



सत्यमेव जयते

# ECONOMIC SURVEY

## ASSAM 2015-16

DIRECTORATE OF ECONOMICS AND STATISTICS, ASSAM  
PLANNING AND DEVELOPMENT DEPARTMENT  
GOVERNMENT OF ASSAM

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## FOREWORD

The Directorate of Economics and Statistics, Assam has been publishing the "Economic Survey, Assam" annually with a view to focus the trends of performance based development of the economy of State of Assam.

In the current issue of the report efforts have been made to depict and analyze the latest economic situation, sectoral performance of the economy of the State and the achievements of various measures/programmes undertaken by the State Government for all-round socio-economic development through collated data made available by different Government Departments, Organisations, Institutions and Agencies. I gratefully acknowledge the co-operation extended by the Government Departments and Organisations on their respective sectors.

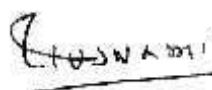
The Report is greatly benefited from the inputs provided by the officers and staff of different Divisions of the Directorate. I do gratefully acknowledge their co-ordination.

Apart from the above, I do specifically acknowledge the team work of the officers and staff of 'Economic Studies Division' and 'Statistical Data Division' of the Directorate associated in compiling, composing and designing the "Economic Survey, Assam, 2015-16" whose sincere and incessant efforts make it possible in bringing out the report.

I hope this edition would be of immense help to the administrators, researchers, planners, academicians, students etc.

Comments and suggestions for improvement of the future issues of this publication are most welcome.

July, 2016.



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CONTENTS

| <b><u>CHAPTER</u></b> |   | <b><u>PAGE</u></b> |
|-----------------------|---|--------------------|
| <b>I</b>              | Assam Economy - An Overview                       | <b>1-10</b>        |
| <b>II</b>             | Population  | <b>11-28</b>       |
| <b>III</b>            | State Income                                      | <b>29-39</b>       |
| <b>IV</b>             | State Finance                                     | <b>40-51</b>       |
| <b>V</b>              | Agriculture                                       | <b>52-76</b>       |
| <b>VI</b>             | Irrigation  | <b>77-87</b>       |
| <b>VII</b>            | Flood and Flood Control Measures                  | <b>88-94</b>       |
| <b>VIII</b>           | Livestock, Animal Husbandry and Dairy Development | <b>95-107</b>      |
| <b>IX</b>             | Fisheries   | <b>108-118</b>     |
| <b>X</b>              | Forestry  | <b>119-134</b>     |
| <b>XI</b>             | Industry, Trade and Mining                        | <b>135-155</b>     |
| <b>XII</b>            | Power   | <b>156-166</b>     |
| <b>XIII</b>           | Transport and Communication                       | <b>167-183</b>     |
| <b>XIV</b>            | Institutional Finance                             | <b>184-195</b>     |
| <b>XV</b>             | Co-operation                                      | <b>196-202</b>     |
| <b>XVI</b>            | Prices and Public Distribution System             | <b>203-216</b>     |
| <b>XVII</b>           | Labour, Employment and Wages                      | <b>217-231</b>     |
| <b>XVIII</b>          | Panchayat and Rural Development                   | <b>232-242</b>     |
| <b>XIX</b>            | Social Sector                                     | <b>243-271</b>     |
| <b>XX</b>             | Important Fact/Findings of Six Economic Census    | <b>272-279</b>     |

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## ASSAM AT A GLANCE

## 1. AREA, ADMINISTRATIVE UNIT AND POPULATION

| Sl. No. | I T E M  | Particulars |
|---------|--|-------------|
| A.      | AREA   |             |
| (a)     | Geographical area (in sq. Km.) as per 2011 Census                    | 78438       |
| B.      | ADMINISTRATIVE UNITS   |             |
| (a)     | District (as on 31 <sup>st</sup> March, 2012)                        | 27          |
| (b)     | Sub-Division (as per 2011 Census)                                    | 56          |
| (c)     | Revenue Circle (as per 2011 Census)                                  | 184         |
| (d)     | C.D. Blocks (as on March 2012)                                       | 219         |
| (e)     | Gaon Panchayats (as on March 2012)                                   | 2202        |
| (f)     | Villages (Census, 2011)  | 26395       |
| (g)     | Total Towns (2011 Census)  | 214         |
|         | (i) Statutory Towns  | 88          |
|         | (ii) Census Towns  | 126         |
| (h)     | Police Station (2015)  | 311         |
| (i)     | Police Out Post (2015)   | 196         |
| C.      | POPULATION as per 2011 Census  |             |
| (a)     | (i) Total Population   | 31205576    |
|         | (ii) Male  | 15939443    |
|         | (iii) Female   | 15266133    |
|         | (iv) Percentage of Rural Population                                  | 86          |
|         | (v) Percentage of Urban Population                                   | 14          |
|         | (vi) Sex-Ratio (Female per thousand male)                            | 958         |
|         | (vii) Density of Population (per Sq. Km.)                            | 398         |
|         | (viii) Decadal percentage variation (2001-2011)                      | 17.07       |
| (b)     | Population of age group (0-6 years)                                  |             |
|         | (i) Male   | 2363485     |
|         | (ii) Female  | 2274645     |
|         | (iii) Total  | 4638130     |
|         | (iv) Sex-Ratio   | 962         |
| (c)     | Literacy Rate  |             |
|         | (i) Male   | 77.85       |
|         | (ii) Female  | 66.27       |
|         | (iii) Total  | 72.19       |
| (d)     | Vital Statistics: (2013)   |             |
|         | (i) Birth rate (per thousand)  | 22.4        |
|         | (ii) Death rate (per thousand)                                       | 7.8         |
|         | (iii) Infant mortality rate (per thousand)                           | 54          |
|         | (iv) M.M.R. (2010-2012) (death per lakh live birth) 2010-12          | 328         |
| (e)     | BPL Population (2011-12) using Tendulkar methodology (in percentage) |             |
|         | (i) Rural  | 33.89       |
|         | (ii) Urban   | 20.49       |
|         | (iii) Total  | 31.98       |

| 2. SECTORAL STATISTICS |    |   |             |             |             |
|------------------------|----|---|-------------|-------------|-------------|
| Sl. No.                |    | ITEM  | Ref. Year   | Unit        | Particulars |
| I                      |    | AGRICULTURE   |             |             |             |
|                        | A. | Land Utilisation  |             |             |             |
|                        |    | (a) Net area sown   | 2012-13     | 000 Hectare | 2809        |
|                        |    | (b) Area sown more than once                                | ..          | ..          | 1267        |
|                        |    | (c) Total cropped area                                      | ..          | ..          | 4076        |
|                        |    | (d) Percentage of Net Area sown to total                    | ..          | Percent     | 35.80       |
|                        |    | Geographical Area   |             |             |             |
|                        |    | (e) Percentage of Area Sown more than once to Net Area sown | ..          | ..          | 45.12       |
|                        | B. | Area under important crops                                  |             |             |             |
|                        |    | (a) Autumn Rice   | 2014-15 (P) | 000 Hectare | 196         |
|                        |    | (b) Winter Rice   | ..          | ..          | 1883        |
|                        |    | (c) Summer Rice   | ..          | ..          | 416         |
|                        |    | (d) Total Rice  | ..          | ..          | 2495        |
|                        |    | (e) Wheat   | ..          | ..          | 24          |
|                        |    | (f) Total Pulses  | ..          | ..          | 148         |
|                        |    | (g) Other cereals & small millets                           | ..          | ..          | 5           |
|                        |    | (h) Maize   | ..          | ..          | 28          |
|                        |    | (i) Total food grains                                       | ..          | ..          | 2700        |
|                        |    | (j) Sugarcane   | ..          | ..          | 30          |
|                        |    | (k) Jute  | ..          | ..          | 70          |
|                        |    | (l) Total oil Seeds   | ..          | ..          | 328         |
|                        | C. | Production of important crops                               |             |             |             |
|                        |    | (a) Autumn Rice   | 2014-15 (P) | 000 tonnes  | 281         |
|                        |    | (b) Winter Rice   | ..          | ..          | 3718        |
|                        |    | (c) Summer Rice   | ..          | ..          | 1224        |
|                        |    | (d) Total Rice  | ..          | ..          | 5223        |
|                        |    | (e) Wheat   | ..          | ..          | 29          |
|                        |    | (f) Total Pulses  | ..          | ..          | 111         |
|                        |    | (g) Maize   | ..          | ..          | 93          |
|                        |    | (h) Other cereals & small millets                           | ..          | ..          | 3           |
|                        |    | (i) Total food grains                                       | ..          | ..          | 5459        |
|                        |    | (j) Total Oil seeds (excluding Coconut)                     | ..          | ..          | 206         |
|                        |    | (k) Sugarcane (in cane)                                     | ..          | ..          | 1099        |
|                        |    | (l) Jute (000 bales of each 180 kgs)                        | ..          | ..          | 768         |
|                        | D. | Yield rate  |             |             |             |
|                        |    | (a) Autumn Rice   | 2014-15 (P) | Kg/Hectare  | 1454        |
|                        |    | (b) Winter Rice   | ..          | ..          | 2005        |
|                        |    | (c) Summer Rice   | ..          | ..          | 2940        |
|                        |    | (d) Total Rice  | ..          | ..          | 2119        |
|                        |    | (e) Wheat   | ..          | ..          | 1217        |

| SI. No. | ITEM   | Ref. Year   | Unit          | Particulars |
|---------|--|-------------|---------------|-------------|
|         | (f) Maize  | 2014-15 (P) | Kg/Hectare    | 3333        |
|         | (g) Total Pulses   | "           | "             | 749         |
|         | (h) Total Food grains  | "           | "             | 2013        |
|         | (i) Total Oilseed  | "           | "             | 670         |
|         | (j) Sugarcane (cane)   | "           | "             | 36760       |
|         | (k) Jute (Dry fibres)  | "           | "             | 1962        |
| E.      | Index of Agricultural Production<br>(All commodities)<br>(Base Triennium ending 2007-08=100) | 2014-15(P)  | -             | 133.21      |
| F.      | Per capita Food Grain Production   | 2012-13     | Kg.           | 175         |
|         | AGRICULTURE CENSUS   |             |               |             |
| G.      | Number of operational holdings   |             |               |             |
|         | (a) Size Marginal (below 1 hectare)  | 2010-11     | 000 Nos.      | 1831        |
|         | (b) Size Small (1.0 to 2.0 hectare)  | "           | "             | 497         |
|         | (c) Size Semi Medium (2.0 to 4.0 hectare)  | "           | "             | 303         |
|         | (d) Size Medium (4.0 to 10.0 hectare)  | "           | "             | 85          |
|         | (e) Size Large (above 10 hectare)  | "           | "             | 4           |
|         | (f) All size   | "           | "             | 2720        |
| H.      | Area under operational holdings  |             |               |             |
|         | (a) Size Marginal (below 1 hectare)  | 2010-11     | 000 Hectare   | 775         |
|         | (b) Size Small (1.0 to 2.0 hectare)  | "           | "             | 687         |
|         | (c) Size Semi Medium (2.0 to 4.0 hectare)  | "           | "             | 818         |
|         | (d) Size Medium (4.0 to 10.0 hectare)  | "           | "             | 437         |
|         | (e) Size Large (above 10 hectare)  | "           | "             | 282         |
|         | (f) All size   | "           | "             | 2999        |
| I.      | Average size of operational holdings   | "           | Hectare       | 1.10        |
| II.     | LIVESTOCK AND VETERINARY   |             |               |             |
|         | Livestock and Poultry Population<br>(Sample Survey)  |             |               |             |
| A.      | Livestock:   |             |               |             |
|         | (i) Crossed Breed Cattle   | 2014-15     | 000 Nos.      | 528         |
|         | (ii) Indigenous Cattle   | "           | "             | 9410        |
|         | (iii) Buffaloes  | "           | "             | 507         |
|         | (iv) Goat  | "           | "             | 4109        |
| B.      | Poultry:   |             |               |             |
|         | (i) Fowls  | "           | "             | 12321       |
|         | (ii) Ducks   | "           | "             | 4617        |
| C.      | Hospitals and Dispensaries   | "           | "             | 359         |
| D.      | (a) Production of Milk   | "           | Million Ltrs. | 873         |
|         | (b) Production of Egg  | "           | Million Nos.  | 473         |
|         | (c) Production of Meat   | "           | 000 Tonnes    | 42.54       |

| Sl. No. | ITEM   | Ref. Year  | Unit         | Particulars |
|---------|--|------------|--------------|-------------|
| III.    | FOREST   |            |              |             |
|         | (a) Area under Reserved Forest                       | 31-03-2015 | 000 Hectare  | 1397        |
|         | (b) Area under proposed Reserved Forest              | ..         | ..           | 176         |
|         | (c) Total Forest excluding unclassified State Forest | ..         | ..           | 1935        |
|         | (d) Number of National Parks                         | ..         | Nos.         | 5           |
|         | (e) Number of Wildlife Sanctuaries                   | ..         | ..           | 18          |
|         | (f) Total Forest revenue                             | 2014       | Rs. in lakh  | 2906.08     |
| IV.     | FISHERY  |            |              |             |
|         | (a) Beel Fisheries (Registered and Unregistered)     | 2014-15    | Number       | 1197        |
|         | (b) Area under Beel Fisheries                        | ..         | Hectare      | 100817      |
|         | (c) Ponds and Tanks                                  | ..         | Number       | 368250      |
|         | (d) Area under Ponds and Tanks                       | ..         | Hectare      | 60570       |
|         | (e) Total Area under Fisheries                       | ..         | ..           | 285349      |
|         | (f) Production of Fish Seed                          | ..         | Million Nos. | 4586        |
|         | (g) Production of Fish                               | "          | 000 Tonnes   | 282         |
| V.      | SERICULTURE  |            |              |             |
|         | A. Sericulture Villages                              | 2014-15    | Nos.         | 11281       |
|         | B. Families engaged in Sericulture                   |            |              |             |
|         | (a) Eri  | ..         | ..           | 552063      |
|         | (b) Muga   | ..         | ..           | 32045       |
|         | (c) Mulberry   | ..         | ..           | 68298       |
|         | C. Total area under Silk worm's food plants          |            |              |             |
|         | (a) Eri  | ..         | Hectare      | 6601        |
|         | (b) Muga   | ..         | ..           | 5995        |
|         | (c) Mulberry   | ..         | ..           | 2821        |
|         | D. Cocoons Reeled                                    |            |              |             |
|         | (a) Eri  | 2014-15    | (000 kg)     | 3050        |
|         | (b) Muga   | ..         | Lakh Nos.    | 6528        |
|         | (c) Mulberry   | ..         | (1000 kg)    | 268         |
|         | E. Production of Silk Yarn                           |            |              |             |
|         | (a) Eri Raw Silk                                     | 2014-15    | M.T          | 2345        |
|         | (b) Muga Raw Silk                                    | ..         | ..           | 126         |
|         | (c) Mulberry Raw Silk                                | ..         | ..           | 26.40       |
|         | F. Number of Spinning/ Reeling Machines              | ..         | Nos.         | 53736       |

| Sl. No. | ITEM  | Ref. Year | Unit         | Particulars |
|---------|---|-----------|--------------|-------------|
| VI.     | POWER   |           |              |             |
|         | (a) Total Installed Capacity                                  | 2014-15   | M.W          | 379.7       |
|         | (b) Total Unit Generation                                     | ..        | MU           | 1894.65     |
|         | (c) Availability  | ..        | ..           | 7165.7      |
|         | (d) Total unit Billed to ultimate consumers                   | ..        | ..           | 5482        |
|         | (e) Energy Requirement  | ..        | ..           | 9104.80     |
|         | (f) Total villages electrified                                | ..        | Nos.         | 22303       |
| VII.    | INDUSTRY AND MINERALS   |           |              |             |
|         | A. Production of some Selected Industries                     |           |              |             |
|         | (a) Petroleum (Crude)   | 2014-15   | 000 M. T     | 4447        |
|         | (b) Coal  | ..        | ..           | 797         |
|         | (c) Jute  | ..        | ..           | 24          |
|         | (d) Fertilizer  | ..        | ..           | 488         |
|         | (e) Cement  | ..        | ..           | 1277        |
|         | (f) Wheat Flour   | ..        | ..           | 951         |
|         | (g) Lime Stone  | ..        | ..           | 681         |
|         | (h) Natural Gas (Utilized)                                    | ..        | MCM          | 2726        |
|         | B. Registered Factories                                       | 2014      | Nos.         | 5537        |
|         | C. Workers in Registered Factories                            | ..        | Nos.         | 210119      |
|         | D. (i) Index of Industrial Production<br>(Base 2004-2005=100) | 2014-15   | -            | 178.37      |
|         | (ii) Index of Mineral Production<br>(Base 2004-2005=100)      | 2012-13   | -            | 98.20       |
| VIII.   | TEA , COFFEE & RUBBER INDUSTRY                                |           |              |             |
|         | (i) Tea Gardens   | 2015      | Nos.         | 83566       |
|         | (ii) Area under Tea Cultivation                               | 2015      | 000'Hectare  | 316         |
|         | (iii) Production of Tea                                       | 2015      | tonnes       | 526185      |
|         | (iv) Area under coffee cultivation                            | 2014-15   | Hectare      | 1060.00     |
|         | (v) Production of coffee                                      | ..        | M.T          | 33.00       |
|         | (vii) Area under Rubber Cultivation                           | ..        | Hectare      | 42097.01    |
|         | (viii) Production of Rubber                                   | ..        | M. T         | 15341.57    |
| IX.     | TRANSPORT & COMMUNICATION                                     |           |              |             |
|         | A. Vehicle  |           |              |             |
|         | (i) Total Vehicles Registered                                 | 2014-15   | Nos.         | 267900      |
|         | (ii) Total Vehicles on Road                                   | ..        | Nos.         | 2384576     |
|         | (iii) Total Revenue earned during the year                    | 2014-15   | Rs. in Crore | 378.98      |

| Sl. No. | ITEM  | Ref. Year | Unit        | Particulars |
|---------|---|-----------|-------------|-------------|
| B.      | ROAD  |           |             |             |
|         | Total P.W.D. Road Length (including N.H.)                       | 2014-15   | Km.         | 48696.68    |
|         | (a) Surfaced (Black topped)                                     | "         | "           | 23948       |
|         | (b) Un-Surfaced   | "         | "           | 20914       |
|         | (c) National Highway  | "         | "           | 3834.68     |
|         | (d) State Highway   | "         | "           | 2530        |
|         | Railway route Length (Total)                                    | 2014-15   | Km.         | 2471.18     |
|         | (a) Broad Gauge   | "         | "           | 2091.87     |
|         | (b) Meter Gauge   | "         | "           | 379.31      |
| C.      | Air Transport   |           |             |             |
|         | (a) Air Traffic Movement  | 2014-15   | Nos.        | 30363       |
|         | (b) Passenger Handled   | "         | "           | 2552861     |
|         | (c) Freight(Loaded + Unloaded)                                  | "         | Tonne       | 10796       |
|         | (d) Average flight per day                                      | "         | Nos.        | 83          |
|         | (e) Average Passenger Handled per day                           | "         | Nos.        | 6994        |
|         | (f) Average Cargo Handled per day                               | "         | Tonne       | 29.57       |
| D.      | Inland Water Transport  |           |             |             |
|         | (i) Total No. of Ferry Services                                 | 2014-15   | Nos.        | 86          |
|         | (ii) Passengers Transported                                     | "         | ('000 Nos.) | 16454       |
|         | (iii) Goods Transported   | "         | M.T.        | 13071       |
| E.      | POSTAL  |           |             |             |
|         | (a) Post Office   | 2014-15   | Nos.        | 4012        |
|         | (b) Letter Boxes  | "         | "           | 10286       |
| F.      | TELEPHONE   |           |             |             |
|         | (a) No. of Telephone Exchanges                                  | 2014-15   | Nos.        | 577         |
|         | (b) Direct Exchange lines (Fixed+WLL+MTS)                       | "         | "           | 1427318     |
|         | (c) Villages covered by Public Telephones (VPTs)                | "         | "           | 24692       |
|         | (d) Wire line phones (Fixed DELs)                               | "         | "           | 165994      |
|         | (e) Wireless Phones (GSM+CDMA)                                  | "         | "           | 1261324     |
|         | (f) Public Call offices   | "         | "           | 10350       |
|         | (g) Tele density per 100 population (overall)                   | "         | percent     | 5.37        |
| X.      | TOURISM   |           |             |             |
|         | (a) Number of Tourists using Tourist lodges                     |           |             |             |
|         | (i) Indian Tourist  | 2014-15   | Nos.        | 21092       |
|         | (ii) Foreign Tourist  | "         | "           | 422         |
|         | (b) Number of Tourist using other accommodation like Hotel etc. |           |             |             |
|         | (i) Indian Tourist  | 2014-15   | "           | 4842734     |
|         | (ii) Foreign Tourist  | "         | "           | 19583       |
|         | (c) Revenue earned from Tourist lodges                          | "         | Rs. in Lakh | 211.77      |

| Sl. No. | ITEM   | Ref. Year  | Unit         | Particulars |
|---------|--|------------|--------------|-------------|
| XI.     | EMPLOYMENT   |            |              |             |
|         | (a) Total No. of Employment Exchanges                                  | 2014       | Nos.         | 83          |
|         | (b) Employment in Organised Sector                                     | "          | "            | 1105995     |
|         | (i) Employment in Public Sector  | "          | "            | 515222      |
|         | (ii) Employment in Private Sector                                      | "          | "            | 590773      |
|         | (c) Educated Applicants in Live Register                               | "          | "            | 1387465     |
|         | (d) Total nos. of unemployed in Live Register                          | "          | "            | 1746520     |
| XII.    | HEALTH   |            |              |             |
|         | (a) Government Hospitals   | 2014       | Nos.         | 25          |
|         | (b) Primary Health Centres   | "          | "            | 1014        |
|         | (c) Sub-divisional Civil Hospitals                                     | "          | "            | 13          |
|         | (d) Sub Centres  | "          | "            | 4621        |
|         | (e) Community Health centre  | "          | "            | 151         |
|         | (f) MBBS Doctors(Govt. + NHM)  | "          | "            | 2581        |
|         | (g) Specialist Doctors (Govt. + NHM)                                   | "          | "            | 1133        |
| XIII.   | EDUCATION  |            |              |             |
|         | A. Institution   |            |              |             |
|         | (a) No. of Primary School (Govt. Prov)                                 | 2014-15    | Nos.         | 40444       |
|         | (b) No. of Middle School   | "          | "            | 11460       |
|         | (c) No. of High School   | "          | "            | 6823        |
|         | B. Enrolment   |            |              |             |
|         | (a) Primary School   | 2014-15    | 000 Nos.     | 3184        |
|         | (b) Middle School  | "          | "            | 1581        |
|         | (c) High School  | "          | "            | 1025        |
| XIV.    | BANKING  |            |              |             |
|         | (i) Scheduled Commercial Banks (Reporting offices)                     | March/2015 | Nos.         | 2047        |
|         | (ii) Total deposit   | "          | Rs. in crore | 97378       |
|         | (iii) Total credit   | "          | "            | 35911       |
|         | (iv) Credit-Deposit Ratio  | "          | Percent      | 36.88       |
|         | (v) Population served per Bank   | "          | 000 Nos.     | 15          |
|         | (vi) Regional Rural Bank   | "          | Nos.         | 465         |
|         | (vii) Deposit of Regional Rural Banks                                  | "          | Rs. in crore | 7878        |
|         | (viii) Credit of Regional Rural Banks                                  | "          | "            | 4159        |
| XV.     | PANCHAYAT AND RURAL DEVELOPMENT PROGRAMME                              |            |              |             |
|         | A. SHGs  |            |              |             |
|         | (a) Physical Achievement   |            |              |             |
|         | (i) Total No. Village Organisations formed                             | 2014-15    | Nos.         | 983         |
|         | (ii) Women SHGs formed   | "          | "            | 10535       |
|         | (b) Financial Performance  |            |              |             |
|         | (i) No. of SHGs provided with Revolving Fund                           | 2014-15    | Rs. in lakh  | 16265       |
|         | (ii) No. Village Organisations provided with Community Investment Fund | "          | "            | 3854        |



| Sl. No. | ITEM  | Ref. Year    | Unit         | Particulars                           |
|---------|-------|--------------|--------------|---------------------------------------|
|         | B.    |              |              | IAY                                   |
|         | (a)   | 2014-15      | Nos.         | 183171                                |
|         | (b)   | "            | "            | 105572                                |
|         | (c)   | "            | Percent      | 57.64                                 |
|         | C.    |              |              | MGNREGA                               |
|         | (i)   | 2014-15      | Rs. in lakh  | 58359.59                              |
|         | (ii)  | "            | "            | 47302.11                              |
|         | (iii) | "            | Lakh Mandays | 208.18                                |
| XVI.    |       |              |              | STATE INCOME                          |
|         | A.    |              |              | Net State Domestic Product            |
|         | (i)   | 2014-15(Q)   | Rs. in crore | 175210                                |
|         | (ii)  | "            | "            | 138387                                |
|         | B.    |              |              | Per Capita Net State Domestic Product |
|         | (i)   | 2014-15(Q)   | In Rupees    | 53618                                 |
|         | (ii)  | "            | "            | 42399                                 |
| XVII.   |       |              |              | STATE GOVT. RECEIPTS AND EXPENDITURE  |
|         | A.    |              |              | Total Revenue Receipts                |
|         | (i)   | 2015-16 (BE) | Rs. in lakh  | 5706410                               |
|         | (ii)  | "            | "            | 1666730                               |
|         | (iii) | "            | "            | 1289240                               |
|         | (iv)  | "            | "            | 432587                                |
|         | (v)   | "            | "            | 2317853                               |
|         | B.    |              |              | Total Revenue Expenditure             |
|         | (i)   | 2015-16(BE)  | Rs. in lakh  | 5156285                               |
|         | (ii)  | "            | "            | 1528275                               |
|         | (iii) | "            | "            | 2235948                               |
|         | (iv)  | "            | "            | 1022410                               |
|         | (v)   | "            | "            | 369652                                |
| XVIII   |       |              |              | STATE PLAN                            |
|         | (i)   | 2012-17      | Rs. in lakh  | 9867187                               |
|         | (ii)  | 2012-13      | Rs. in lakh  | 1050000                               |
|         | (iii) | 2013-14      | Rs. in lakh  | 1250000                               |
|         | (iv)  | 2014-15      | Rs. in lakh  | 1859001                               |
|         | (v)   | 2015-16      | Rs. in lakh  | 2602987                               |
|         |       |              |              | Actual Expenditure                    |
|         | (i)   | 2012-13      | Rs. in lakh  | 723914                                |
|         | (ii)  | 2013-14      | Rs. in lakh  | 809682                                |
|         | (iii) | 2014-15      | Rs. in lakh  | 1356098                               |

P : Provisional; E : Estimated; Q : Quick; BE: Budget Estimate.

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## COMPARATIVE STATEMENT OF KEY INDICATORS OF ASSAM AND INDIA

| Sl. No.  | Item  | Year           | Unit                | India | Assam |
|--|---|----------------|---------------------|-------|-------|
| <b>DEMOGRAPHIC AND HUMAN DEVELOPMENT INDICATORS</b>    |   |                |                     |       |       |
| 1  | Decadal Growth Rate   | 2001-2011      | Percent             | 17.7  | 17.07 |
| 2  | Density of Population   | Census 2011    | Per. Sq. K.m.       | 382   | 398   |
| 3  | Sex Ratio   | ..             | Per '000 male       | 943   | 958   |
| 4  | Child sex ratio (0-6)   | ..             | ..                  | 919   | 962   |
| 5  | Percentage of Urban Population  | ..             | Percent             | 31.2  | 14.1  |
| 6  | Literacy Rate (Person)  | ..             | ..                  | 72.99 | 72.19 |
| 7  | Per Capita Income GDP/GSDP (At current prices)  | 2014-15        | In Rupees           | 98565 | 54211 |
| 8.a.   | Per Capita NNI/NSDP Income (At constant 2011-12 prices)   | 2014-15        | ..                  | 72889 | 42349 |
| 8.b.   | Growth over previous year   | 2014-15        | In Percent          | 5.84  | 1.25  |
| 9  | Population Below Poverty line   |                |                     |       |       |
| 9.1  | Total   | 2011-12        | Percent             | 21.92 | 31.98 |
| 9.2  | Rural   | 2011-12        | ..                  | 25.70 | 33.89 |
| 9.3  | Urban   | 2011-12        | ..                  | 13.70 | 20.49 |
| Source : Census 2011/Economic Survey of India, 2014-15 |   |                |                     |       |       |
| <b>VITAL STATISTICS</b>                                |   |                |                     |       |       |
| 10   | Birth Rate  | 2013           | Per '000            | 21.4  | 22.4  |
| 11   | Death Rate  | 2013           | ..                  | 7.0   | 7.8   |
| 12   | <b>INFANT MORTALITY RATE</b>  |                |                     |       |       |
| 12.a.  | Male  | 2013           | Per '000            | 39    | 53    |
| 12.b.  | Female  | 2013           | ..                  | 42    | 55    |
| 12.c.  | Total   | 2013           | ..                  | 40    | 54    |
| 13   | Maternal Mortality Rate   | 2011-13        | Per lakh live birth | 167   | 300   |
| 14   | Total Fertility Rate  | 2013           |                     | 2.4   | 2.3   |
| 15   | Under 5 Mortality Rate  | 2013           |                     | 49    | 73    |
| 16   | <b>GOVT. HOSPITALS</b>  |                |                     |       |       |
| 16.a.  | Average population served per Govt. Hospitals   | As on 1/1/2013 |                     | 34163 | 30556 |
| 16.b.  | Average population per bed in Hospital  | As on 1/1/2013 |                     | 879   | 3062  |
| 16.c.  | No. of Doctors  |                | Per lakh population | 9.2   | 11.90 |
| 16.d.  | Percent of live births where the mothers received medical attention at delivery at Govt. or Private Hospitals | 2011           |                     | 66.6  | 61.8  |
| 17   | <b>DRINKING WATER FACILITY</b>  |                |                     |       |       |
| 17.a.  | Good quality drinking water   |                |                     |       |       |
|  | Rural   |                | Per '000 population | 877   | 580   |
|  | Urban   |                |                     | 881   | 638   |
| 17.b.  | Drinking Water within premises.   | 2012           | Per '000 household  |       |       |
|  | Rural   |                |                     | 405   | 791   |
|  | Urban   |                |                     | 745   | 922   |

| Sl. No.   | Item   | Year                    | Unit                      | India  | Assam  |
|---|--|-------------------------|---------------------------|--------|--------|
| 18  | Rural households with access to toilets                      | 2011                    | Percent                   | 33     | 62     |
| 19  | Households got daily supply of water                         |                         |                           |        |        |
|   | Rural  | 2012                    | Per '000 Households       | N.A.   | 908    |
|   | Urban  |                         |                           | N.A.   | 923    |
| 20  | EDUCATION  |                         |                           |        |        |
|   | (A) Gross Enrolment Ratio Classes I-V (6-10 years)           |                         |                           |        |        |
|   | Boys   | 2010-11                 | Percent                   | 114.9  | 93.1   |
|   | Girls  |                         |                           | 116.3  | 95.6   |
|   | Total  |                         |                           | 115.5  | 94.3   |
| 21  | (B) Gross Enrolment Ratio Classes I-VIII (6-13 years)        |                         |                           |        |        |
|   | Boys   | 2010-11                 | Percent                   | 104.5  | 83.0   |
|   | Girls  |                         |                           | 103.3  | 85.1   |
|   | Total  |                         |                           | 103.9  | 84.0   |
| 22  | (C) Drop Out Ratio Classes I-VI (6-11 years)                 |                         |                           |        |        |
|   | Boys   | 2009-10                 | Percent                   | 30.25  | 38.99  |
|   | Girls  |                         |                           | 27.25  | 32.67  |
|   | Total  |                         |                           | 28.86  | 35.89  |
| 23  | (D) Drop Out Ratio Classes I-X (6-16 years)                  |                         |                           |        |        |
|   | Boys   | 2009-10                 | Percent                   | 53.38  | 77.41  |
|   | Girls  |                         |                           | 51.97  | 77.82  |
|   | Total  |                         |                           | 52.76  | 77.60  |
| Source : Statistical Hand Book, 2014              |  |                         |                           |        |        |
| AGRICULTURE                                       |  |                         |                           |        |        |
| 24  | Area of food grains under irrigation                         | 2012-13                 | Percent                   | 51.20  | 4.60   |
| 25  | Av. Yield of Total food grains                               | 2011-12                 | Kg/hectare                | 2078   | 1704   |
| 26  | Av. Yield of Total oil seeds                                 | 2011-12                 | „                         | 1133   | 557    |
| 27  | Cost of Production of paddy                                  | 2010-11                 | Rs./quintal               | N.A.   | 824.34 |
| Source : Agriculture Statistics at a Glance, 2013 |  |                         |                           |        |        |
| 28  | Cropping Intensity   | 2014-15                 | Percent                   | 138.92 | 145.8  |
| 29  | Growth rate of GVS/GSDP in agriculture and allied sector     | 2014-15                 | Constant (2011-12) Prices | 0.2    | 3.4    |
| 30  | Growth rate of GSDP only in agriculture sector               | Avg. 2005-06 to 2013-14 | Constant (2004-05) Prices | 4.10   | 3.47   |
| 31  | Share of Employment in agriculture sector                    |                         | In percent                | 52     | 63     |
| MISCELLANEOUS                                     |  |                         |                           |        |        |
| 32  | Road Length (in Km.)   | 2011-12                 | Per lakh population       | 402    | 146    |
| 33  | Railway route length (In. Km.)                               | 2011-12                 | Per'000 Sq. Km.           | 19.65  | 31.36  |
| 34  | Credit Deposit Ratio   | 2015                    |                           | 77.4   | 36.9   |
| 35  | Share of Employment in major sectors (excluding agriculture) | 2009-10                 | In percent                | 48     | 37     |
| Source : Statistical Abstract, India 2012         |  |                         |                           |        |        |

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## CHAPTER – I

## ASSAM ECONOMY – AN OVERVIEW

## AREA AND POPULATION

Assam is situated in the North-East region of India – bordering seven States viz. Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and West Bengal and two countries viz. Bangladesh and Bhutan. The geographical area of the State is 78,438 sq. km of which 98.4 percent area is rural. Assam shares about 2.4 percent of the country's total geographical area and provides shelter to 2.6 percent population of the Country.

Assam is a state of heterogeneous population with socio-cultural and ethnic diversity. According to the Census of India, 2011 the population of Assam stands at 312.05 lakh of which 159.39 lakh are male and 152.66 lakh are female. The decadal growth of the State's population works out at 17.07 percent during the decade 2001-2011 as against 17.68 percent for the country as a whole. Out of the total 312.06 lakh population, 86 percent population live in rural areas and 14 percent population live in urban areas of the State. While the percentage of rural population of the State stands much higher compared to All-India average (69 percent), the proportion of urban population in the State has increased from 12.9 percent in 2001 to 14 percent in 2011.

The density of the population of Assam has increased to 398 persons in 2011 from 340 persons in 2001 Census or on an average, 58 more people inhabit every square kilometer in the State as compared to a decade ago.

The sex ratio of Assam has increased to 958 female per 1000 male in 2011 from 935 in 2001. Compared to overall sex ratio of the State, the Child sex ratio (age-group 0-6 years) has gradually declined from 975 in 1991 to 967 in 2001 and further to 962 in 2011. On the other hand, sex ratio at birth (0-1 year) in Assam as per 2011 Census was calculated at 957 female per 1000 male.

## STATE DOMESTIC PRODUCT

Analysis of sectoral contribution to GSDP at constant (2011-12) prices from 2011-12 to 2014-15 reveal that other than Service sector, the percentage contribution of Agriculture and Allied activities (Agriculture, Forestry, Fishing) and Industry sector is more or less static. The contribution of Agriculture and allied activities is expected to marginally increase from the level of 20.12 percent in 2011-12 to 20.28 percent level in 2014-15. The "Agriculture sector" i.e. Agriculture crops is the major contributor of Agriculture and Allied activities and the percentage contribution of this sector towards the State economy has been showing slight improvement at the level of 14.74 percent in 2014-15 from 14.39 percent in 2011-12. The percentage contribution of the Industry Sector to the State economy is also showing a slightly declining trend and expected to fall from 30.78 percent in 2011-12 to 29.80 percent in 2014-15 but would show slight recovery over the previous year. The of "Mining & Quarrying" Sector's contribution (being the most potential sector within the 'Industry Sector' of the State) towards state economy has also recorded decline from 10.22 percent in 2011-12 to 7.90 percent in 2014-15. The contribution of "Mining and Quarrying" towards Industry Sector has also declined from 32.23 percent in 2011-12 to 26.52 percent in 2014-15. On the other hand, the percentage contribution of Service sector towards the State economy is expected to increase from 43.96 percent in 2011-12 to 45.47 percent in 2014-15.

The 'Industry' sector which comprises Mining & Quarrying, Manufacturing, Electricity, Gas, Water Supply & Other Utility Services and Construction sectors is achieved at 2.28 per cent growth in 2014-15 as against 6.03 per cent in the previous year (2013-14). The "Construction Sector" has the highest contribution in the growth of "Industry Sector" which is 8.79 per cent in 2014-15 as against 21.56 per cent in the previous year 2013-14. On the other hand, the estimated growth of "Manufacturing sector" is 2.83 per cent in 2014-15 as against estimated growth of 4.90 per cent in 2013-14.

The state of economy in terms of Rupee value of the GSDP at constant (2011-12) prices for the year 2014-15 (Quick Estimates) is estimated at Rs. 156895.41 crore as against Rs. 151820.41 crore for 2013-14 (Provisional Estimates) reflecting a growth of 3.34 per cent which is lower than

the estimated growth of 6.08 per cent in 2013-14 (Provisional Estimates). The expectation of growth of 3.34 per cent in GSDP of the State for 2014-15 comprises of the estimated growth of 3.40 per cent in Agriculture, Forestry & Fishing sector, 2.28 per cent in Industry sector and 4.36 per cent in Services sector.

During the financial year 2014-15, the growth of 'Forestry' sector displayed a negative growth of 3.28 percent as against 4.64 per cent growth experienced in 2013-14. The growth of 'Agriculture' i.e. Agriculture Crops is estimated to increase with 3.91 percent during 2014-15 over 0.61 percent in 2013-14. The 'Fishing' sector, on the other hand, expected to be displayed marginally lower growth with 4.81 percent in 2014-15 against 5.22 percent growth in the previous year.

The overall performance of the 'Industry' sector is not much encouraging in 2014-15 compared 2013-14 although the growth is expected to be achieved the level of 11.34 per cent in 2014-15 against 12.15 per cent growth estimated in the previous year 2013-14 and this is due to lower performance of Manufacturing Sector and Construction sector during 2014-15 compared to 2013-14. The growth of "Construction" sector alone is estimated to be achieved at 8.79 percent in 2014-15. Amongst the sub-sectors of Industry sector, the estimated growth rate of Mining and Quarrying, Manufacturing (Registered), Electricity, Gas & Water Supply is not very encouraging and expected to be remained lower during 2014-15 over the growth of previous year.

The Services sector comprises of Trade, Repair, Hotels & Restaurants, Transport, Storage, Communication & Services related to Broadcasting, Financial Services, Real Estate, Ownership of Dwelling & Professional Services, Public Administration and Other Services and growth of the sector is 4.36 per cent during 2014-15 as compared to 9.15 per cent in 2013-14. In the Services Sector, the highest contribution of Other Services is observed which is 9.07 per cent during 2014-15 as against 17.95 per cent growth in 2013-14. Comparatively lower performance is observed in the sub sector "Real Estate, Ownership of Dwelling & Professional Services" of the services sector. The growth of which is 0.51 per cent in the year 2014-15 over the previous year 2013-14.

The Net State Domestic Product (NSDP), also known as State Income, at 2011-12 prices is expected to be shown lower growth with 2.56 percent in 2014-15 (Quick Estimate) compared to the estimated growth of 5.17 percent during 2013-14. Measured on the basis of Net State Domestic Product, the Per Capita Income of the State will attain the level of Rs.42349.00 at constant (2011-12) prices and Rs.53618.00 at current prices as per quick estimates for 2014-15 as against Rs.41825.00 and Rs.48974.00 at constant (2011-12) prices and current prices in the previous year 2013-14 respectively. In terms of growth rate, the per capita income at constant (2011-12) prices is likely to be 1.25 percent higher in 2014-15 over 2013-14.

## STATE FINANCE

The Assam Government Budget, 2015-16 was presented with an expected fiscal deficit of Rs.4680.31 crore and a revenue surplus of Rs.5501.26 crore and a primary deficit of Rs.2069.19 crore. The fiscal reform measures adopted by the State started yielding favourable results since 2005-06. During the year 2014-15, the State had a revenue deficit of Rs.896.68 crore after a gap of four years and a fiscal deficit of Rs.5429.54 crore which is 2.78 percent of GSDP below the 3 percent limit recommended by the Thirteenth Finance Commission. The debt-GSDP ratio during 2014-15 in the State was 16.04 percent well below the fiscal target of 28.4 percent prescribed by the Thirteenth Finance Commission. The total own tax revenues of the State during 2014-15 have shown a growth of 5.06 percent over 2013-14 against an increase of 9.01 percent during 2013-14 over the previous year. The gross VAT collection increased by 9 percent in 2014-15 against an increase of 11 percent in 2013-14 over the previous year. The contribution of VAT to the total own tax revenue is 73 percent in 2014-15 against a contribution of 70 percent in 2013-14.

In the State Budget, 2015-16, the share of total plan expenditure is expected to be 39.82 percent of which share of Economic Services is expected to be the highest with 18.56 percent followed by Social and Community Services (18.14%), Autonomous Councils (1.86%) and General Services (0.85%).

## CLIMATE AND RAINFALL

The climate of the State is of humid sub-tropical in nature with warm and humid summer and cool and dry winter. On an average the temperature of the State varies between 8° Celsius (winter season) and 36° Celsius (summer season). The humidity is high primarily during summer season. Due to unique geographical location coupled with varied physiographic, the State has array of climatic conditions.

Assam is situated in the high rainfall zone. The monsoons are Assam's life line as the agricultural activity is predominantly depended on it. The southwest monsoon brought shower for which the State receives average annual rainfall of 2580 mm on the Brahmaputra valley and its surrounding region. The State normally receives 2 percent rainfall in Winter Season (January – February), 25 percent in Summer Season (March – May), 65 percent in Monsoon Season (June – September) and 7 percent in Post-monsoon Season (October – December).

During 2014-15 the State had experienced 1854.4 mm rainfall against normal rainfall of 2295.8 mm. During the kharif crop season only 1774.6 mm [against the normal rainfall of 2001.0 mm] was occurred in the State. Thus, according to the State Agriculture Department, the pattern of overall rainfall in the State was normal during the kharif season both in terms of total rainfall and its spread being (-) 11.00 percent below normal. During the Rabi season overall rainfall in the State was "Scanty" with deviation of (-) 73.00 percent from normal. Although the occurrence of overall rainfall throughout the State was 'deficient' during the year 2014-15, according to the State Agriculture Department, the spread and pattern of rainfall varies from district to district during the period.

## AGRICULTURE AND FOOD GRAINS PRODUCTION

Agriculture is the principal occupation of majority of the rural population in the state in terms of employment and livelihood. Agriculture sector continues to providing employment of more than 50 percent of the total workforce and support more than 75 percent population of the State directly or indirectly. The contribution of Agriculture Sector towards State economy registered gradual rise [GSDP at constant (2011-12) prices] for the years 2011-12, 2012-13, 2013-14 and 2014-15. The trend of growth of Agriculture Sector, on the other hand, was erratic [GSDP (at constant 2011-12 prices)] during the same period. The growth rate is expected to show some remarkable recovery in 2014-15 as per Quick estimate.

The net cultivated area of the State is 28.11 lakh hectares (2011-12) which is about 87.4 percent of the total land available for agricultural cultivation in the State. According to the Agricultural Census, Assam, 2010-11, the average operational holding is 1.10 hectare only and more than 85 percent of the farmer family is small and marginal farmers with average land holding of only 0.63 hectare but in a scattered manner.

The soil, topography, rainfall and climate in general are conducive for an agricultural activity mainly for paddy cultivation in Assam and therefore concentration is high on paddy production both for farmers and the State Agriculture Department. As per final estimates, the total area under paddy cultivation during the year 2014-15 was 24.95 lakh hectare or 72.30 percent of the total area under food grains in the State. The area covered under paddy cultivation was 0.08 lakh hectare less during the year 2014-15 over 2013-14. The Paddy cultivation, during the year 2014-15 occupies 89.0 percent of the net cropped area and 60.0 percent of the gross cropped area in the State. The area coverage under Pulses and Oilseeds had both increased in 2013-14 from 2012-13 as per final estimate in 2013-14, but both declined in 2014-15 from 2013-14. In respect of pulses the increase was 1.50 lakh hectare in 2013-14 from 1.42 lakh hectare from 2012-13. In respect of oilseeds, the increase was 3.25 lakh hectare in 2013-14 from 3.05 lakh in 2012-13. Analysis of area under pulses and Oilseeds reveal that in respect of Pulses, the area under cultivation has increased from 1.00 lakh hectares in 2005-06 to 1.50 lakh hectares in 2013-14 and then declined to 1.46 lakh hectares in 2014-15, on the other hand the area under Oilseeds recorded increase from 2.53 lakh hectares in 2008-09 to 3.25 lakh hectares in 2013-14 and then declined to 3.07 lakh hectares in 2014-15.

As per final estimates, total food grains production in the State was 54.58 lakh MT in 2014-15 (Provisional Estimate) compared to 54.18 lakh MT in 2013-14 (Revised Estimate). Total food



production in the State was 0.74 percent more during the year 2014-15 compared to the previous year's production. It is pertinent to note that the total food grains production in the State was the highest in 2014-15 compared to last twelve years.

The total production of Rice in the State was 52.22 MT in 2014-15 (Provisional Estimate) compared to 51.93 lakh MT in 2013-14 (Revised Estimate). Total production of rice in the State was , thus, marginally 0.56 percent more during 2014-15 compared to previous year production despite overall rainfall in the State was (-) 11.0 percent deviated from normal during the kharif season.

The production of total Pulses reported 5.8 percent increase with 1.10 lakh MT in 2014-15 compared to 1.04 lakh MT in 2013-14. This increasing trend of production of total Pulses continued since 2005-06. The total Oilseeds production, on the other hand, recorded 10.21 percent increase during 2013-14 compared to the previous year's production.

## IRRIGATION

The achievements made by Irrigation Department in creation of additional irrigation potential as well as potential utilised was not much encouraging. Out of the Gross Cropped Area of 41.74 lakh hectares of the State, the Irrigation Department alone created potential of 9.07 (appox) lakh hectares up to March, 2015 by operating both completed and ongoing irrigation schemes of which 2.78 lakh hectares through both Major and Medium Irrigation Projects and the rest 5.28 lakh hectares through Minor Irrigation Schemes. Out of the 6.28 lakh hectares of created potential under Minor Irrigation Sector, a potential of 4.79 lakh hectares was created through the Govt. Minor Irrigation Schemes executed by the State Irrigation Department and the rest 1.49 lakh hectares through Shallow Tube Wells (STWs) and Low Lift points (LLPs) installed by the Assam State Minor Irrigation Development Corporation (ASMIDC) Limited [Now merged with the State Irrigation Department]. The State Agriculture Department has also created irrigation Potential of 11.27 lakh hectares till the end of 2014-15 through the Shallow Tube wells and Low Lift Points of which 7.33 lakh hectare area under utilisable/assured irrigation.

## FISHERY

The contribution of Fishery sector to State Domestic Product is very nominal and it is estimated at around 3.0 percent. Despite existence of vast water resources suitable for pisciculture in the State covering an area of 4.77 lakh hectares (including River Fisheries) the fish production is showing a sluggish growth. Fish production in the State has reached the level of 282.7 thousand tonne in 2014-15 which is about 6.0 percent more than the previous year. However, the current requirement of fish is 325 thousand tonne. The gap between present production and requirement is partially met by importing fish from other states. The present per capita availability of fish is about 9 Kg which is far below the minimum percapita nutritional requirement of 11 kg.

With a view to increase per capita availability of fish and to narrow down the production-requirement gap, State Fisheries Department has adopted a number of positive interventions and has given special emphasis for scientific fish farming in beels and community tanks through awareness, training, government support and subsequent bank linkage. Strategies have also been formulated for sustainable development of the fisheries sector.

## MILK AND MEAT PRODUCTION

The volume of total milk production of the State for the year 2014-15 was estimated at 873 million liters as against 857 million liters in the previous year. The growth of milk production, thus, increased by 1.9 percent over the previous year. Despite increase in milk production in the State over the years, the estimated per capita/per day milk availability remained more or less at the same level due to increase in population. The estimated per capita/per day milk availability of milk was 74 ml during the year 2014-15 which was at the same level when compared with the per capita/per day availability of milk during the previous year. Of the total volume of milk production indigenous cattle milk is observed to have constituted 54.41 percent of the total milk production of the State while the contribution of crossbreed cattle milk is 28.19 percent and thus the cattle milk together contributes 82.60 percent to the total milk. Buffalo and goat milk contributes 14.46 percent and 2.94 percent respectively to the total milk production.

Total egg production in the State during 2014-15 was estimated at 4774 lakh numbers compared to estimated 4717 lakh numbers during the previous year. Annual average yield rate of Fowl egg was 105 and 171 numbers per layer/ year for local and improved fowl respectively during the year.

The total meat production during 2014-15 was estimated at 42.60 thousand tons as against estimated 38.34 thousand tons meat production in 2013-14 showing about 11.11 percent increase in meat production over the previous year.

## INDUSTRY AND INDUSTRIAL GROWTH

During the last three years (2012-2015), the Industry sector grew at an average growth of 1.86 percent calculated as per the new base 2011-12. The period started with a negative growth of 2.20 percent during 2012-13 followed by high growth of 6.03 percent during 2013-14 mainly contributed by a high growth of 21.56 percent in the construction sector and again slowed down in 2014-15 to an annual average growth of 2.28 percent. The low growth during the last three years is due to poor performance of Mining and Quarrying that grew with a negative annual average growth of 5.40 percent.

During the year 2014-15, production of Limestone increased substantially by 227 percent followed by Coal (19.85%), Sulphur (8.62%) and Natural gas (2.67%). Production of Crude oil decreased by (-) 5.74 percent during 2014-15 as against (-) 2.94 percent during 2013-14 over the previous year.

Creation of environment for industrialization by setting up Industrial infrastructure in the perspective of industrial development and attract investment through proper planning is the prime objective of the State Government. To achieve the goal the department is creating a good numbers of infrastructural facilities as well as upgrading the existing ones located in different districts of the state. Infrastructural facilities in the form of Export Processing Industrial Park (EPIP), Industrial Infrastructure Development Centre (IIDC), Growth Centers, Food Processing Industrial Park, Industrial Estates, Industrial Areas, and Commercial Estates etc are spreading throughout the State.

At present, there are 20 Industrial Estates, 8 Mini Industrial Estates, 17 Industrial Areas and 12 Growth Centres in the State where 722 numbers of Industrial units are functioning. One Export Promotion Industrial Park (EPIP) has also been established with world class infrastructure at Amingaon in Kamrup district where 47 numbers of industrial units are producing some export quality product of various kinds. In addition, 11 nos. of Industrial Infrastructure Development (IID) Centre in 11 different districts and 3 numbers of Industrial Growth Centre, one Food Park at Chaygaon in Kamrup District and one North East Mega Food Park at Nalbari District have been established.

There are 41434 SSI/MSME units in Assam and provided employment to 2.35 lakh persons till the end of March 2015. The Table – 11.3 shows some annual statistics in respect of setting up of SSI/MSME units upto 31-03-2015. It is evident from the table that average employment per unit of manufacturing enterprises in Assam is around 7(seven) person during the period 2005-06 to 2014-15 and average investment per unit is Rs.14.09 lakh.

## TEA –THE PLANTATION CROP

The Tea industry occupies an important place in Assam and plays a very special role in the State economy. The first Indian tea produced in Assam was sent to United Kingdom for public sale in the year 1838. Although the tea cultivation was extended to other parts of the country between 50's and 60's of the last century, as of today, Assam Tea has maintained its international reputation and commands significant share in the World Tea Market. The total area under tea cultivation in Assam is accounting for more than half of the country's total area under tea. In addition to existing big & large tea gardens owned by reputed both Indian and multinational Companies, the profession of tea plantation in the State has been taken up by common people as business venture at present, especially by unemployed youths. The tea industry in Assam also provides average daily employment to more than 6.86 lakh persons in the State, which is around 50 percent of the total average daily number of labour employed [on an average 11.1 lakh labour employed per day] in the country.



## RUBBER PLANTATION

The rubber cultivation has gained its popularity in Assam due to congenial agro-climatic condition as well as its eco-friendly environment. The Rubber Board has identified Assam as a "Potential State" from the "productivity" point of view as the State too has ample scope of rubber plantation. Considering the said conditions, the Rubber Board has planned to enhance rubber plantation area to 2 lakh hectares at the end of Twelfth Five Year Plan from the 28102 hectare at present to cope with the growing demand of rubber in the country which is expected to touch 1.78 lakh MT at the end of 2025. The area under rubber cultivation has grown from 16.5 thousand hectares in 2006-07 to 42.1 thousand hectares in 2014-15. The tapping area as well as production of rubber has also been increased considerably during the same period.

## HANDLOOM AND SERICULTURE

This Sericulture industry has undergone a number of changes with the changes in loom, fabric, design, technology etc. Non-mulberry silk in general and Muga silk in particular has been closely associated with the rituals and traditions of Assam and thus, silk production and its usage has been an important household activity in the State over the years. Muga Silk and Eri Silk have good demand in the national and international market. Rearing of Eri, Muga and Mulberry silkworm are playing an important role in the economic development of a large section of rural population of the State. It is practiced in 11281 villages at present and provides employment to 6.5 lakh families of the State.

The production of silk in the State was 2497 MT during the year 2014-15 which is 7.52 percent less than the previous year. During the year, a decrease in production has been noticed in respect of Eri Raw Silk (-7.89 percent), Mulberry raw silk (-2.2 percent) and Muga Raw Silk (-0.78 percent) over the previous year. The total area under Silkworm Food Plants recorded decrease from 33790 in 2013-14 to 15417 in 2014-15.

The Handloom sector in Assam has gradually grown to the expected level for commercial production. During 2014-15, there were 19.48 lakh weavers in the State out of which 15.30 lakh were part time weavers and 4.18 lakh whole time weavers. Number of Handloom demonstration circle were 221 and 14273 numbers of villages were covered under the activity. During the year, under Centrally Sponsored Scheme, 56354 numbers of weavers were covered under the Health Insurance and 4034 weavers were given Weavers Credit Card.

## FOREST

The forest cover in the state, as per India State Forest Report 2013 is 27671 sq.km which is 35.28 percent of total geographical area of the State. The total forest cover of the state is 2 sq.km less in 2013 compared to the figure published in the State Forest Report 2011 [According to the State Forest Report 2011 the forest cover of Assam was 27,673 sq km of the State's geographical area]. This decrease in forest cover in the State, according to the assessment report, is due to encroachment in forest land, biotic pressure and shifting cultivation.

The Report also shows that of the total forest area, Reserved Forests and unclassed forests constitute 66.58 percent and 33.42 percent respectively. The reserved forest area constitutes around 18 per cent and total forest area excluding unclassed forest constitutes around 25 per cent of the total geographical area of the State.

In terms of forest canopy density classes, the State has 1,444 sq km very dense forest, 11,345 sq km moderately dense forest and 14,825 sq km open forest. There was depletion of 59.0 sq.km of moderately dense forest cover in the State and an addition of 57.0 sq.km open forest during the assessment period 2011 and 2013. Besides forest cover, there is 1582 sq.km tree cover in the state as per report and thus total of forest cover and tree cover is calculated at 37.29 percent of the total geographical area of the State and 3.70 percent of the total forest and tree cover of the country. The per capita forest cover and tree cover in the state is also calculated at 0.094 hectare.

## POWER

Growth in the consumption of energy is linked to the growth of the economy, modernisation, urbanisation and improvement of quality of life of the people living in a State or a Country. The Central Electricity Authority (CEA) data shows that the Northeast of India has hydro power

potential of 63,257 MW or 43 percent of the total assessed hydro power of the Country. Among the north-eastern states, Assam has a capacity to produce 680 MW hydro power. The 18th Electric Power Survey of India was undertaken by Central Electricity Authority (CEA) to forecast electric Energy Requirement and Electric Load and Power Station Bus Bars (Utilities only) for the Twelfth Five Plan (2012-13 to 2016-17) for all States/Union Territories of India. As per the Survey report by the end of 12<sup>th</sup> Plan period, the projected energy requirement for Assam is 8947 MU and Peak Electric Load is 1817 MW.

The population census of India, 2011 report reveal that 37.0 percent households of Assam are using electricity as a source of lighting compared to 67.0 percent households of all India. The rural-urban differential of use of electricity as a source is very high in Assam. Only 28.0 percent rural households use electricity for lighting purpose in comparison to 84.1 percent urban households in Assam. According to the Assam Power Distribution Company Limited the total number of consumers in the State during the year 2013-14 were 2498260 of which 2330093 were domestic consumers and 168167 commercial consumers. The number of consumers in the State has increased by 37.0 percent during the period from 2010-11 to 2013-14. The growth of domestic consumers during the same period was 41.0 percent.

The status of power generation in the state is not satisfactory from the point of power requirement of consumers is concerned. The installed capacity of generating plants at present in the State is 376.7 MW which include Coal, Hydel and Gas plants of the State. There has always been a shortage of power supply in the State, due to less generation of power in comparison to requirements of consumers. However, gross power generation in the State during the year 2014-15 has shown some improvement and generated 1865 MU or 2.68 percent more compared to gross power generation 1845 MU in the previous year, 2013-14.

The energy requirement in the State has been worked out at 9104 Million Units (MU) during the year 2014-15 against 7434 Million Unit (MU) in the previous year but the availability of energy during the periods was 7165 MU and 6965 MU respectively. However, the power generation was 1895 MU and 1845 MU during the years 2014-15 and 2013-14 respectively. The peak electricity demand in the State during the period 2010-11 to 2014-15 has increased by 33.62 percent. The shortage of power has increased from 144 MW in 2013-14 to 229 MW in 2014-15. However, for better improvement of the power supply position in the State, various projects have been undertaken and are in progress.

As regards to rural households electrification Assam is also lagging behind. Till the end of the 2014-15 the State could be complete electrification of 86 percent.

Energy loss during transmission and distribution is a matter of concern for an energy deficit State like Assam. The aggregate transmission and commercial losses in the State is gradually come down from 29 percent in 2012-13 to 24 percent during 2014-15. The situation has been gradually improving with the adoption of some precautionary measures.

## EMPLOYMENT SCENARIO

The employment scenario according to the last three Population Census reports recorded that the proportion of main workers to total population in Assam has decreased from 31 percent in 1991 to 28 percent in 2011 although the figures in absolute number has increased by 24 percent between the period 1991 to 2011. On the other hand, the proportion of marginal workers shows an increasing trend both in percentage share and absolute number during the same period. The size of the educated job seekers in the State is considerably growing higher is a major areas of concern. As per records of the live register of Employment Exchanges the registered educated job seekers stood at 1472859 during 2013 and recorded an increase of 4.31 percent over 2012. The percentage of educated job seekers constitutes about 88 percent of the total job-seekers.

The result of the Fourth Annual Employment Unemployment Survey, 2013-14 conducted by the Labour Bureau reveals that the Labour Force Participation rate in respect of the age-group 15 years and above according to usual status approach for both principal status (ps) and subsidiary status (ss) in Assam is 63 percent in rural areas, 51 percent in urban areas and 61 percent taking urban and rural areas as a whole against the all India rate of 59 percent, 48 percent and 56 percent respectively.

The LFPR of the State in the age group 18-29 years is 60.2 percent of which 78.9 percent are male and 39.7 percent are female which is higher than the All-India rate of 52.0 percent of which 70.1 percent for male and 29.4 percent for female.

Out of the overall LFPR of 61 percent, the Scheduled caste participation rate is 63 percent, Scheduled tribe is 66 percent, Other backward classes are 62 percent and others 58 percent.

## RURAL DEVELOPMENT

Poverty alleviation and economic upliftment of rural poor is the basic objective of the Panchayat and Rural Development Department of Assam for which various national and State level flagship schemes have been implementing by the this department. For eradication of poverty the Panchayat wing has been implementing various National and State level flagship schemes viz. Indira Gandhi National Old Age Pension Scheme, National Family Benefit Scheme, Annapurna, Chief Minister's Assam Bikash Yojona, Backward Region Grant Fund, etc. The Rural Development, on the other hand, is also implementing programmes like IAY, MGNREGA etc for upliftment life and generate and employment of the rural poor of the State.

During 2014-15, 105572 numbers of IAY houses were constructed against the annual target of 183171 numbers of houses which includes more than 11,442 nos. of incomplete IAY houses in the previous year completed in 2014-15. The Department completed 83148 numbers of IAY houses against the annual target of 138698 during 2013-14. As far as a financial achievement is concerned an amount of Rs.1229.67 crore has been utilised during 2014-15 as compared to the utilization of Rs.587.31 crore in during 2013-14.

Under the MGNREGA, the flagship programme for employment generation, an amount of Rs.583 crore have been utilised in 2014-15 as compared to the utilisation of Rs.700.70 crore in the previous year. During the year, 2014-15 208.17 lakhs mandays have been generated as against 299.16 kakhs mandays during 2013-14. Till the end of March, 2014 more than 42.20 lakh (cumulative) nos. of rural households have been provided job cards as compared to 41.48 lakh during 2013-14. During the year 2014-15, 208.17 lakh mandays have been generated, out of which 58.73 laks mandays was generated by women.

## BANKING

According to the Reserve Bank of India, the number of reporting Bank Offices of all Scheduled Commercial Banks in Assam has been increased to 2047 as on March 2015 from 1262 as on March 2007. With the increase in the bank networking, the dependence per bank offices in Assam has been considerably decreased over the years and reduced from 62.15 Sq.km as on March 2007 to 38.32 Sq.km as on March 2015. However, average population covered per bank branch office in Assam was calculated at 15.24 thousand (based on Population Census 2011) as on March, 2015 compared to All India average of 10.5 thousand during the same period.

The expansion of banking facilities in the State has augmented not only in respect of volume of deposits but also in respect of disbursement of credit. The aggregate deposit with Scheduled Commercial Banks in Assam, which was Rs.85069 crore in March 2014, has increased to Rs.97378 crore in March 2015. The total volume of credit disbursed by the banks has been increased to Rs.35911 crore in March 2015 from Rs.31713 crore in March 2014 thereby recorded an impressive growth of 13.24 percent. During 2014-15, the growth deposits and credit in the State has recorded 14.5 percent and 13.24 percent respectively compared to the previous year.

The Credit-Deposit ratio of all Scheduled Commercial Banks in Assam is marginally reduced to 36.9 in 2014-15 (ending March 2015) compared to 37.3 percent during the year 2013-14.

## ROADS AND TRANSPORT

Road infrastructure is bare necessity for speedy development of a State. The road network in Assam comprises of total 57516 Km. of roads consisting of 3834.68 Km. National Highways, 2530 Km. State Highways, 4379 Km. Major District roads, 1409 Km. Urban roads, 36544 Km. Rural Roads and the rest are Panchayats & Other Non PWD Roads. At present 48696.68 Km. road network including 3834.68 Km. National Highways [of which 259.543 Km. under construction and 838.88 Km. newly declared NH Way] is maintained by the State PWD. Excluding the National Highways, 24092 Km. out of the total 44862 Km. road length maintained by the PWD is

blacktopped. As against availability of large road net work in the State, the existence of large number of semi-permanent timber bridges hamper all weather road communication in many areas within the State territory. The effort of the State PWD helps to bring down the number of semi-permanent timber bridges from 5450 in 2001 to 1037 in 2015. In addition construction of the number of RCC bridges has been increased from 309 in 2001 to 4370 in 2015. At present 1465 RCC bridges are under construction.

With the improvement of road connectivity and road conditions the rapid increase of the number of motor vehicles on road in Assam has been observed over the past few years. The on road vehicle population in the State has reached 2384576 as on March 2014 compared to 1725222 as on March 2014. An additional of 399696 or 20.1 percent on road motor vehicles was added during the year 2014-15 over 2013-14. The density of motor vehicles in Assam was 30.4 per Sq. Km during the year 2014-15 as against 25.3 vehicles per Sq. Km during the year 2013-14.

## TELECOMMUNICATION

The status of telecom facilities in Assam has shown considerable improvement over the years. It is evident from the status of telecom facilities in Assam that the overall tele-density (Telephone per 100 of population) of the State as on December 2014 was 51.90 as against the national average 77.59. During the year 2013-14, the overall tele-density of Assam was 48.74 as against the national average of 75.23. While the urban tele-density of Assam stood at 129.05 as on December, 2014 compared to 126.05 as on March, 2014, the rural tele-density was only 37.41 as on December, 2014 and seems to be slightly higher over the previous year (34.36). However, in respect of overall tele-density as well as urban tele density the position of Assam stood far below the national average [overall 77.23 and urban 147.75 as on December, 2014. In respect of rural segments also tele-density of Assam was considerably below the national average (rural-46.14) during the same period.

According to the Annual Report 2014 of the Department of Telecommunications, Govt. of India, there were 16611629 telephones in Assam out of which 59.48 percent were in rural areas., the total telephones in Assam as on December, 2014 share only 1.76 percent total telephones in the Country.

In respect of wireless phone [mobile segment] connections, there were 1.64 crore mobile subscribers in Assam as on December 2014. BSNL alone provides around 7.3 percent of the total mobile connections in the State till December 2014. The private mobile service operators, on the other hand, provided about 1.51 crore mobile connections as on December 2014. The share of mobile connections provided by the private operators has been increased from 91.6 percent as on March 2013 to 92.2 percent as on December 2014.

## PRICE AND PRICE SITUATION

The All India WPI for all commodities (Base: 2004-05) during 2014-15 was 181.2, showing an increase of 2.0 percent over 177.64 in 2013-14 against an increase of 5.98 percent in 2013-14 over 2012-13. The WPI for food articles was 253.4 percent in 2014-15, an increase of 6.1 percent over 238.9 in 2013-14 as against an increase of 12.8 percent in 2013-14 over the previous year.

The Directorate of Economics and Statistics, Assam compiles the Wholesale Price Index of Agricultural Commodities with base 1993-94=100 in Assam. The WPI of agricultural commodities during 2014-15 was 391 as compared to 336 in 2013-14 showing an increase of 16.37 percent against an increase of 13.51 percent in 2013-14 over the previous year.

The Consumer Price index number with base 2001=100 for working class population for the State is compiled by the Directorate of Economics and Statistics, Assam taking into account the weighted average of the indices of the three centres viz. Guwahati, Silchar and Tinsukia. The annual average of Consumer price Index for Working Class Population (Base 2001=100) in Assam increased by 5.38 percent in 2015 over 2014 as compared to 13.20 percent in 2014 over 2013. During 2015, the Centre-wise increase is comparatively high in Tinsukia (10.33%) followed by Guwahati (5.61%) and Silchar (1.65%).

## EDUCATION

The role of education for socio-economic development of the society is well recognized. With the help of target oriented interventions, the number of educational institutions has increased over the years. Literacy Rate of Assam is 72.19 with male literacy rate 77.85, which is behind the National rate of 72.99 and male literacy rate of 80.89 respectively. The female literacy rate with 66.27 stood above the National rate of 64.64.

The Gross Enrolment Ratio (GER) at Primary Level during 2013-14 and 2014-15 in Assam is 113.43 and 144.96 against 101.36 and 100.08 respectively for all States. The GER at Upper Primary Level during 2013-14 and 2014-15 in Assam was 93.13 and 95.86 compared to 89.33 and 91.24 for all States respectively.

The Pupil-Teacher Ratio in the Primary and Upper Primary Levels of the State during the year 2014-15 was 27 and 16 respectively as against the all States ratio of 27 and 29 respectively. The graph below the PRT of Primary and Upper Primary in the State and at All State level during 2013-14 and 2014-15 as per Flash statistics: Elementary Education in India Progress towards UEE, 2014-15.

The average annual drop-out rate at Primary level in the State during 2014-15 as per DISE, 2014-15 was 7.44 against the all India drop-out rates of 4.34. At the Upper Primary level the average drop out rate in the State during 2014-15 was 7.05 against the all India rate of 3.77. The drop-out rate at the Elementary Level (Class- I to Class-VIII) in the age group 6 years to 14 years in the State was 7.32 as against the all India rate of 4.15 in 2014-15.

## HEALTH AND FAMILY WELFARE

The status of Health infrastructure in the State is improving over the years. At present there are 25 Civil Hospitals, 13 Sub-Divisional Civil Hospitals, 1014 PHCs, 62 FRUs, 151 CHCs and 4621 Sub Centres with 18006 numbers of total beds in the State at the end of 2014. The number of available Government doctors in the State is 5004 including Ayurvedic and Homeopathic doctors in 2014.

MDGs laid down a set of numerical & time bound targets including improvement of maternal health and reduction of infant mortality as a measure of human and social development achievements in the world. The Maternal Mortality Ratio of Assam State [328 per 1, 00,000 live birth (2010-12)] is the highest in the country against the corresponding national figure 178 for the same period. Increasing medical attention at the time of delivery either at Govt. hospitals or at private hospitals helps to lower the maternal deaths in the State. During the period (1997-2012), the relative overall decline of MMR in Assam is 42 percent as against 55 percent in the Country. Though the rate is still very high than that of the Country but due to some improvement in maternal health at birth in the State, the gap between the relative overall decline of MMR of the State and the Country during the period 2004-12 has minimised. The Infant Mortality Rate (IMR) of the State is also showing consistent downward trend from 74 in 2001 to 54 in 2013. However, the IMR of Assam stands higher compared to the national level figure of 42 in 2012. In respect of under 5 mortality rate Assam is far behind the national average. The Under 5 Mortality Rate for Assam is 73 in 2013 compared to all India 49 during the same period.

The overall economy of the state although shown consistent improvement, the continued law and order situation due to prolonged insurgency, debt burden, unemployment problems, power shortage, recurrence of natural calamities in the shape of flood, drought etc., stands as constraints towards achieving expected development. However, the State Government is pursuing for all round development by adopting various precautionary interventions so that the State economy can grow towards positive direction.

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## CHAPTER – II

### POPULATION

Assam is situated in the North-East region of India. It borders seven States namely Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and West Bengal and two countries namely Bangladesh and Bhutan. The geographical area of the State is 78,438 sq. km of which 98.4 percent is rural. Assam shares about 2.4 percent of the total geographical area of the country and provides shelter to 2.6 percent population of the Country. Most of the State's population lives in the lush and verdant valleys of its two major river systems in the twenty four districts of the Brahmaputra valley and the three districts of the Barak valley. Less densely populated two hill districts - Karbi-Anglong and the Dima Hasao, separated the two valleys. For administrative and revenue purposes, the State has 27 districts including Kamrup (Metro) district and four districts under the Bodoland Territorial Council (BTC) areas viz. Kokrajhar, Baska, Chirang and Udalguri.

#### DECADAL GROWTH OF POPULATION IN INDIA AND ASSAM IN PERCENTAGES:

As per Census of India, 2011 the total population of Assam is 3,12,05,576 of which 1,59,39,443 males and 1,52,66,133 females. The decadal growth rate of the State's population for the decade 2001-2011 has been worked out as 17.07 percent as against 17.68 percent for India as a whole.

#### DENSITY OF POPULATION (TOTAL PERSONS PER SQ. KM.) OF ASSAM AND INDIA:

The density of population in Assam has increased from 340 persons in 2001 to 398 persons in 2011 census. Thus, on an average 58 more people inhabit every square kilometer in the state compared to a decade ago. The population density of India has gone up to 382 persons in 2011 census per square kilometer from 325 persons in 2001.

TABLE – 2.1  
POPULATION TREND IN ASSAM AND INDIA

| Year | Population (in lakh) |       | Percentage Decadal Variation |       | Density (Person per Sq.Km.) |       |
|------|----------------------|-------|------------------------------|-------|-----------------------------|-------|
|      | ASSAM                | INDIA | ASSAM                        | INDIA | ASSAM                       | INDIA |
| 1901 | 33                   | 2384  | -                            | -     | 42                          | 77    |
| 1911 | 38                   | 2521  | 17.0                         | 5.8   | 49                          | 82    |
| 1921 | 46                   | 2513  | 20.5                         | 0.3   | 59                          | 81    |
| 1931 | 56                   | 2789  | 19.9                         | 11.0  | 71                          | 90    |
| 1941 | 67                   | 3186  | 20.4                         | 14.2  | 85                          | 103   |
| 1951 | 80                   | 3611  | 19.9                         | 13.3  | 102                         | 117   |
| 1961 | 108                  | 4392  | 35.0                         | 21.5  | 138                         | 142   |
| 1971 | 146                  | 5481  | 35.0                         | 24.8  | 186                         | 177   |
| 1981 | *180                 | 6833  | *23.4                        | 24.7  | *230                        | 230   |
| 1991 | 224                  | 8463  | 24.2                         | 23.9  | 286                         | 267   |
| 2001 | 266                  | 10270 | 18.9                         | 21.5  | 340                         | 325   |
| 2011 | 312                  | 12106 | 17.1                         | 17.7  | 398                         | 368   |

\*Interpolated.

Source: Census of India 2011



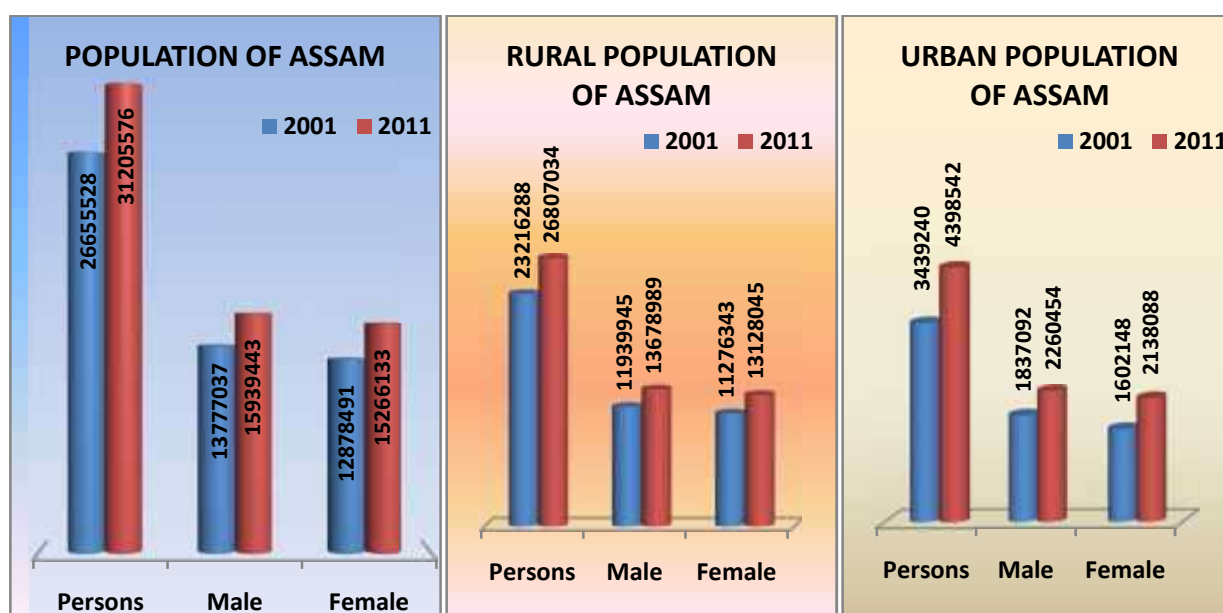
Some important features of population of Assam as per Census 2001 and 2011 are shown in the following Table.

TABLE – 2.2  
POPULATION FEATURES AT A GLANCE OF ASSAM

| Particulars                            | Unit                   | 2001 Census | 2011 Census |
|--|------------------------|-------------|-------------|
| Population                             | Lakh                   | 267         | 312         |
| Decadal Growth                         | Percent                | 18.92       | 17.1        |
| Change in percentage of decadal growth | Percent                | (-) 5.32    | (-)1.8      |
| Density                                | Per Sq. Km.            | 340         | 398         |
| Sex-Ratio                              | Females per 1000 males | 935         | 958         |
| Literacy                               | Percent                | 63.25       | 72.19       |
| (a) Male                               | Percent                | 71.28       | 77.85       |
| (b) Female                             | Percent                | 54.61       | 66.27       |
| Urban Population                       | Percent                | 12.90       | 14.09       |
| (a) Male                               | Percent                | 53.41       | 51.39       |
| (b) Female                             | Percent                | 46.58       | 48.61       |
| Rural Population                       | Percent                | 87.10       | 85.90       |
| (a) Male                               | Percent                | 51.43       | 51.03       |
| (b) Female                             | Percent                | 48.57       | 48.97       |
| S.C. Population                        | Percent                | 7.40        | 7.15        |
| S.T. Population                        | Percent                | 12.83       | 12.45       |

#### POPULATION: RURAL AND URBAN:

As per Population Census 2011, of the total population in Assam rural population was 86 percent, which is much higher than that of All-India rural population of 69 percent. There is a decrease in the proportion of rural population in the state from 87 percent in 2001 census to 86 percent in census 2011. However, there is a increase in the proportion of Urban population in the State from 12.9 percent in 2001 census to 14 percent in census 2011.

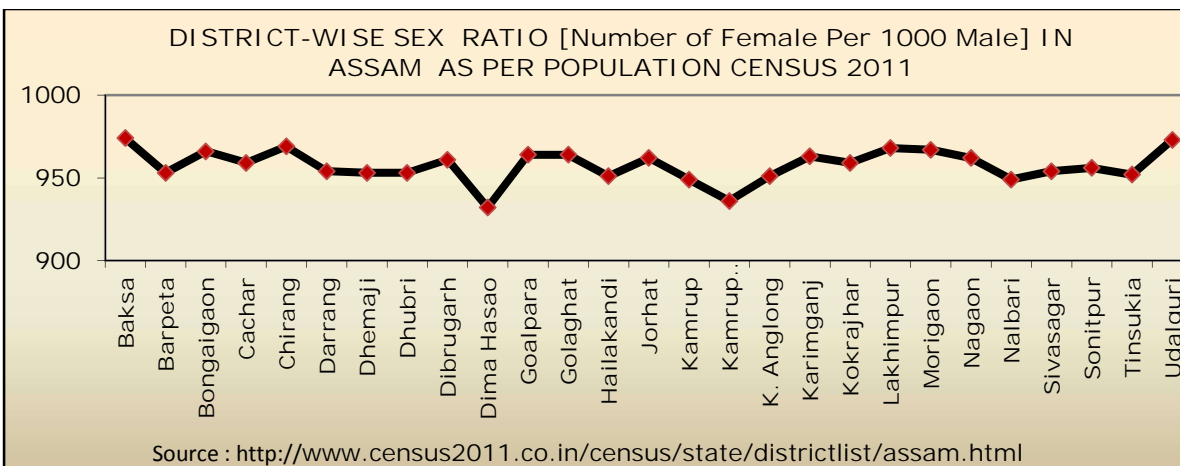
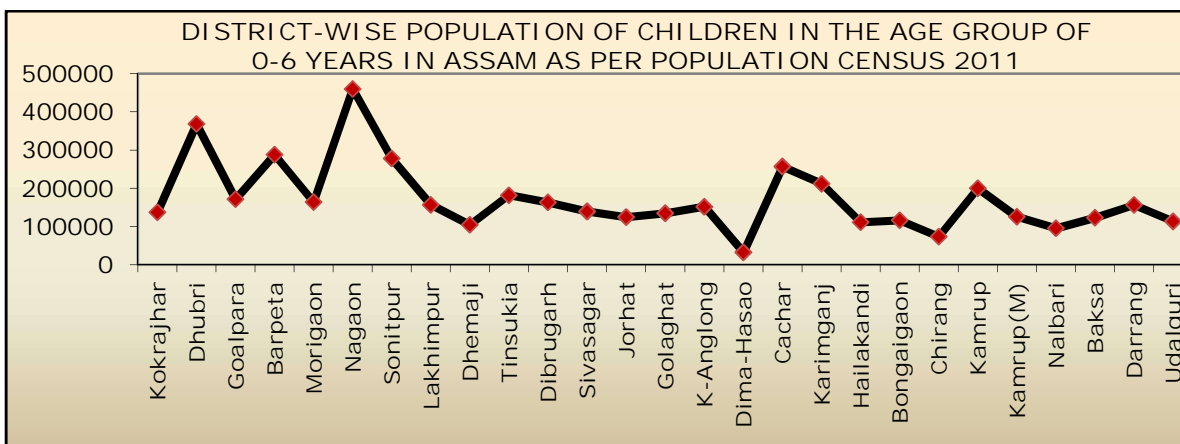
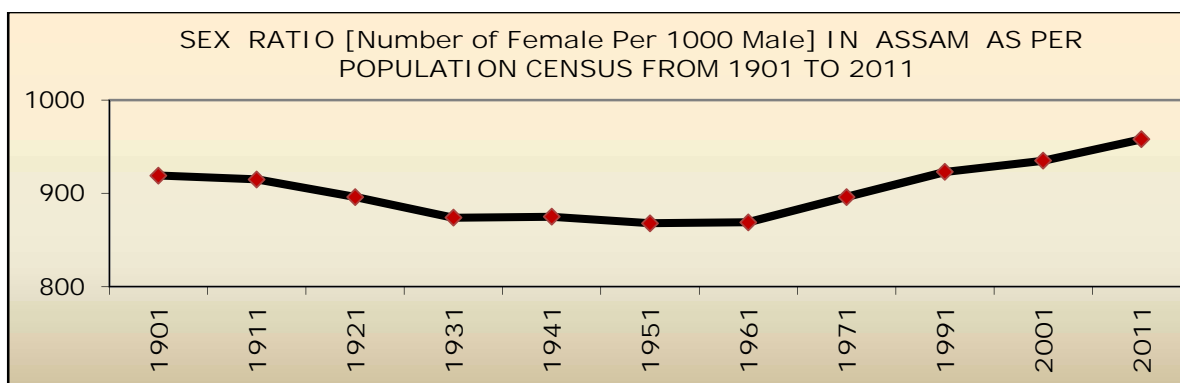


## SEX RATIO

The sex-ratio in the State shows some an improvement from 935 in 2001 to 958 in 2011. The sex ratio for all ages for rural area was calculated at 960 and for urban area were 948. The sex ratio in the age-group 0-6 years is the vital indicator of future sex composition in the population in the State. Child sex ratio in the State was 962 female per 1000 male child as per Census, 2011. The corresponding sex ratio in the State for the age-group 0-6 years was 967 in 2001 and 975 in 1991.

On the other hand, sex ratio at birth (0-1 year) in Assam as per 2011 Census was calculated at 957 female per 1000 male. The sex ratio at birth for rural area was 958 and for Urban were 948. District wise analysis of sex ratio at birth shows that Dima Hasao district recorded highest sex ratio of 985 and the lowest is recorded in Dhemaji District with 922.

The sex ratio of Scheduled Castes and Scheduled Tribes population in Assam were 948 and 985 respectively in 2011. In respect of rural and urban divide, the sex ratio for Scheduled Castes population is 945 and 963 respectively and for Scheduled Tribes population the figures are 984 and 996 respectively.



Source : <http://www.census2011.co.in/census/state/districtlist/assam.html>



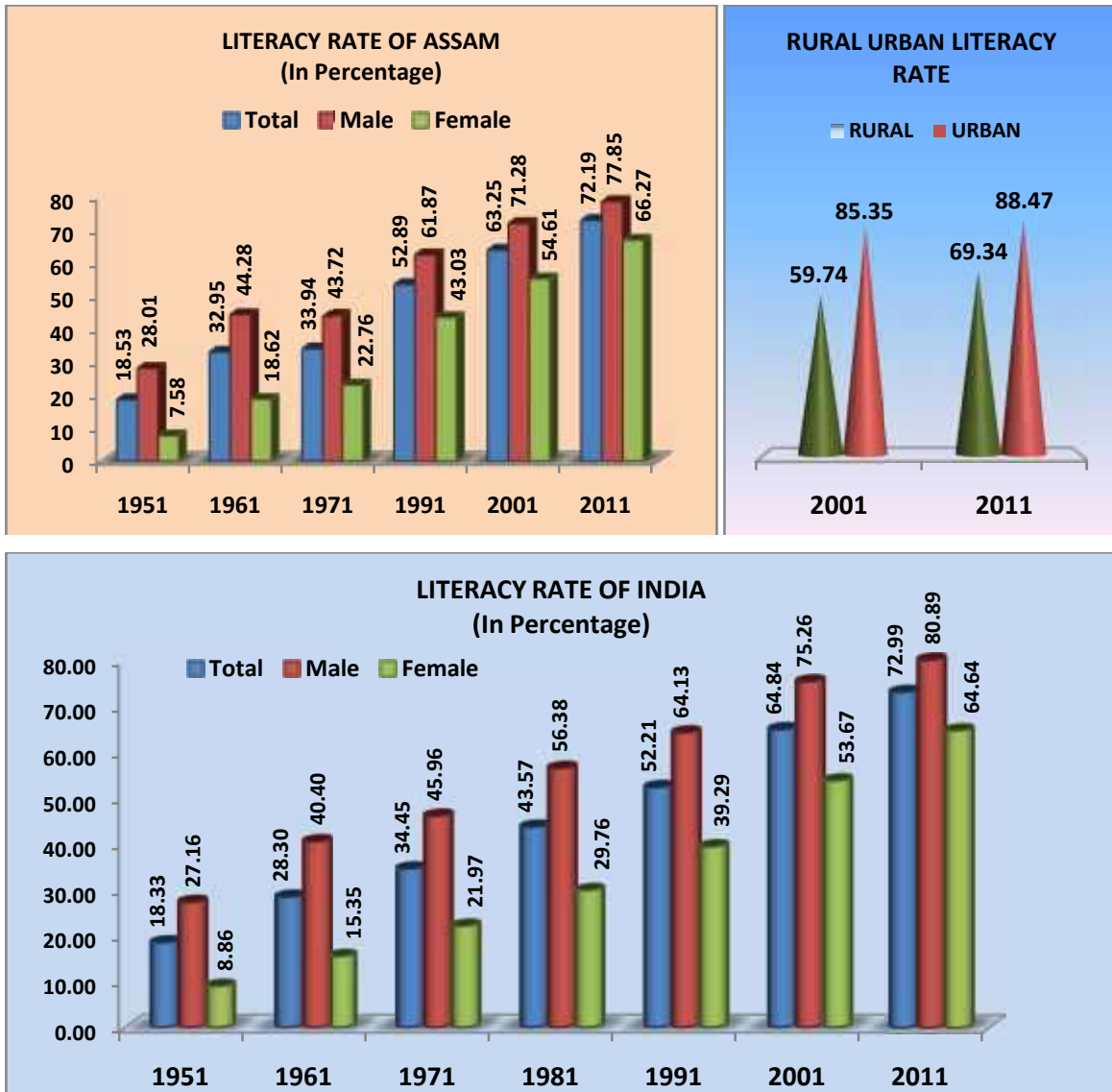
### LITERACY RATES BY SEX IN ASSAM

The growth in literacy rates, in Assam shows an encouraging trend. As per, Census 2011, there is an increase of 72.19 percent being 77.85 percent for males and 66.27 percent for females. The literacy rates for rural and urban areas in Assam was found to be 69.34 percent and 88.47 percent respectively. The literacy rates for India as a whole had increased from 65 percent to 73 percent with male and female literacy rates being 80.09 percent and 64.64 percent respectively. The literacy gap between male and female is calculated as 11.58 percent. This gap of literacy found in rural and urban areas is 12.3 and 6.9 respectively.

TABLE – 2.3  
LITERACY RATE: ASSAM AND INDIA  
(Figure in %)

| State | 1991   |       |        | 2001   |       |        | 2011   |       |        |
|-------|--------|-------|--------|--------|-------|--------|--------|-------|--------|
|       | Person | Male  | Female | Person | Male  | Female | Person | Male  | Female |
| Assam | 52.89  | 61.87 | 43.03  | 63.25  | 71.28 | 54.61  | 72.19  | 77.85 | 66.27  |
| India | 52.21  | 64.13 | 39.28  | 64.83  | 75.26 | 53.67  | 72.99  | 80.89 | 64.64  |

Source: Registrar General of India



## ASSAM STATE HIGH LIGHTS, AS PER 2011 CENSUS

After completing the Population Census 2011, the Census Directorate of Assam highlighted the following observations:

During 1971-2011, the growth of population in Assam was 113.12 percent against the All-India growth rate of 120.77 percent during this period.

- Among the states of India, Assam ranks 14<sup>th</sup> regarding size of population.
- Among the states of India, Assam ranks 15<sup>th</sup> regarding density of population.
- Among the states of India, Assam ranks 14<sup>th</sup>, regarding sex-ratio of population.
- Among of states of India, Assam ranks 26<sup>th</sup>. Regarding literacy rate of population.

Some State highlights in 2011 census, such as highest and lowest population, percentage of growth, literacy rate, sex ratio and density among the districts of Assam may be seen in the following.

| Item                            | Highest                  | Lowest               |
|---------------------------------|--------------------------|----------------------|
| Total Population                | Nagaon (826,006)         | Dima Hasao (213,529) |
| Total Rural Population          | Nagaon (2,457,906)       | Dima Hasao (152,302) |
| Total Urban Population          | Kamrup Metro (1,044,832) | Baksa (12,173)       |
| Percentage of Population Growth | Total                    | Dhubri (24.40)       |
|                                 | Rural                    | Dhubri (27.13)       |
|                                 | Urban                    | Nalbari (200.34)     |
| Literacy Rate                   | Total                    | Kamrup Metro (88.66) |
|                                 | Rural                    | Jorhat (81.36)       |
|                                 | Urban                    | Hailakandi (94.67)   |
| Sex-ratio                       | Total                    | Morigaon (974)       |
|                                 | Rural                    | Morigaon (975)       |
|                                 | Urban                    | Hailakandi (992)     |
| Density                         | Kamrup Metro (2,010)     | Dima Hasao (44)      |

## POPULATION BY ECONOMIC ACTIVITY

Classification of population by economic activity according to the result of Population Census, 2011 reveal that out of the total population of 31205576 in the State, 11969690 (38 percent) were total workers. Out of the total workers 8687123(72 percent) were main workers and 3282567 (27 percent) were marginal workers. Among the total male workers 82 percent were main workers, 18 percent were marginal workers and among females workers 48 percent were main workers and 52 percent were marginal workers. Out of the total 11969690 workers in Assam, 3138554(26 percent) were Cultivators, 903294 (8.0 percent) were Agricultural labourers, 242071 (2.0 percent) were engaged in Household Industries and 4403204 (37.0 percent) were Other Workers.

Among the total marginal workers (3282567), 923073(28.0 percent) were Cultivators, 942052 (29.0 percent) were Agricultural labourers and 249250 (7.6 percent) were Household Industry workers.

TABLE – 2.4

### DISTRIBUTION OF WORKERS AND NON WORKERS IN ASSAM

| Workers                      | Person   | Male    | Female   |
|------------------------------|----------|---------|----------|
| Total workers                | 11969690 | 8541560 | 3428130  |
| Main workers                 | 8687123  | 7034642 | 1652451  |
| Marginal workers             | 3282567  | 1506918 | 1775649  |
| Cultivators                  | 3138554  | 2698384 | 440170   |
| Agricultural labourers       | 903294   | 705306  | 197988   |
| Household Industries workers | 242071   | 146566  | 95505    |
| Other workers                | 4403204  | 3484386 | 918818   |
| Non workers                  | 19235886 | 7397883 | 11838003 |

Source: State Primary Census Abstract

## BIRTH AND DEATH RATES

The data published in the Sample Registration Bulletins by the Registrar General of India depicts the trend of birth and death rates, natural growth rate and infant mortality rate in the State and it is evident that although there has been a trend of gradual declination, the birth rates, death rates and infant mortality rates in the State were found to be higher than that of the country as a whole,. As per available information received from the Registrar General of India, during the year 2012, the birth rates, death rates and infant mortality rates of Assam have been 22.5, 7.9 and 55 per mille as against 21.6, 7.0 and 42 per mille respectively at all-India level. The Table - 2.5 shows the birth, death, natural growth and infant mortality rates of Assam and India from 2001 to 2012.

TABLE – 2.5  
BIRTH RATE, DEATH RATE, NATURAL GROWTH RATE,  
INFANT MORTALITY RATE OF ASSAM AND INDIA (PER MILLE)

| YEAR | Birth Rate |       | Death Rate |       | Natural Growth Rate |       | Infant Mortality Rate |       |
|------|------------|-------|------------|-------|---------------------|-------|-----------------------|-------|
|      | ASSAM      | INDIA | ASSAM      | INDIA | ASSAM               | INDIA | ASSAM                 | INDIA |
| 2001 | 27.0       | 25.4  | 9.6        | 8.4   | 17.4                | 17.0  | 74                    | 66    |
| 2002 | 26.6       | 25.0  | 9.2        | 8.1   | 17.4                | 16.9  | 70                    | 63    |
| 2003 | 26.3       | 24.8  | 9.1        | 8.0   | 17.2                | 16.8  | 67                    | 60    |
| 2004 | 25.1       | 24.1  | 8.8        | 7.5   | 16.3                | 16.6  | 66                    | 58    |
| 2005 | 25.0       | 23.8  | 8.7        | 7.6   | 16.3                | 16.3  | 68                    | 58    |
| 2006 | 24.6       | 23.5  | 8.7        | 7.5   | 15.9                | 16.0  | 67                    | 57    |
| 2007 | 24.3       | 23.1  | 8.6        | 7.4   | 15.7                | 15.7  | 66                    | 55    |
| 2008 | 23.9       | 22.8  | 8.6        | 7.4   | 15.4                | 15.4  | 64                    | 53    |
| 2009 | 23.6       | 22.5  | 8.4        | 7.3   | 15.2                | 15.2  | 61                    | 50    |
| 2010 | 23.2       | 22.1  | 8.2        | 7.2   | 14.9                | 14.9  | 58                    | 47    |
| 2011 | 22.8       | 22.1  | 8.0        | 7.2   | 14.8                | 14.7  | 55                    | 47    |
| 2012 | 22.5       | 21.6  | 7.9        | 7.0   | 14.6                | 14.5  | 55                    | 42    |

Source: Sample Registration Bulletin, R.G.I., New Delhi

## SLUM POPULATION

As per Census, 2011, there were a total of 31 nos. of towns reporting slum population in the state of Assam, as against a total of 2613 nos. of towns reporting slum population in India as whole. According to Census 2011, slum population was 197,266 nos. out of which males are 101,424 nos. and females are 95,842 nos. of the total population in the state of Assam. The slum population is around 0.63 percent. In the total slum population the child population falling under the age group (0-6 years) is 22,229 nos. with 11,378 nos. of males and 10,851 nos of females. The corresponding, all India level of child population (0-6 years) shows a total of 8,082,743 nos. of slum population with 4,204,451 nos. of males and 3,878,292 nos. of females respectively. From the total urban population in Assam, the slum population is about 4.5 percent. As per census 2011, the all India slum population is 65,494,604 nos. with 33,968,203 nos as males and 31,526,401 nos as females.

## LITERACY RATE OF SLUM POPULATION

According to Census 2011, the literacy rates for slum population is 72 percent with 76 percent for males and 68 percent for females. The corresponding figures of literacy rates for All India is 68 percent with 73 percent as males and 62 percent as female literacy rates respectively.

## APPENDIX – 2.1

## DISTRICTWISE DEMOGRAPHIC PROFILE OF ASSAM, 2011 CENSUS

| Sl. No. | District      | Area in Sq. Km. | Population | Rural Population | Urban Population | Population Density per Sq. Km. |
|---------|---------------|-----------------|------------|------------------|------------------|--------------------------------|
| 1       | Dhubri        | 2176            | 1949258    | 1745557          | 203701           | 896                            |
| 2       | Bongaigaon    | 1093            | 738804     | 628994           | 109810           | 676                            |
| 3       | Kokrajhar     | 3296            | 887142     | 832201           | 54941            | 269                            |
| 4       | Chirang       | 1923            | 482162     | 446825           | 35337            | 251                            |
| 5       | Baksa         | 2457            | 950075     | 937833           | 12242            | 387                            |
| 6       | Goalpara      | 1824            | 1008183    | 870121           | 138062           | 553                            |
| 7       | Barpeta       | 2282            | 1693622    | 1546269          | 147353           | 742                            |
| 8       | Nalbari       | 1052            | 771639     | 688909           | 82730            | 733                            |
| 9       | Kamrup (M)    | 955             | 1253938    | 216927           | 1037011          | 1313                           |
| 10      | Kamrup (R)    | 3105            | 1517542    | 1375148          | 142394           | 489                            |
| 11      | Darrang       | 1585            | 928500     | 873006           | 55494            | 586                            |
| 12      | Udalguri      | 2012            | 831668     | 794094           | 37574            | 413                            |
| 13      | Sonitpur      | 5204            | 1924110    | 1750265          | 173845           | 370                            |
| 14      | Lakhimpur     | 2277            | 1042137    | 950804           | 91333            | 458                            |
| 15      | Dhemaji       | 3237            | 686133     | 637848           | 48285            | 212                            |
| 16      | Morigaon      | 1551            | 957423     | 884125           | 73298            | 617                            |
| 17      | Nagaon        | 3973            | 2823768    | 2454234          | 369534           | 711                            |
| 18      | Golaghat      | 3502            | 1066888    | 969152           | 97736            | 305                            |
| 19      | Jorhat        | 2851            | 1092256    | 871722           | 220534           | 383                            |
| 20      | Sivasagar     | 2668            | 1151050    | 1040954          | 110096           | 431                            |
| 21      | Dibrugarh     | 3381            | 1326335    | 1082605          | 243730           | 392                            |
| 22      | Tinsukia      | 3790            | 1327929    | 1063186          | 264743           | 350                            |
| 23      | Karbi-Anglong | 10434           | 956313     | 843347           | 112966           | 92                             |
| 24      | Dima Hasao    | 4888            | 214102     | 151613           | 62489            | 44                             |
| 25      | Karimganj     | 1809            | 1228686    | 1118986          | 109700           | 679                            |
| 26      | Hailakandi    | 1327            | 659296     | 611156           | 48140            | 497                            |
| 27      | Cachar        | 3786            | 1736617    | 1421153          | 315464           | 459                            |
|         | ASSAM         | 78438           | 31205576   | 26807034         | 4398542          | 398                            |

Source : Census of India, 2011.

## APPENDIX – 2.2

## DECADAL PERCENTAGE VARIATION IN POPULATION OF ASSAM

| District      | 1901-1911 | 1941-1951 | 1951-1961 | 1961-1971 | 1971-1991 | 1991-2001 | 2001-2011 |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Dhubri*       | 28.73     | 12.74     | 43.74     | 43.26     | 45.65     | 22.97     | 24.44     |
| Bongaigaon*   | 28.69     | 12.88     | 36.27     | 35.81     | 38.77     | 22.09     | 20.59     |
| Kokrajhar*    | 28.73     | 17.11     | 55.41     | 54.89     | 61.96     | 14.49     | 5.21      |
| Chirang*      | 5.02      | 18.18     | 40.32     | 57.37     | 103.33    | (-) 0.08  | 11.34     |
| Baksa*        | 18.36     | 33.68     | 60.52     | 66.67     | 73.65     | 12.51     | 10.74     |
| Goalpara      | 29.97     | 9.25      | 37.10     | 45.88     | 54.12     | 23.03     | 22.64     |
| Barpeta*      | 18.65     | 16.62     | 34.39     | 33.91     | 40.97     | 19.62     | 21.43     |
| Nalbari*      | 15.24     | 35.15     | 33.56     | 31.79     | 75.78     | 14.21     | 11.99     |
| Kamrup(M)*    | 6.59      | 2.39      | 13.30     | 19.99     | 20.77     | 45.91     | 18.34     |
| Kamrup *      | 10.01     | 17.01     | 45.12     | 44.48     | 81.53     | 14.97     | 15.69     |
| Darrang*      | 22.72     | 18.58     | 40.94     | 36.05     | 89.77     | 22.18     | 22.19     |
| Udalguri *    | 45.60     | 29.13     | 54.04     | 37.85     | 43.03     | 10.02     | 9.61      |
| Sonitpur*     | 23.67     | 22.02     | 41.99     | 33.17     | 68.08     | 18.11     | 15.55     |
| Lakhimpur     | 26.29     | 17.94     | 50.46     | 43.39     | 56.29     | 18.30     | 17.22     |
| Dhemaji       | 26.29     | 17.94     | 75.21     | 103.42    | 107.50    | 19.45     | 19.97     |
| Morigaon      | 15.84     | 36.63     | 37.89     | 37.51     | 50.90     | 21.35     | 23.34     |
| Nagaon        | 15.84     | 36.65     | 35.91     | 38.99     | 51.26     | 22.26     | 22.00     |
| Golaghat      | 16.55     | 19.76     | 26.04     | 30.85     | 58.12     | 14.27     | 12.75     |
| Jorhat        | 16.90     | 14.87     | 24.17     | 17.47     | 33.10     | 14.69     | 9.31      |
| Sivasagar     | 13.41     | 15.98     | 23.36     | 19.47     | 38.76     | 15.83     | 9.44      |
| Dibrugarh     | 26.29     | 17.94     | 30.64     | 22.93     | 37.78     | 13.68     | 11.92     |
| Tinsukia      | 26.29     | 17.94     | 35.92     | 31.02     | 47.03     | 19.51     | 15.47     |
| Karbi Anglong | -         | 30.96     | 79.21     | 68.28     | 74.72     | 22.72     | 17.58     |
| Dima Hasao    | (-) 33.12 | 6.16      | 36.95     | 40.00     | 98.30     | 24.72     | 13.84     |
| Karimganj     | 12.94     | 29.87     | 22.96     | 25.13     | 42.08     | 21.87     | 21.90     |
| Hailakandi    | 16.09     | 17.48     | 27.23     | 23.61     | 45.94     | 20.89     | 21.45     |
| Cachar        | 12.33     | 23.92     | 22.60     | 23.96     | 47.59     | 18.89     | 20.19     |
| ASSAM         | 16.99     | 19.93     | 34.98     | 34.95     | 53.26     | 18.92     | 17.07     |

\*Due to creation of 4 new Districts the rates for 2001 have been affected in 12 Districts.

## APPENDIX-2.3

DISTRICTWISE POPULATION OF SCHEDULED CASTES  
AND SCHEDULED TRIBES IN ASSAM

| Sl. No. | District      | Scheduled Castes |         |         | Scheduled Tribes |         |         |
|---------|---------------|------------------|---------|---------|------------------|---------|---------|
|         |               | Total            | Male    | Female  | Total            | Male    | Female  |
| 1       | Kokrajhar     | 29570            | 15386   | 14184   | 278665           | 139579  | 139086  |
| 2       | Dhubri        | 70395            | 36359   | 34036   | 6332             | 3198    | 3134    |
| 3       | Goalpara      | 45094            | 22999   | 22095   | 231570           | 116013  | 115557  |
| 4       | Barpeta       | 95320            | 49165   | 46155   | 27344            | 13530   | 13814   |
| 5       | Morigaon      | 117841           | 60194   | 57647   | 136777           | 68382   | 68395   |
| 6       | Nagaon        | 266350           | 136473  | 129877  | 115153           | 57759   | 57394   |
| 7       | Sonitpur      | 109130           | 55817   | 53313   | 232207           | 117685  | 114522  |
| 8       | Lakhimpur     | 81840            | 41689   | 40151   | 249426           | 126716  | 122710  |
| 9       | Dhemaji       | 4225             | 23006   | 21219   | 325560           | 165449  | 160111  |
| 10      | Tinsukia      | 37688            | 19443   | 18245   | 82066            | 41769   | 40297   |
| 11      | Dibrugarh     | 58876            | 30517   | 28359   | 102871           | 51835   | 51036   |
| 12      | Sivasagar     | 42347            | 21568   | 20779   | 49039            | 24989   | 24050   |
| 13      | Jorhat        | 88665            | 45194   | 43471   | 139971           | 70795   | 69176   |
| 14      | Golaghat      | 62298            | 31807   | 30491   | 111765           | 56420   | 55345   |
| 15      | Karbi Anglong | 44961            | 23436   | 21525   | 538738           | 272460  | 266278  |
| 16      | Dima-Hasao    | 4337             | 2340    | 1997    | 151843           | 76520   | 75323   |
| 17      | Cachar        | 264897           | 136051  | 128846  | 17569            | 8736    | 8833    |
| 18      | Karimganj     | 157890           | 81384   | 76506   | 1940             | 994     | 946     |
| 19      | Hailakandi    | 70659            | 36369   | 34290   | 691              | 354     | 337     |
| 20      | Bongalgaon    | 82784            | 42513   | 40271   | 18835            | 9377    | 9458    |
| 21      | Chirang       | 35135            | 18105   | 17030   | 178688           | 89273   | 89415   |
| 22      | Kamrup        | 107827           | 55237   | 52590   | 182038           | 92094   | 89944   |
| 23      | Kamrup(M)     | 101789           | 52106   | 49683   | 75121            | 37902   | 37219   |
| 24      | Nalbari       | 60216            | 30654   | 29562   | 23364            | 11692   | 11672   |
| 25      | Baksa         | 73083            | 37534   | 35549   | 331007           | 165634  | 165373  |
| 26      | Darrang       | 40260            | 20566   | 19694   | 8419             | 4300    | 4119    |
| 27      | Udalguri      | 37844            | 19402   | 18442   | 267372           | 133550  | 133822  |
| 28      | ASSAM         | 2231321          | 1145314 | 1086007 | 3884371          | 1957005 | 1927366 |

APPENDIX X-2.4  
POPULATION OF CHILDREN IN THE AGE GROUP OF 0-6 YEARS IN ASSAM  
(2011 Census)

| District      | Male    | Female  | Rural   | Urban  | Total   |
|---------------|---------|---------|---------|--------|---------|
| Kokrajhar     | 70085   | 66839   | 131397  | 5527   | 136924  |
| Dhubri        | 187092  | 181170  | 345279  | 22983  | 368262  |
| Goalpara      | 87457   | 84200   | 152141  | 19516  | 171657  |
| Barpeta       | 146777  | 141052  | 273296  | 14533  | 287829  |
| Morigaon      | 83746   | 80073   | 155116  | 8703   | 163819  |
| Nagaon        | 234203  | 225737  | 420813  | 39127  | 459940  |
| Sonitpur      | 141353  | 136509  | 260964  | 16898  | 277862  |
| Lakhimpur     | 80016   | 76723   | 146289  | 10450  | 156739  |
| Dhemaji       | 53457   | 50790   | 98352   | 5895   | 104247  |
| Tinsukia      | 92777   | 89049   | 155228  | 26598  | 181826  |
| Dibrugarh     | 83168   | 80042   | 140283  | 22927  | 163210  |
| Sivasagar     | 71102   | 68278   | 128289  | 11091  | 139380  |
| Jorhat        | 63428   | 61166   | 103394  | 21200  | 124594  |
| Golaghat      | 68662   | 66131   | 125120  | 9673   | 134793  |
| Karbi-Anglong | 77428   | 74253   | 138407  | 13274  | 151681  |
| Dima-Hasao    | 16480   | 15934   | 25067   | 7347   | 32414   |
| Cachar        | 131417  | 125357  | 222673  | 34101  | 256774  |
| Karimganj     | 107638  | 104322  | 200334  | 11626  | 211960  |
| Hailakandi    | 56936   | 54342   | 106617  | 4661   | 111278  |
| Bongaigaon    | 59099   | 57293   | 105251  | 11141  | 116392  |
| Chirang       | 37201   | 36014   | 69176   | 4039   | 73215   |
| Kamrup        | 101716  | 98345   | 186844  | 13217  | 200061  |
| Kamrup(M)     | 64444   | 60942   | 27333   | 98053  | 125386  |
| Nalbari       | 48458   | 46875   | 87759   | 7574   | 95333   |
| Baksa         | 62498   | 60374   | 121332  | 1540   | 122872  |
| Darrang       | 79437   | 76971   | 150916  | 5492   | 156408  |
| Udalguri      | 57410   | 55864   | 109653  | 3621   | 113274  |
| Assam         | 2363485 | 2274645 | 4187323 | 450807 | 4638130 |

## APPENDIX-2.5

## COMPARATIVE DISTRIBUTION OF CHILD POPULATION (0-6 YEARS) IN ASSAM

| Sl. No. | District      | 2001    | 2011    | Percentage to total Population |       | Sex Ratio |      |
|---------|---------------|---------|---------|--------------------------------|-------|-----------|------|
|         |               |         |         | 2001                           | 2011  | 2001      | 2011 |
| 1       | Kokrajhar     | 151366  | 136924  | 17.95                          | 15.43 | 955       | 959  |
| 2       | Dhubri        | 326754  | 368262  | 20.86                          | 18.89 | 964       | 953  |
| 3       | Goalpara      | 159133  | 171657  | 19.36                          | 17.03 | 974       | 964  |
| 4       | Barpeta       | 265146  | 287829  | 19.01                          | 16.99 | 961       | 953  |
| 5       | Morigaon      | 148758  | 163819  | 19.16                          | 17.11 | 966       | 967  |
| 6       | Nagaon        | 426280  | 459940  | 18.42                          | 16.29 | 975       | 962  |
| 7       | Sonitpur      | 270419  | 277862  | 16.24                          | 14.44 | 974       | 956  |
| 8       | Lakhimpur     | 150312  | 156739  | 16.91                          | 15.04 | 967       | 968  |
| 9       | Dhemaji       | 99545   | 104247  | 17.40                          | 15.19 | 970       | 953  |
| 10      | Tinsukia      | 184845  | 181826  | 16.07                          | 13.69 | 958       | 952  |
| 11      | Dibrugarh     | 172631  | 163210  | 14.57                          | 12.31 | 962       | 961  |
| 12      | Sivasagar     | 149098  | 139380  | 14.18                          | 12.11 | 968       | 954  |
| 13      | Jorhat        | 133888  | 124594  | 13.40                          | 11.41 | 967       | 962  |
| 14      | Golaghat      | 142970  | 134793  | 15.11                          | 12.63 | 963       | 964  |
| 15      | Karbi-Anglong | 150230  | 151681  | 18.47                          | 15.86 | 974       | 951  |
| 16      | Dima-Hasao    | 30807   | 32414   | 16.38                          | 15.14 | 955       | 932  |
| 17      | Cachar        | 229219  | 256774  | 15.86                          | 11.79 | 961       | 959  |
| 18      | Karimganj     | 177431  | 211960  | 17.60                          | 17.25 | 965       | 963  |
| 19      | Hailakandi    | 100976  | 111278  | 18.60                          | 16.88 | 927       | 951  |
| 20      | Bongaigaon    | 110835  | 116392  | 18.09                          | 15.75 | 972       | 966  |
| 21      | Chirang       | 79037   | 73215   | 18.25                          | 15.18 | 958       | 969  |
| 22      | Kamrup        | 204757  | 200061  | 15.61                          | 13.18 | 963       | 949  |
| 23      | Kamrup(M)     | 125033  | 125386  | 11.80                          | 10.00 | 943       | 936  |
| 24      | Nalbari       | 97847   | 95333   | 14.20                          | 12.35 | 961       | 949  |
| 25      | Baksa         | 138906  | 122872  | 16.19                          | 12.93 | 961       | 974  |
| 26      | Darrang       | 146808  | 156408  | 19.32                          | 16.85 | 977       | 954  |
| 27      | Udalguri      | 125044  | 113274  | 16.48                          | 13.62 | 975       | 973  |
| 28      | ASSAM         | 4498075 | 4638130 | 16.87                          | 14.86 | 965       | 958  |



APPENDIX-2.6  
POPULATION OF CHILDREN IN THE AGE GROUP OF 0-6 YEARS IN INDIA  
(2011 Census)

| State                     | Male     | Total     | Rural     | Urban    | Total     |
|---------------------------|----------|-----------|-----------|----------|-----------|
| Jammu & Kashmir           | 1084355  | 2018905   | 1593008   | 425897   | 2018905   |
| Himachal Pradesh          | 407459   | 777898    | 712822    | 65076    | 777898    |
| Punjab                    | 1665994  | 3076219   | 1945502   | 1130717  | 3076219   |
| Chandigarh                | 63536    | 119434    | 4270      | 115164   | 119434    |
| Uttarakhand               | 717199   | 1355814   | 990776    | 365038   | 1355814   |
| Haryana                   | 1843109  | 3380721   | 2285112   | 1095609  | 3380721   |
| NCT of Delhi              | 1075440  | 2012454   | 56716     | 1955738  | 2012454   |
| Rajasthan                 | 5639176  | 10649504  | 8414883   | 2234621  | 10649504  |
| Uttar Pradesh             | 16185581 | 30791331  | 25040583  | 5750748  | 30791331  |
| Bihar                     | 9887239  | 19133964  | 17383701  | 1750263  | 19133964  |
| Sikkim                    | 32761    | 64111     | 49218     | 14893    | 64111     |
| Arunachal Pradesh         | 107624   | 212188    | 172289    | 39899    | 212188    |
| Nagaland                  | 149785   | 291071    | 217482    | 73589    | 291071    |
| Manipur                   | 174700   | 338254    | 236843    | 101411   | 338254    |
| Mizoram                   | 85561    | 168531    | 93384     | 75147    | 168531    |
| Tripura                   | 234008   | 458014    | 365309    | 92705    | 458014    |
| Meghalaya                 | 288646   | 568536    | 490592    | 77944    | 568536    |
| Assam                     | 2363485  | 4638130   | 4187323   | 450807   | 4638130   |
| West Bengal               | 5410396  | 10581466  | 7820710   | 2760756  | 10581466  |
| Jharkhand                 | 2767147  | 5389495   | 4367507   | 1021988  | 5389495   |
| Orissa                    | 2716497  | 5273194   | 4525870   | 747324   | 5273194   |
| Chattisgarh               | 1859935  | 3661689   | 2924941   | 736748   | 3661689   |
| Madhya Pradesh            | 5636172  | 10809395  | 8325731   | 2483664  | 10809395  |
| Gujarat                   | 4115384  | 7777262   | 4824903   | 2952359  | 7777262   |
| Daman & Diu               | 14144    | 26934     | 7438      | 19496    | 26934     |
| Dadra & Nagar Haveli      | 26431    | 50895     | 28504     | 22391    | 50895     |
| Maharashtra               | 7035391  | 13326517  | 7688954   | 5637563  | 13326517  |
| Andhra Pradesh            | 4714950  | 9142802   | 6152022   | 2990780  | 9142802   |
| Karnataka                 | 3675291  | 7161033   | 4517645   | 2643388  | 7161033   |
| Goa                       | 74460    | 144611    | 54014     | 90597    | 144611    |
| Lakshwadeep               | 3797     | 7255      | 1815      | 5440     | 7255      |
| Kerala                    | 1768244  | 3472955   | 1823664   | 1649291  | 3472955   |
| Tamil Nadu                | 3820276  | 7423832   | 3911302   | 3512530  | 7423832   |
| Puducherry                | 67527    | 132858    | 44514     | 88344    | 132858    |
| Andaman & Nicobar Islands | 20770    | 40878     | 26415     | 14463    | 40878     |
| INDIA                     | 85732470 | 164478150 | 121285762 | 43192388 | 164478150 |

## APPENDIX – 2.7

STATEWISE POPULATION, SEX RATIO, POPULATION DENSITY,  
LITERACY RATE AND PERCENTAGE DECADAL GROWTH IN INDIA

| Sl. No. | India, States, Union Territories | Population 2011 | Sex Ratio 2011 | Population Density per sq. km. 2011 | Literacy rate 2011 | Percentage decadal growth |           |
|---------|----------------------------------|-----------------|----------------|-------------------------------------|--------------------|---------------------------|-----------|
|         |                                  |                 |                |                                     |                    | 1991-2001                 | 2001-2011 |
|         | India                            | 1210569573      | 943            | 368                                 | 72.99              | 21.54                     | 17.68     |
| 1.      | Jammu & Kashmir                  | 12541302        | 889            | 56                                  | 67.16              | 29.43                     | 23.64     |
| 2.      | Himachal Pradesh                 | 6864602         | 972            | 123                                 | 82.80              | 17.54                     | 12.94     |
| 3.      | Punjab                           | 27743338        | 895            | 551                                 | 75.84              | 20.10                     | 13.89     |
| 4.      | Chandigarh                       | 1055450         | 818            | 9258                                | 86.05              | 40.28                     | 17.19     |
| 5.      | Uttarakhand                      | 10086292        | 963            | 189                                 | 78.82              | 20.41                     | 18.81     |
| 6.      | Haryana                          | 25351462        | 879            | 573                                 | 75.55              | 28.43                     | 19.90     |
| 7.      | Delhi                            | 16787941        | 868            | 11320                               | 86.21              | 47.02                     | 21.21     |
| 8.      | Rajasthan                        | 68548437        | 928            | 200                                 | 66.11              | 28.41                     | 21.31     |
| 9.      | Uttar Pradesh                    | 199812341       | 912            | 829                                 | 67.68              | 25.85                     | 20.23     |
| 10.     | Bihar                            | 104099452       | 918            | 1106                                | 61.80              | 28.62                     | 25.42     |
| 11.     | Sikkim                           | 610577          | 890            | 86                                  | 81.42              | 33.06                     | 12.89     |
| 12.     | Arunachal Pradesh                | 1383727         | 938            | 17                                  | 65.38              | 27.00                     | 26.03     |
| 13.     | Nagaland                         | 1978502         | 931            | 119                                 | 79.55              | 64.53                     | -0.58     |
| 14.     | Manipur                          | 2570390         | 992            | 115                                 | 79.21              | 24.86                     | 12.05     |
| 15.     | Mizoram                          | 1097206         | 976            | 52                                  | 91.33              | 28.82                     | 23.48     |
| 16.     | Tripura                          | 3673917         | 960            | 350                                 | 87.22              | 16.03                     | 14.84     |
| 17.     | Meghalaya                        | 2966889         | 989            | 132                                 | 74.43              | 30.65                     | 27.95     |
| 18.     | Assam                            | 31205576        | 958            | 398                                 | 72.19              | 18.92                     | 17.07     |
| 19.     | West Bengal                      | 91276115        | 950            | 1028                                | 76.26              | 17.77                     | 13.84     |
| 20.     | Jharkhand                        | 32988134        | 948            | 414                                 | 66.41              | 23.36                     | 22.42     |
| 21.     | Orissa                           | 41974218        | 979            | 270                                 | 72.87              | 16.25                     | 14.05     |
| 22.     | Chhatisgarh                      | 25545198        | 991            | 189                                 | 70.28              | 18.27                     | 22.61     |
| 23.     | Madhya Pradesh                   | 72626809        | 931            | 236                                 | 69.32              | 24.26                     | 20.35     |
| 24.     | Gujarat                          | 60439692        | 919            | 308                                 | 78.03              | 22.66                     | 19.28     |
| 25.     | Daman & Diu                      | 243247          | 618            | 2191                                | 87.10              | 55.73                     | 53.76     |
| 26.     | Dadra & Nagar Haveli             | 343709          | 774            | 700                                 | 76.24              | 59.22                     | 55.88     |
| 27.     | Maharashtra                      | 112374333       | 929            | 365                                 | 82.34              | 22.73                     | 15.99     |
| 28.     | Andhra Pradesh                   | 84580777        | 993            | 308                                 | 67.02              | 14.59                     | 10.98     |
| 29.     | Karnataka                        | 61095297        | 973            | 319                                 | 75.36              | 17.51                     | 15.60     |
| 30.     | Goa                              | 1458545         | 973            | 394                                 | 88.70              | 15.21                     | 8.23      |
| 31.     | Lakshadweep                      | 64473           | 946            | 2149                                | 91.85              | 17.30                     | 6.30      |
| 32.     | Kerala                           | 33406061        | 1084           | 860                                 | 94.00              | 9.43                      | 4.91      |
| 33.     | Tamil Nadu                       | 72147030        | 996            | 555                                 | 80.09              | 11.72                     | 15.61     |
| 34.     | Puducherry                       | 1247953         | 1037           | 2547                                | 85.85              | 20.62                     | 28.08     |
| 35.     | Andaman & Nicobar Islands        | 380581          | 876            | 46                                  | 86.63              | 26.90                     | 6.86      |

Source : Census of India, 2011.

## APPENDIX – 2.8

## BIRTH AND DEATH RATES IN ASSAM

| YEAR | BIRTH RATE |       |       | DEATH RATE |       |       |
|------|------------|-------|-------|------------|-------|-------|
|      | Combined   | Rural | Urban | Combined   | Rural | Urban |
| 1991 | 30.9       | 31.7  | 21.3  | 11.5       | 11.8  | 6.9   |
| 1995 | 29.3       | 30.2  | 21.8  | 9.6        | 10.0  | 6.7   |
| 1996 | 27.6       | 28.9  | 20.7  | 9.6        | 10.2  | 5.8   |
| 1997 | 28.2       | 29.0  | 20.7  | 9.9        | 10.3  | 5.9   |
| 1998 | 27.9       | 28.7  | 20.2  | 10.0       | 10.5  | 6.0   |
| 1999 | 27.0       | 28.0  | 18.9  | 9.7        | 10.1  | 6.2   |
| 2000 | 26.9       | 27.9  | 18.6  | 9.6        | 10.0  | 6.1   |
| 2001 | 26.8       | 27.8  | 15.5  | 9.5        | 9.8   | 6.6   |
| 2002 | 26.6       | 27.5  | 18.3  | 9.2        | 9.6   | 6.0   |
| 2003 | 26.3       | 27.2  | 18.0  | 9.1        | 9.5   | 5.9   |
| 2004 | 25.1       | 27.0  | 14.3  | 8.8        | 9.3   | 5.5   |
| 2005 | 25.0       | 26.6  | 15.3  | 8.7        | 9.2   | 5.6   |
| 2006 | 24.6       | 26.1  | 15.4  | 8.7        | 9.2   | 5.8   |
| 2007 | 24.3       | 25.7  | 15.5  | 8.6        | 9.1   | 5.7   |
| 2008 | 23.9       | 25.3  | 15.7  | 8.6        | 9.0   | 5.6   |
| 2009 | 23.6       | 24.9  | 15.9  | 8.4        | 8.8   | 5.9   |
| 2010 | 23.2       | 24.4  | 15.8  | 8.2        | 8.6   | 5.8   |
| 2011 | 22.8       | 24.0  | 15.5  | 8.0        | 8.4   | 5.6   |
| 2012 | 22.5       | 23.7  | 15.6  | 7.9        | 8.3   | 5.6   |
| 2013 | 22.4       | 23.5  | 15.4  | 7.8        | 8.2   | 5.6   |

Source : Registrar General of India.

## APPENDIX – 2.9

## INFANT MORTALITY RATE IN ASSAM AND INDIA

| SECTOR | ASSAM/<br>INDIA | YEARS |      |      |      |      |      |      |      |      |      |      |      |
|--------|-----------------|-------|------|------|------|------|------|------|------|------|------|------|------|
|        |                 | 2001  | 2002 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| Rural  | Assam           | 77    | 73   | 69   | 71   | 70   | 68   | 66   | 64   | 60   | 58   | 58   | 56   |
|        | India           | 72    | 69   | 64   | 64   | 62   | 61   | 58   | 55   | 51   | 48   | 46   | 44   |
| Urban  | Assam           | 34    | 38   | 38   | 39   | 42   | 41   | 39   | 37   | 36   | 34   | 33   | 32   |
|        | India           | 42    | 40   | 40   | 40   | 39   | 37   | 36   | 34   | 31   | 29   | 28   | 27   |
| Total  | Assam           | 74    | 70   | 66   | 68   | 67   | 66   | 64   | 61   | 58   | 55   | 55   | 54   |
|        | India           | 66    | 64   | 58   | 58   | 57   | 55   | 53   | 50   | 47   | 44   | 42   | 40   |

Source : Registrar General of India.

## APPENDIX – 2.10

## INFANT MORTALITY RATE BY SEX IN ASSAM AND INDIA

| SECTOR | ASSAM/<br>INDIA | YEARS |      |      |      |      |      |      |      |      |      |      |      |
|--------|-----------------|-------|------|------|------|------|------|------|------|------|------|------|------|
|        |                 | 2001  | 2002 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| Male   | Assam           | 69    | 70   | 76   | 68   | 67   | 64   | 62   | 58   | 56   | 55   | 54   | 53   |
|        | India           | 64    | 62   | 58   | 58   | 56   | 55   | 52   | 49   | 46   | 43   | 41   | 39   |
| Female | Assam           | 80    | 71   | 55   | 69   | 68   | 67   | 65   | 64   | 60   | 56   | 57   | 55   |
|        | India           | 68    | 65   | 58   | 61   | 59   | 56   | 55   | 52   | 49   | 46   | 44   | 42   |
| Total  | Assam           | 74    | 70   | 66   | 68   | 67   | 66   | 64   | 61   | 58   | 55   | 55   | 54   |
|        | India           | 66    | 63   | 58   | 58   | 57   | 55   | 53   | 50   | 47   | 44   | 42   | 40   |

Source : Registrar General of India.

## APPENDIX – 2.11

## DISTRICT-WISE NUMBER OF VILLAGES, GAON PANCHAYAT, COMMUNITY DEVELOPMENT BLOCK, ANCHALI K PANCHAYAT AND ZILA PARI SHADS IN ASSAM

| Sl No. | District      | Number of Villages (As per 2011 Census) | Number of Gaon Panchayat (as on 2011) | Number of Community Development Block (as on 2011) | Number of Anchalik Panchayat (as on 2011) | Number of Zila Parishad (as on 2011) |
|--------|---------------|---|---------------------------------------|--|---|--------------------------------------|
| 1.     | Dhubri        | 1091                                    | 168                                   | 15   | 15  | 1                                    |
| 2.     | Kokrajhar     | 1068                                    | -                                     | 4  | -   | -                                    |
| 3.     | Bongaigaon    | 563                                     | 65                                    | 5  | 5   | 1                                    |
| 4.     | Goalpara      | 829                                     | 81                                    | 8  | 8   | 1                                    |
| 5.     | Barpeta       | 835                                     | 129                                   | 11   | 11  | 1                                    |
| 6.     | Nalbari       | 456                                     | 65                                    | 7  | 7   | 1                                    |
| 7.     | Kamrup        | 1068                                    | 146                                   | 16   | 16  | 1                                    |
| 8.     | Darrang       | 561                                     | 76                                    | 6  | 6   | 1                                    |
| 9.     | Sonitpur      | 1876                                    | 158                                   | 14   | 14  | 1                                    |
| 10.    | Lakhimpur     | 1184                                    | 81                                    | 9  | 9   | 1                                    |
| 11.    | Dhemaji       | 1319                                    | 65                                    | 5  | 5   | 1                                    |
| 12.    | Morigaon      | 632                                     | 85                                    | 5  | 7   | 1                                    |
| 13.    | Nagaon        | 1412                                    | 239                                   | 18   | 20  | 1                                    |
| 14.    | Golaghat      | 1125                                    | 102                                   | 8  | 8   | 1                                    |
| 15.    | Jorhat        | 848                                     | 110                                   | 8  | 8   | 1                                    |
| 16.    | Sivasagar     | 875                                     | 118                                   | 9  | 9   | 1                                    |
| 17.    | Dibrugarh     | 1348                                    | 93                                    | 7  | 7   | 1                                    |
| 18.    | Tinsukia      | 1168                                    | 86                                    | 7  | 7   | 1                                    |
| 19.    | Karbi Anglong | 2921                                    | -                                     | 11   | -   | -                                    |
| 20.    | Dima Hasao    | 695                                     | -                                     | 5  | -   | -                                    |
| 21.    | Karimganj     | 936                                     | 96                                    | 7  | 7   | 1                                    |
| 22.    | Hailakandi    | 331                                     | 62                                    | 5  | 5   | 1                                    |
| 23.    | Cachar        | 1040                                    | 163                                   | 15   | 15  | 1                                    |
| 24.    | Chirang *     | 508                                     | -                                     | 2  | -   | -                                    |
| 25.    | Baksa *       | 690                                     | -                                     | 7  | -   | -                                    |
| 26.    | Kamrup (M)*   | 216                                     | 14                                    | -  | -   | -                                    |
| 27.    | Udalguri *    | 800                                     | -                                     | 5  | -   | -                                    |
|        | Assam         | 26395                                   | 2202                                  | 219  | 189                                       | 20                                   |

N. B \* Indicates newly created Districts.

## APPENDIX – 2.12

## COMPARATIVE STATEMENT ON PERCENTAGE OF POPULATION BELOW POVERTY LINE

| Sl. No. | State                | Using TENDULKAR Methodology<br>(Poverty Headcount Ratio) |       |          |         |       |          |         |       |          |
|---------|----------------------|--|-------|----------|---------|-------|----------|---------|-------|----------|
|         |                      | 2004-05  |       |          | 2009-10 |       |          | 2011-12 |       |          |
|         |                      | Rural  | Urban | Combined | Rural   | Urban | Combined | Rural   | Urban | Combined |
| 1       | Andhra Pradesh       | 32.30  | 23.40 | 29.90    | 22.8    | 17.7  | 21.1     | 10.96   | 5.81  | 9.20     |
| 2       | Arunachal Pradesh    | 33.60  | 23.50 | 31.10    | 26.2    | 24.9  | 25.9     | 38.93   | 20.33 | 34.67    |
| 3       | Assam                | 36.40  | 21.80 | 34.40    | 39.9    | 26.1  | 37.9     | 33.89   | 20.49 | 31.98    |
| 4       | Bihar                | 55.70  | 43.70 | 54.40    | 55.3    | 39.4  | 53.5     | 34.06   | 31.23 | 33.74    |
| 5       | Chhattisgarh         | 55.10  | 28.40 | 49.40    | 56.1    | 23.8  | 48.7     | 44.61   | 24.75 | 39.93    |
| 6       | Delhi                | 15.60  | 12.90 | 13.10    | 7.7     | 14.4  | 14.2     | 12.92   | 9.84  | 9.91     |
| 7       | Goa                  | 28.10  | 22.20 | 25.00    | 11.5    | 6.9   | 8.7      | 6.81    | 4.09  | 5.09     |
| 8       | Gujarat              | 39.10  | 20.10 | 31.80    | 26.7    | 17.9  | 23.0     | 21.54   | 10.14 | 16.63    |
| 9       | Haryana              | 24.80  | 22.40 | 24.10    | 18.6    | 23.0  | 20.1     | 11.64   | 10.28 | 11.16    |
| 10      | Himachal Pradesh     | 25.00  | 4.60  | 22.90    | 9.01    | 12.6  | 9.5      | 8.48    | 4.33  | 8.06     |
| 11      | Jammu & Kashmir      | 14.10  | 10.40 | 13.20    | 8.1     | 12.8  | 9.4      | 11.54   | 7.20  | 10.35    |
| 12      | Jharkhand            | 51.60  | 23.80 | 45.30    | 41.6    | 31.1  | 39.1     | 40.84   | 24.83 | 36.96    |
| 13      | Karnataka            | 37.50  | 25.90 | 33.40    | 26.1    | 19.6  | 23.6     | 24.53   | 15.25 | 20.91    |
| 14      | Kerala               | 20.70  | 18.40 | 19.70    | 12.0    | 12.1  | 12.0     | 9.14    | 4.97  | 7.05     |
| 15      | Madhya Pradesh       | 53.60  | 35.10 | 48.60    | 42.0    | 22.9  | 36.7     | 35.74   | 21.00 | 31.65    |
| 16      | Maharashtra          | 47.90  | 25.60 | 38.10    | 29.5    | 18.3  | 24.5     | 24.22   | 9.12  | 17.35    |
| 17      | Manipur              | 39.30  | 34.50 | 38.00    | 47.4    | 46.4  | 47.1     | 38.80   | 32.59 | 36.89    |
| 18      | Meghalaya            | 14.00  | 24.70 | 16.10    | 15.3    | 24.1  | 17.1     | 12.53   | 9.26  | 11.87    |
| 19      | Mizoram              | 23.00  | 7.90  | 15.30    | 31.1    | 11.5  | 21.1     | 35.43   | 6.36  | 20.40    |
| 20      | Nagaland             | 10.00  | 4.30  | 9.00     | 19.3    | 25.0  | 20.9     | 19.93   | 16.48 | 18.88    |
| 21      | Odisha               | 60.80  | 37.60 | 57.20    | 39.2    | 25.9  | 37.0     | 35.69   | 17.29 | 32.59    |
| 22      | Puducherry           | 22.90  | 9.90  | 14.10    | 0.2     | 1.6   | 1.2      | 17.06   | 6.30  | 9.69     |
| 23      | Punjab               | 22.10  | 18.70 | 20.90    | 14.6    | 18.1  | 15.9     | 7.66    | 9.24  | 8.26     |
| 24      | Rajasthan            | 35.80  | 29.70 | 34.40    | 26.4    | 19.9  | 24.8     | 16.05   | 10.69 | 14.71    |
| 25      | Sikkim               | 31.80  | 2.90  | 31.10    | 15.5    | 5.0   | 13.1     | 9.85    | 3.66  | 8.19     |
| 26      | Tamil Nadu           | 37.50  | 19.70 | 28.90    | 21.2    | 12.8  | 17.1     | 15.83   | 6.54  | 11.28    |
| 27      | Tripura              | 44.50  | 22.50 | 40.60    | 19.8    | 10.0  | 17.4     | 16.53   | 7.42  | 14.05    |
| 28      | Uttar Pradesh        | 42.70  | 34.10 | 40.90    | 39.4    | 31.7  | 37.7     | 30.40   | 26.06 | 29.43    |
| 29      | Uttarakhand          | 35.10  | 26.20 | 32.70    | 14.9    | 25.2  | 18.0     | 11.62   | 10.48 | 11.26    |
| 30      | West Bengal          | 38.20  | 24.40 | 34.30    | 28.8    | 22.0  | 26.7     | 22.52   | 14.66 | 19.98    |
| 31      | Andaman & Nicobar    |  |       |          |         |       |          | 1.57    | 0.00  | 1.00     |
| 32      | Chandigarh           |  |       |          |         |       |          | 1.64    | 22.31 | 21.81    |
| 33      | Dadra & Nagar Haveli |  |       |          |         |       |          | 62.59   | 15.38 | 39.31    |
| 34      | Daman & Diu          |  |       |          |         |       |          | 0.00    | 12.62 | 9.86     |
| 35      | Lakshadweep          |  |       |          |         |       |          | 0.00    | 3.44  | 2.77     |
|         | All India            | 42   | 25.5  | 37.2     | 33.8    | 20.9  | 29.8     | 25.70   | 13.70 | 21.92    |

Source: Planning Commission, Govt. of India.

## APPENDIX-2.13

## STATE- WISE INFORMATION ON SLUM POPULATION IN INDIA-CENSUS 2011

| Sl. No. | Area Name        | Towns reporting Slums | Total No. of House-holds | Slum Population |          |          | % of total slum popn. to urban popn. | Slum Population ( 0-6yrs) |         |         |
|---------|------------------|-----------------------|--------------------------|-----------------|----------|----------|--------------------------------------|---------------------------|---------|---------|
|         |                  |                       |                          | Persons         | Male     | Female   |                                      | Persons                   | Male    | Female  |
|         | INDIA            | 2613                  | 13920191                 | 65494604        | 33968203 | 31526401 | 17.4                                 | 8082743                   | 4204451 | 3878292 |
| 1       | Andhra Pradesh   | 125                   | 2431474                  | 10186934        | 5103377  | 5083557  | 36.1                                 | 1149779                   | 593145  | 556634  |
| 2       | Arunachal Pr.    | 5                     | 3479                     | 15562           | 8029     | 7533     | 4.9                                  | 2226                      | 1102    | 1124    |
| 3       | Assam            | 31                    | 42533                    | 197266          | 101424   | 95842    | 4.5                                  | 22229                     | 11378   | 10851   |
| 4       | Bihar            | 88                    | 216496                   | 1237682         | 649475   | 588207   | 10.5                                 | 208383                    | 107994  | 100389  |
| 5       | Chhattisgarh     | 94                    | 413831                   | 1898931         | 966623   | 932308   | 32.0                                 | 254080                    | 130178  | 123902  |
| 6       | Delhi            | 22                    | 367893                   | 1785390         | 974329   | 811061   | 10.9                                 | 229029                    | 119508  | 109521  |
| 7       | Goa              | 3                     | 5497                     | 26247           | 13826    | 12421    | 2.9                                  | 3240                      | 1691    | 1549    |
| 8       | Gujarat          | 103                   | 345998                   | 1680095         | 912571   | 767524   | 6.5                                  | 240589                    | 126331  | 114258  |
| 9       | Haryana          | 75                    | 332697                   | 1662305         | 887947   | 774358   | 18.8                                 | 225889                    | 122124  | 103765  |
| 10      | Himachal Pradesh | 22                    | 14385                    | 61312           | 32555    | 28757    | 8.9                                  | 6509                      | 3493    | 3016    |
| 11      | Jammu & Kashmir  | 40                    | 103633                   | 662062          | 342422   | 319640   | 19.3                                 | 94204                     | 50649   | 43555   |
| 12      | Jharkhand        | 31                    | 72544                    | 372999          | 192908   | 180091   | 4.7                                  | 53465                     | 27703   | 25762   |
| 13      | Karnataka        | 206                   | 707662                   | 3291434         | 1650724  | 1640710  | 13.9                                 | 418295                    | 212928  | 205367  |
| 14      | Kerala           | 19                    | 45417                    | 202048          | 97429    | 104619   | 1.3                                  | 20327                     | 10271   | 10056   |
| 15      | Madhya Pradesh   | 303                   | 1117764                  | 5688993         | 2957524  | 2731469  | 28.3                                 | 771999                    | 403360  | 368639  |
| 16      | Maharashtra      | 189                   | 2499948                  | 11848423        | 6328217  | 5520206  | 23.3                                 | 1428850                   | 743603  | 685247  |
| 17      | Meghalaya        | 6                     | 10518                    | 57418           | 28737    | 28681    | 9.6                                  | 8241                      | 4162    | 4079    |
| 18      | Mizoram          | 1                     | 15987                    | 78561           | 38861    | 39700    | 13.7                                 | 10430                     | 5292    | 5138    |
| 19      | Nagaland         | 11                    | 17152                    | 82324           | 42651    | 39673    | 14.4                                 | 11114                     | 5569    | 5545    |
| 20      | Odisha           | 76                    | 350032                   | 1560303         | 800963   | 759340   | 22.3                                 | 188962                    | 97551   | 91411   |
| 21      | Punjab           | 73                    | 293928                   | 1460518         | 776388   | 684130   | 14.0                                 | 176257                    | 94781   | 81476   |
| 22      | Rajasthan        | 107                   | 394391                   | 2068000         | 1078991  | 989009   | 12.1                                 | 307035                    | 161872  | 145163  |
| 23      | Sikkim           | 7                     | 7203                     | 31378           | 16216    | 15162    | 20.4                                 | 3229                      | 1621    | 1608    |
| 24      | Tamil Nadu       | 507                   | 1463689                  | 5798459         | 2886993  | 2911466  | 16.6                                 | 614969                    | 314363  | 300606  |
| 25      | Tripura          | 15                    | 34143                    | 139780          | 70143    | 69637    | 14.5                                 | 14755                     | 7467    | 7288    |
| 26      | Uttar Pradesh    | 293                   | 1066363                  | 6239965         | 3298339  | 2941626  | 14.0                                 | 863392                    | 457036  | 406356  |
| 27      | Uttarakhand      | 31                    | 93911                    | 487741          | 257624   | 230117   | 16.0                                 | 66176                     | 35131   | 31045   |
| 28      | West Bengal      | 122                   | 1391756                  | 6418594         | 3321700  | 3096894  | 22.1                                 | 656780                    | 337441  | 319339  |
| 29      | A. N. Islands    | 1                     | 3324                     | 14172           | 7386     | 6786     | 9.9                                  | 1588                      | 788     | 800     |
| 30      | Chandigarh       | 1                     | 21704                    | 95135           | 53340    | 41795    | 9.3                                  | 14720                     | 7697    | 7023    |
| 31      | Puducherry       | 6                     | 34839                    | 144573          | 70491    | 74082    | 17.0                                 | 16002                     | 8222    | 7780    |

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## CHAPTER – III

## STATE INCOME

The State Domestic Product and its related aggregates are the main components of Planning and Policy making which is also considered as important indicators of development process of the State. The estimates of State Domestic Product reveal the extent and direction of changes in the levels of economic development of the State over a period of time. The fiscal reform measures adopted by the State of Assam started yielding favourable results since 2005-06 and have been recognized to be a key factor for attaining higher economic growth eventually leads to improvement to the well-being of people.

The annual average growth rate of Eleventh Five Year Plan Period (2007-12) of the State of Assam is estimated at 6.43 percent which indicates a favourable status of the State Economy when compared with the growth rate of 5.33 per cent accredited during Tenth Five Year Plan Period (2002-07). The growth trend of Agriculture and allied sector during 11<sup>th</sup> plan period has been steadily increasing as compared to the 10<sup>th</sup> plan period. The Agriculture and Allied sector of the State has made considerable recovery and achieved average annual growth rate of 3.88 per cent during the 11<sup>th</sup> Plan period as compared to the 10<sup>th</sup> Plan Period due to initiative and prioritize need based intervention of the State Government. In the closing year (2011-12) of the Plan period the growth was 4.63. The annual average growth rate of Industry sector, on the other hand, shown lower growth rate of 4.31per cent during the 11<sup>th</sup> Plan period compared to 7.90 per cent annual average growth achieved during the 10<sup>th</sup> Five Year Plan period. The lower growth of the Industry sector in the State was the result of social disorder in certain part of the State during the period and national economic meltdown which was reflected by declining all India Index of Industrial Production. The growth of Service sector is encouraging with the rapid diversification of communication sector, growing services of Banking & Insurance, steady growth of real estate, ownership dwelling and business services in the State. The annual average growth of Service sector in the 11<sup>th</sup>Plan period was 8.53per cent against 7.20 per cent experienced by the Assam economy during the 10<sup>th</sup>Plan period.

In the new series (base-2011-12) estimates, the annual average growth rate of the GSDP at current prices for the years 2011-12 to 2014-15 is 10.89 per cent and the rate of NSDP at the current prices for the same period is estimated at 10.65 per cent. In terms of the constant (2011-12) prices the annual average growth rate for the period 2011-12 to 2014-15 is estimated at 3.38 per cent for GSDP and 2.55 per cent for NSDP.

#### ESTIMATES OF GROSS STATE DOMESTIC PRODUCT (GSDP) AND NET STATE DOMESTIC PRODUCT (NSDP) FOR THE YEAR 2014-15:

The GSDP at constant (2011-12) prices for the year 2014-15 (Quick Estimates) is estimated at Rs. 156895.41 crore as against Rs. 151820.41 crore for 2013-14 (Provisional Estimates) reflecting a growth of 3.34 per cent which is lower than the estimated growth of 6.08 per cent in 2013-14 (Provision Estimates). The expectation of growth of 3.34 per cent in GSDP of the State for 2014-15 comprises of the estimated growth of 3.40 per cent in Agriculture, Forestry & Fishing sector, 2.28 per cent in Industry sector and 4.36 per cent in Services sector.

The 'Industry' sector which comprises Mining & Quarrying, Manufacturing, Electricity, Gas, Water Supply & Other Utility Services and Construction sectors is achieved at 2.28 per cent growth in 2014-15 as against 6.03 per cent in the previous year (2013-14). The "Construction Sector" has the highest contribution in the growth of "Industry Sector" which is 8.79 per cent in 2014-15 as against 21.56 per cent in the previous year 2013-14. On the other hand, the estimated growth of "Manufacturing sector" is 2.83 per cent in 2014-15 as against estimated growth of 4.90 per cent in 2013-14.



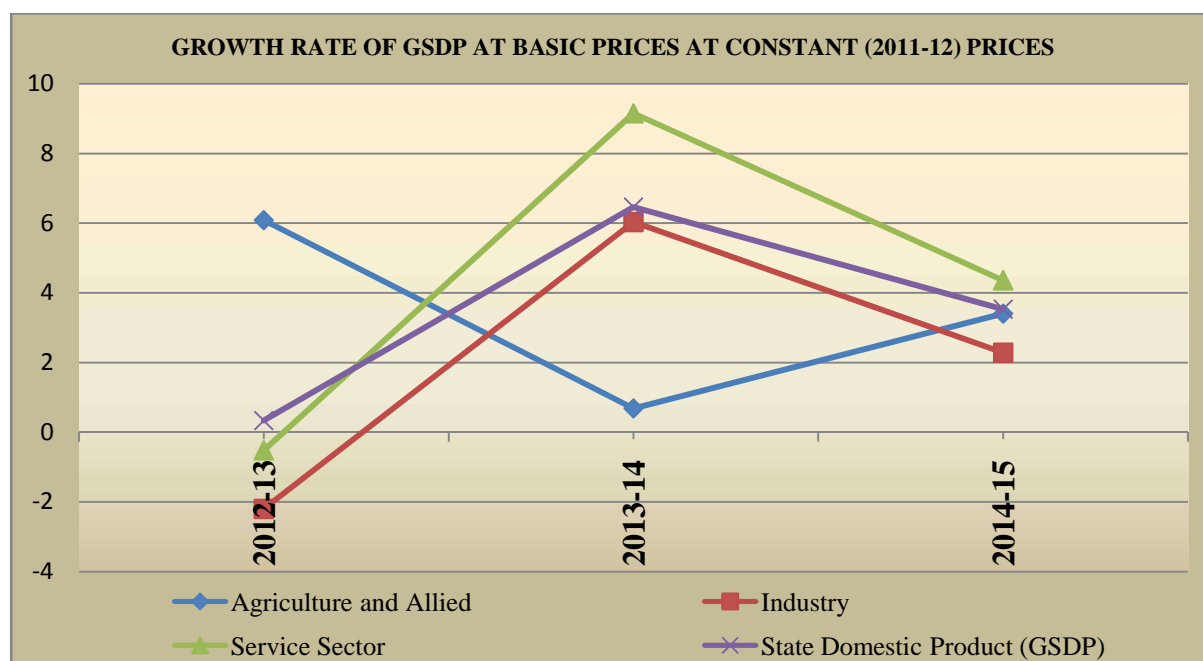


TABLE – 3.1

## ESTIMATES OF STATE DOMESTIC PRODUCT OF ASSAM AND GROSS DOMESTIC PRODUCT OF INDIA FOR THE YEAR 2014-15 (Quick Estimates)

(Rs. in crore)

| State  | GSDP/GDP                     |                      | NSDP/NNP                     |                      | Per Capita NSDP/NNP (in Rs.) |                   |
|--------|------------------------------|----------------------|------------------------------|----------------------|------------------------------|-------------------|
|        | At Constant (2011-12) Prices | At Current Prices    | At Constant (2011-12) Prices | At Current Prices    | At Constant (2011-12) Prices | At Current Prices |
| Assam  | 156894.41<br>(3.34)          | 195145.02<br>(11.59) | 138386.64<br>(2.56)          | 175210.46<br>(10.90) | 42349<br>(1.24)              | 53618<br>(9.48)   |
| India* | 10552151<br>(7.20)           | 12488205<br>(10.80)  | 9235026<br>(7.20)            | 11007592<br>(10.80)  | 72889<br>(5.80)              | 86879<br>(9.40)   |

\* Figures in brackets are growth in percentage.

Source: 1. Directorate of Economics and Statistics, Assam.

2. Central Statistical Office, Government of India.

The Services sector comprises of Trade, Repair, Hotels & Restaurants, Transport, Storage, Communication & Services related to Broadcasting, Financial Services, Real Estate, Ownership of Dwelling & Professional Services, Public Administration and Other Services and growth of the sector is 4.36 per cent during 2014-15 as compared to 9.15 per cent in 2013-14. In the Services Sector, the highest contribution of Other Services is observed which is 9.07 per cent during 2014-15 as against 17.95 per cent growth in 2013-14. Comparatively lower performance is observed in the sub sector "Real Estate, Ownership of Dwelling & Professional Services" of the services sector. The growth of which is 0.51 per cent in the year 2014-15 over the previous year 2013-14.

In respect of "Agriculture, Forestry & Fishing" sector, the growth is estimated at 3.40 per cent for the year 2014-15 as against 0.68 per cent in the year 2013-14 in terms of the GSDP at constant (2011-12) prices. The Livestock and Forestry sector shows a declining trend over the year 2013-14

**TABLE – 3.2**

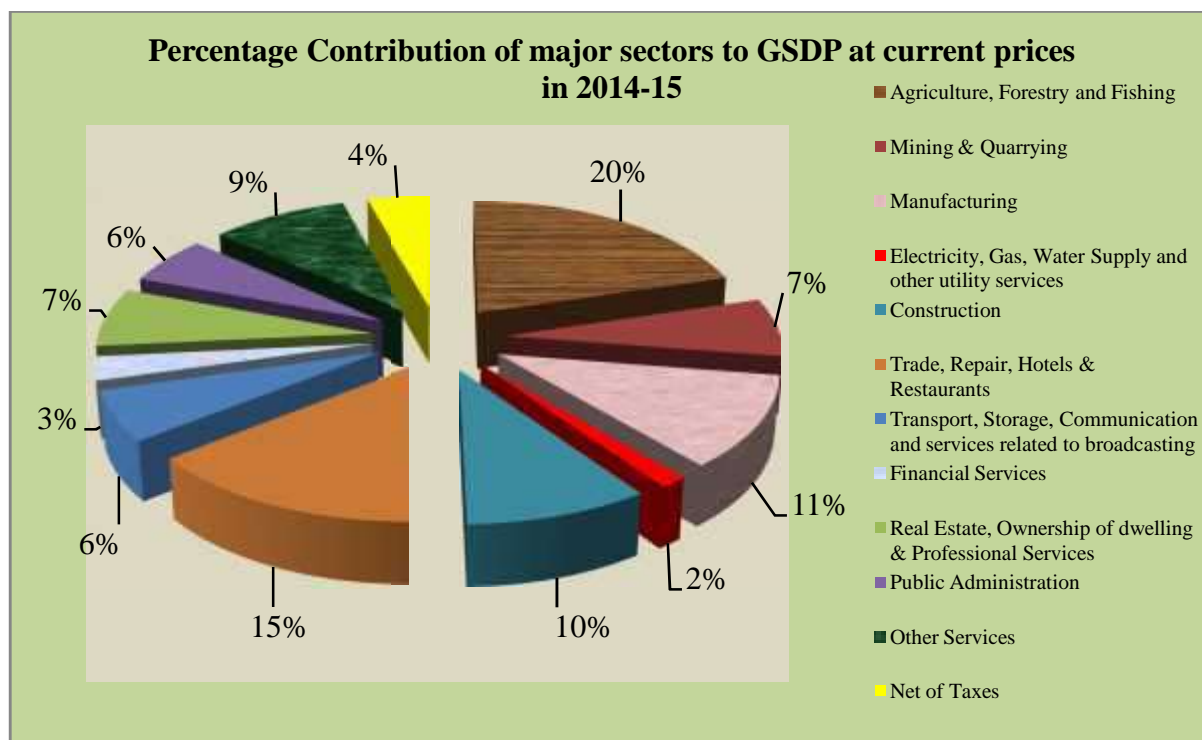
**SECTORAL GROWTH OF SDP FOR ASSAM, 2014-15 (Quick Estimates)**

| Sector  | Growth of GSDP at 2011-12 prices (in %) |
|---|---|
| Agriculture, Forestry, Fishing (Agriculture and allied) | 3.40                                    |
| Industry  | 2.28                                    |
| Services  | 4.36                                    |

to 2014-15. The estimated growth in the quick estimates for the year 2014-15 of the 'Fishing and Aquaculture' sector is 4.81 per cent as against 5.22 per cent in the previous year 2013-14.

The estimated growth of Net State Domestic Product (NSDP), also known as State Income, at 2011-12 prices is 2.56 per cent in the year 2014-15 which was 5.17 per cent in the previous year 2013-14.

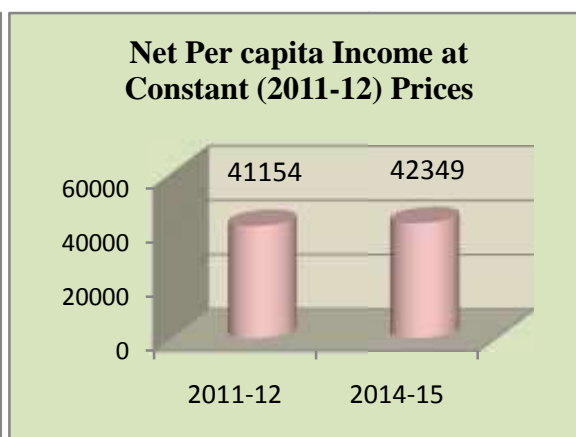
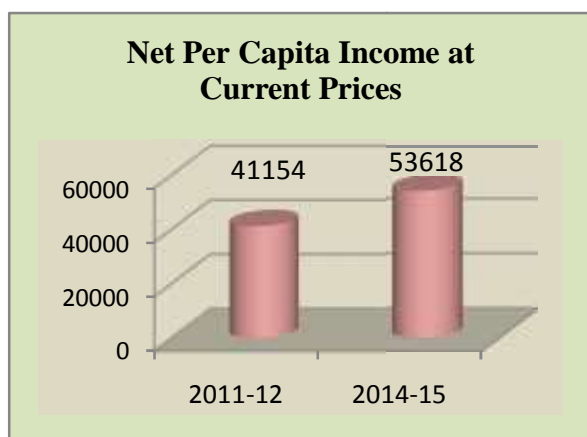
**SECTORAL CONTRIBUTION TO GROSS STATE DOMESTIC PRODUCT IN 2014-15  
(Quick Estimates) AT CURRENT PRICES**



Source: Directorate of Economics and Statistics, Assam.

**ESTIMATES OF PER CAPITA INCOME FOR THE YEAR 2014-15 (QUICK ESTIMATES)**

The per capita income of the State in terms of NSDP at constant (2011-12) prices is estimated at Rs. 42349.00 in quick estimates for the year 2014-15 and the same was Rs.41154.00 in the year 2011-12. The average annual growth observed in the period 2011-12 to 2014-15 is 1.24 per cent. The per capita NSDP at current prices for the year 2014-15 and 2011-12 are Rs. 53618.00 and Rs. 41154.00 respectively. The average growth rate during this period is 9.24 per cent.



## GROSS STATE DOMESTIC PRODUCT (GSDP) FOR 2013-14 (P)

The Gross State Domestic Product (GSDP) of the State of Assam, during 2013-14, at current prices was Rs. 174883.83 crore which is 11.10 per cent higher than that of Rs. 157406.27 crore in 2012-13 which is navigated by the high growth of 4.59 per cent in Agriculture, Forestry & Fishing Sector, 12.15 per cent in Industry Sector and 13.68 per cent in Service Sector.

The Gross State Domestic Product at constant (2011-12) prices during 2013-14 was Rs.151820.41 crore against Rs. 143112.29 crore in 2012-13 showing an increase of 6.08 per cent growth over the previous year. As per Provisional Estimates for the year 2013-14, the Agriculture and Allied Activities showed a nominal growth of 0.68 per cent compared to the growth of 6.08 per cent in previous year 2012-13. The Service sector has contributed a high growth 9.15 per cent during 2013-14 over the previous year 2012-13. The Industry Sector has experienced a growth of 6.03 per cent in 2013-14 in spite of previous year's negative growth in the Industry sector. The negative growth influencing sectors are mainly 'Mining & Quarrying', 'Construction' and 'Trade, Repair, Hotel & Restaurant' sector.

TABLE – 3.3  
SECTORAL GROWTH RATES OF GSDP AT CONSTANT (2011-12) PRICES

(Rs. in Lakh)

| Sector   | Base Year | Quick Estimates | Growth during the period |
|--|-----------|-----------------|--------------------------|
|  | 2011-12   | 2014-15         |                          |
| Agriculture, Forestry & Fishing (Agriculture & allied activities)    | 2881900   | 3182347         | 10.43                    |
| Mining & Quarrying   | 1464989   | 1240146         | -15.35                   |
| Manufacturing  | 1571707   | 1708942         | 8.73                     |
| Electricity, Gas, Water Supply & Other Utility Services              | 191883    | 207375          | 8.07                     |
| Construction   | 1179740   | 1519024         | 28.76                    |
| Industry   | 4408319   | 4675487         | 6.06                     |
| Trade, Repair, Hotels & Restaurants                                  | 2045676   | 2177362         | 6.44                     |
| Transport, Storage, Communication & Services related to Broadcasting | 810110    | 1022270         | 26.19                    |
| Financial Services   | 427077    | 496601          | 16.28                    |
| Real Estates, Ownership of Dwelling and Professional Services        | 1112543   | 1129738         | 1.55                     |
| Public Administration  | 821723    | 909445          | 10.68                    |
| Other Services   | 1077923   | 1398599         | 29.75                    |
| Services   | 6295052   | 7134015         | 13.33                    |
| Total Gross State Value Added at Basic Prices                        | 13585271  | 14991849        | 10.35                    |
| Gross State Domestic Product (GSDP)                                  | 14321244  | 15689541        | 9.55                     |
| Per capita Net State Domestic Product (in Rs.)                       | 41154     | 42349           | 2.90                     |

Source: Directorate of Economics &amp; Statistics, Assam.

## NET STATE DOMESTIC PRODUCT 2014-15 (QUICK ESTIMATES)

The State Income i.e, Net State Domestic Product (NSDP) at current prices is estimated at Rs.175210.46 crore in 2014-15 (quick estimates) which is higher by 10.90 percent than that of Rs. 157989.57 crore in 2013-14. At current prices 'Agriculture, Forestry & Fishing' registered an

increase of 11.20 percent while 'Industry' and 'Service' sector registered a growth of 9.57 percent and 12.39 per cent respectively.

The quick estimates of State Income at constant (2011-12) prices is estimated at Rs.138386.64 crore in 2014-15 showing increase of 2.56 per cent than that of Rs. 134926.16 crore in 2013-14. Though the 'Construction' under Industry sector (8.06 per cent), 'Transport, Storage, Communication & Services related to Broadcasting' (7.24 per cent) and 'Other Services' (8.83 per cent) under Service Sector has achieved a significant growth, but due to negative impact of 'Mining & Quarrying' 'Electricity, Gas, Water Supply and Other Utility Services' sectors, the overall growth of the state Income at constant (2011-12) prices has slow down.

### PER CAPITA STATE INCOME

As per Quick Estimates for 2014-15 the Per Capita Income at constant (2011-12) prices is estimated at Rs. 42349.00 as against Rs. 41825.00 in 2013-14 showing a growth rate of 1.25 percent.

At current prices Per Capita Net State Income is worked out at Rs. 53618.00 during 2014-15 as against Rs. 48974.00 in 2013-14 registering a growth of 9.48 percent.

A comparative table in respect of Per capita Income of the State and the country is given at Table-3.4.

TABLE – 3.4  
PER CAPITA INCOME OF ASSAM AND INDIA

(In Rupees.)

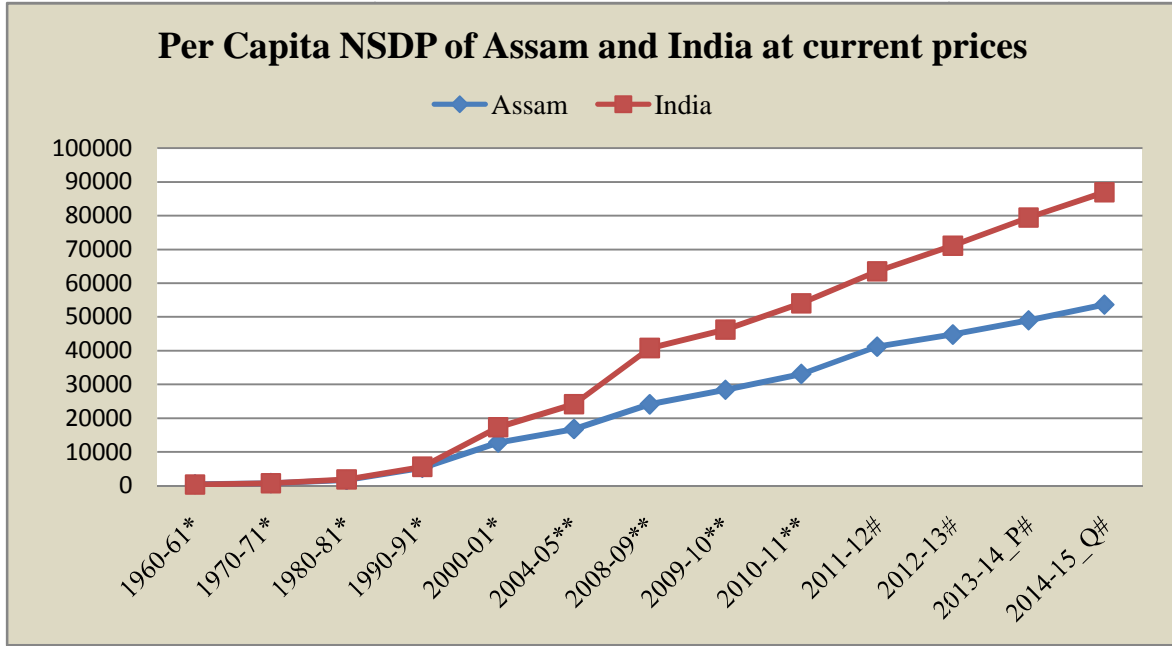
| Year       | Per Capita Income |                    |                   |                    |
|------------|-------------------|--------------------|-------------------|--------------------|
|            | Assam             |                    | India             |                    |
|            | At Current Prices | At Constant Prices | At Current Prices | At Constant Prices |
| 1960-61*   | 433               | 8769               | 373               | 8889               |
| 1970-71*   | 743               | 9351               | 763               | 10016              |
| 1980-81*   | 1673              | 9334               | 1852              | 10712              |
| 1990-91*   | 5315              | 10915              | 5621              | 14330              |
| 2000-01*   | 12803             | 12447              | 17295             | 20362              |
| 2004-05**  | 16782             | 16782              | 24143             | 24143              |
| 2008-09**  | 24099             | 18922              | 40775             | 31754              |
| 2009-10**  | 28383             | 20406              | 46249             | 33901              |
| 2010-11**  | 33087             | 21146              | 54021             | 36342              |
| 2011-12#   | 41154             | 41154              | 63460             | 63460              |
| 2012-13#   | 44769             | 40281              | 71050             | 65664              |
| 2013-14_P# | 48974             | 41825              | 79412             | 68867              |
| 2014-15_Q# | 53618             | 42349              | 86879             | 72889              |

\* For 1960-61 to 2000-01 the base is 1999-2000.

\*\* For the year 2004-05 to 2010-11 the base period is 2004-05

#For 2011-12 to 2014-15 the base period is 2011-12

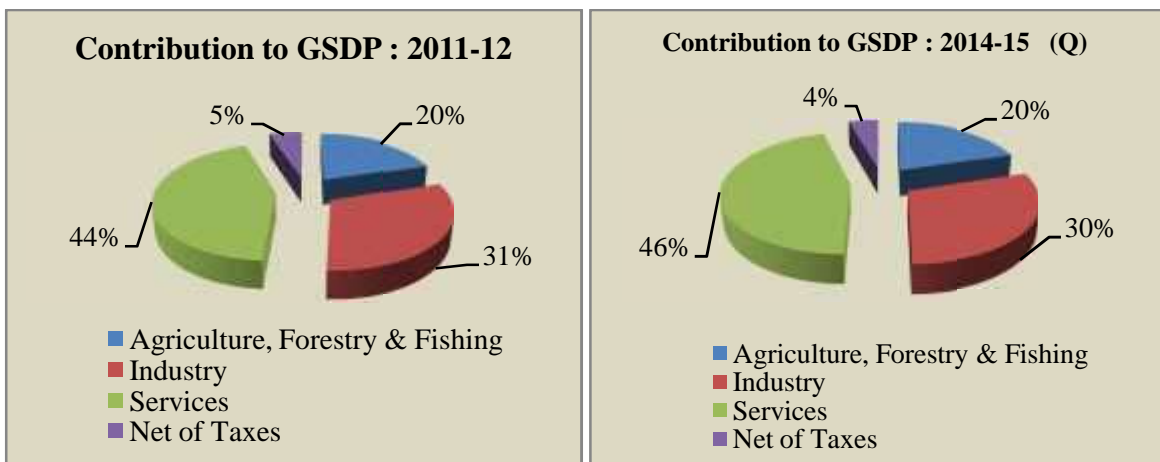
Source : Directorate of Economics & Statistics, Assam & Central Statistical Office (MOSPI), Govt. of India.



### SECTORAL COMPOSITION OF GROSS STATE DOMESTIC PRODUCT (GSDP)

The sectoral composition of GDP depicts the contribution of different sectors in percentage in the economy over a period of time which not only indicates the real structural changes taking place in the economy but also facilitates formulation of plans & various programmes for overall economic development of the State. It reveals from the table that the share of 'Agriculture, Forestry & Fishing' sector in the GSDP has nominal increased from 20.12 per cent in 2011-12 (Base Year Estimates) to 20.28 per cent in 2014-15 (Quick Estimates). Similar trend has been noticed in case of the share of Services sector also which was 43.96 per cent in 2011-12 and 45.47 per cent in 2014-15. But in case of Industry Sector the contribution of GSDP is in the declining trend from the year 2011-12 to 2014-15 as the contribution in the year 2011-12 was 30.78 which is come down to 29.80 in the year 2014-15.

#### SECTORAL CONTRIBUTION TO GROSS STATE DOMESTIC PRODUCT (GSDP) AT CONSTANT (2011-12) PRICES



On the other hand, the Services Sector has shown an encouraging growth trend of contribution to the State economy. Moreover, it also reveals that the share contribution of Agriculture, Forestry, Fishing sector (agriculture and allied) and Industry sector to GSDP has been remained more or less at the same level since last few years. Further, share of net of taxes [i.e. Total taxes on products minus subsidies on products] to GSDP has reduced to 4 percent in 2014-15 from 5 percent in 2011-12. The State Economy however experienced a picturesque change over the periods as the

primary sector witnessed a shift to service sector and the service sector has flourished very rapidly in the State's economy.

APPENDIX – 3.1  
GROSS STATE DOMESTIC PRODUCT AT CURRENT PRICES IN ASSAM

(Rs. in lakh)

| Sl. No. | Item   | 2011-12  | 2012-13  | 2013-14(P) | 2014-15(Q) |
|---------|--|----------|----------|------------|------------|
| 1       | 2  | 3        | 4        | 5          | 6          |
| 1       | Agriculture, Forestry and Fishing                                      | 2881900  | 3402008  | 3558088    | 3965007    |
| 1.1     | Crops  | 2061487  | 2496905  | 2641908    | 2990792    |
| 1.2     | Livestock  | 172539   | 179234   | 147015     | 135706     |
| 1.3     | Forestry & Logging   | 193092   | 207652   | 216239     | 228833     |
| 1.4     | Fishing and aquaculture  | 454782   | 518217   | 552926     | 609676     |
| 2       | Mining & Quarrying   | 1464989  | 1448306  | 1418997    | 1396545    |
|         | Primary  | 4346889  | 4850314  | 4977085    | 5361552    |
| 3       | Manufacturing  | 1571707  | 1699096  | 1906500    | 2216129    |
| 4       | Electricity, Gas, Water Supply and other utility services              | 191883   | 210860   | 241603     | 280841     |
| 5       | Construction   | 1179740  | 1243653  | 1594053    | 1852938    |
|         | Secondary  | 2943330  | 3153609  | 3742156    | 4349908    |
|         | Industry Sector  | 4408319  | 4601915  | 5161153    | 5746454    |
| 6       | Trade, Repair, Hotels & Restaurants                                    | 2045676  | 2284042  | 2549646    | 2848553    |
| 6.1     | Trade and repair services  | 1961211  | 2191727  | 2448009    | 2735000    |
| 6.2     | Hotel and restaurants  | 84465    | 92315    | 101637     | 113552     |
| 7       | Transport, Storage, Communication and services related to broadcasting | 810110   | 918558   | 1057960    | 1209106    |
| 7.1     | Railways   | 158334   | 177728   | 199736     | 224335     |
| 7.2     | Transport other than Railway   | 399834   | 468875   | 524250     | 600216.239 |
| 7.3     | Services Incidental to Transport                                       | 36400    | 39855    | 49912      | 58446      |
| 7.4     | Storage  | 6594     | 7277     | 8344       | 9386       |
| 7.5     | Communication & Services related to Broadcasting                       | 208948   | 224823   | 275718     | 316722     |
| 8       | Financial Services   | 427077   | 457213   | 515905     | 567024     |
| 9       | Real Estate, Ownership of dwelling & Professional Services             | 1112543  | 1225917  | 1302352    | 1409075    |
| 10      | Public Administration  | 821723   | 929477   | 1022873    | 1141221    |
| 11      | Other Services   | 1077923  | 1183294  | 1507473    | 1782709    |
|         | Tertiary   | 6295052  | 6998501  | 7956209    | 8957688    |
|         | Services Sector  | 6295052  | 6998501  | 7956209    | 8957688    |
| 12      | Total GSVA at Basic Prices   | 13585271 | 15002424 | 16675450   | 18669149   |
| 13      | Taxes on Products  | 1172219  | 1312137  | 1431420    | 1581781    |
| 14      | Subsidies on Products  | 436246   | 573934   | 618487     | 736428     |
| 15      | Gross State Domestic Product   | 14321244 | 15740627 | 17488383   | 19514502   |
| 16      | Population (in '00 )   | 314410   | 318480   | 322600     | 326775     |
| 17      | Per Capita GSDP (in Rs.)   | 45550    | 49424    | 54211      | 59718      |

Source: Directorate of Economics and Statistics, Assam.

## APPENDIX – 3.2

GROSS STATE DOMESTIC PRODUCT AT CONSTANT (2011-12) PRICES IN ASSAM  
(Rs. in lakh)

| Sl. No. | Item   | 2011-12  | 2012-13  | 2013-14 (P) | 2014-15 (Q) |
|---------|--|----------|----------|-------------|-------------|
| 1       | 2  | 3        | 4        | 5           | 6           |
| 1       | Agriculture, Forestry and Fishing                                      | 2881900  | 3056979  | 3077675     | 3182347     |
| 1.1     | Crops  | 2061487  | 2222098  | 2225760     | 2312742     |
| 1.2     | Livestock  | 172539   | 187419   | 171676      | 171246      |
| 1.3     | Forestry & Logging   | 193092   | 172610   | 180616      | 174684      |
| 1.4     | Fishing and aquaculture  | 454782   | 474852   | 499623      | 523675      |
| 2       | Mining & Quarrying   | 1464989  | 1386337  | 1310972     | 1240146     |
|         | Primary  | 4346889  | 4443316  | 4388647     | 4422493     |
|         | Industry   | 4408319  | 4311373  | 4571242     | 4675487     |
| 3       | Manufacturing  | 1571707  | 1584216  | 1661915     | 1708942     |
| 4       | Electricity, Gas, Water Supply and other utility services              | 191883   | 192214   | 202077      | 207375      |
| 5       | Construction   | 1179740  | 1148606  | 1396278     | 1519024     |
|         | Secondary  | 2943330  | 2925036  | 3260270     | 3435341     |
| 6       | Trade, Repair, Hotels & Restaurants                                    | 2045676  | 1867102  | 2132523     | 2177362     |
| 6.1     | Trade and repair services  | 1961211  | 1790010  | 2047515     | 2092081     |
| 6.2     | Hotel and restaurants  | 84465    | 77092    | 85008       | 85281       |
| 7       | Transport, Storage, Communication and services related to broadcasting | 810110   | 864896   | 945649      | 1022270     |
| 7.1     | Railways   | 158334   | 177728   | 199736      | 224335      |
| 7.2     | Transport Other than Railway   | 399834   | 434910   | 455811      | 486606      |
| 7.3     | Services Incidental to Transport                                       | 36400    | 36968    | 43396       | 47383       |
| 7.4     | Storage  | 6594     | 6754     | 7201        | 7525        |
| 7.5     | Communication & Services related to Broadcasting                       | 208948   | 208536   | 239505      | 256421      |
| 8       | Financial Services   | 427077   | 448132   | 472252      | 496601      |
| 9       | Real Estate, Ownership of dwelling & Professional Services             | 1112543  | 1137847  | 1123977     | 1129738     |
| 10      | Public Administration  | 821723   | 857488   | 879210      | 909445      |
| 11      | Other Services   | 1077923  | 1087150  | 1282305     | 1398599     |
|         | Tertiary   | 6295052  | 6262615  | 6835916     | 7134015     |
|         | Services Sector  | 6295052  | 6262615  | 6835916     | 7134015     |
| 12      | Total GSVA at Basic Prices   | 13585271 | 13630967 | 14484833    | 14991849    |
| 13      | Taxes on Products  | 1172219  | 1209149  | 1227650     | 1305485     |
| 14      | Subsidies on Products  | 436246   | 528887   | 530442      | 607793      |
| 15      | Gross State Domestic Product   | 14321244 | 14311229 | 15182041    | 15689541    |
| 16      | Population (in '00 )   | 314410   | 318480   | 322600      | 326775      |
| 17      | Per Capita GSDP (in Rs.)   | 45550    | 44936    | 47062       | 48013       |

Source: Directorate of Economics and Statistics, Assam.



APPENDIX – 3.3  
NET STATE DOMESTIC PRODUCT AT CURRENT PRICES IN ASSAM  
(Rs. in lakh)

| Sl. No. | Item   | 2011-12  | 2012-13  | 2013-14 (P) | 2014-15 (Q) |
|---------|--|----------|----------|-------------|-------------|
| 1       | 2  | 3        | 4        | 5           | 6           |
| 1       | Agriculture, Forestry and Fishing                                      | 2654638  | 3141949  | 3262331     | 3627815     |
| 1.1     | Crops  | 1888760  | 2298656  | 2410674     | 2723450     |
| 1.2     | Livestock  | 167084   | 172861   | 140400      | 128701      |
| 1.3     | Forestry & Logging   | 190554   | 204863   | 212822      | 224914      |
| 1.4     | Fishing and aquaculture  | 408240   | 465569   | 498435      | 550751      |
| 2       | Mining & Quarrying   | 1288077  | 1272547  | 1224255     | 1193540     |
|         | Primary  | 3942715  | 4414496  | 4486586     | 4821355     |
|         | Industry   | 3848062  | 4058623  | 4549806     | 4985271     |
| 3       | Manufacturing  | 1306140  | 1472145  | 1656307     | 1865161     |
| 4       | Electricity, Gas, Water Supply and other utility services              | 130994   | 136954   | 160225      | 177202      |
| 5       | Construction   | 1122851  | 1176977  | 1509019     | 1749367     |
|         | Secondary  | 2559985  | 2786076  | 3325551     | 3791731     |
| 6       | Trade, Repair, Hotels & Restaurants                                    | 2002198  | 2231417  | 2486123     | 2770377     |
| 6.1     | Trade and repair services  | 1919528  | 2141229  | 2387018     | 2661867     |
| 6.2     | Hotel and restaurants  | 82670    | 90188    | 99105       | 108510      |
| 7       | Transport, Storage, Communication and services related to broadcasting | 654981   | 741500   | 864882      | 995892      |
| 7.1     | Railways   | 102300   | 113843   | 127036      | 141564      |
| 7.2     | Transport Other than railway   | 345246   | 406585   | 460362      | 533345      |
| 7.3     | Services Incidental to Transport                                       | 31430    | 34560    | 43829       | 51757       |
| 7.4     | Storage  | 5654     | 6315     | 7095        | 7948        |
| 7.5     | Communication & Services related to Broadcasting                       | 170351   | 180197   | 226560      | 261278      |
| 8       | Financial Services   | 420333   | 449114   | 506649      | 556242      |
| 9       | Real Estate, Ownership of dwelling & Professional Services             | 942080   | 1026126  | 1078207     | 1153478     |
| 10      | Public Administration  | 634052   | 722921   | 772986      | 853483      |
| 11      | Other Services   | 1046848  | 1148295  | 1465040     | 1733135     |
|         | Tertiary   | 5700492  | 6319373  | 7173887     | 8062607     |
|         | Services Sector  | 5700492  | 6319373  | 7173887     | 8062607     |
| 12      | Total NSVA at Basic Prices   | 12203192 | 13519945 | 14986024    | 16675693    |
| 13      | Taxes on Products  | 1172219  | 1312137  | 1431420     | 1581781     |
| 14      | Subsidies on Products  | 436246   | 573934   | 618487      | 736428      |
| 15      | Net State Domestic Product   | 12939165 | 14258148 | 15798957    | 17521046    |
| 16      | Population (in '00 )   | 314410   | 318480   | 322600      | 326775      |
| 17      | Per Capita NSDP (in Rs.)   | 41154    | 44769    | 48974       | 53618       |

. Source: Directorate of Economics and Statistics, Assam



## APPENDIX – 3.4

NET STATE DOMESTIC PRODUCT AT CONSTANT (2011-12) PRICES IN ASSAM  
(Rs. in lakh)

| Sl.No. | Item   | 2011-12  | 2012-13  | 2013-14 (P) | 2014-15 (Q) |
|--------|--|----------|----------|-------------|-------------|
| 1      | 2  | 3        | 4        | 5           | 6           |
| 1      | Agriculture, Forestry and Fishing                                      | 2654638  | 2796920  | 2781918     | 2849356     |
| 1.1    | Crops  | 1888760  | 2023849  | 1994526     | 2049610     |
| 1.2    | Livestock  | 167084   | 181046   | 165061      | 164059      |
| 1.3    | Forestry & Logging   | 190554   | 169821   | 177199      | 170877      |
| 1.4    | Fishing and aquaculture  | 408240   | 422204   | 445132      | 464810      |
| 2      | Mining & Quarrying   | 1288077  | 1210578  | 1116230     | 1039105     |
|        | Primary  | 3942715  | 4007498  | 3898148     | 3888461     |
|        | Industry   | 3848062  | 3768081  | 3959895     | 4039618     |
| 3      | Manufacturing  | 1306140  | 1357265  | 1411722     | 1467672     |
| 4      | Electricity, Gas, Water Supply and other utility services              | 130994   | 118308   | 120699      | 115859      |
| 5      | Construction   | 1122851  | 1081930  | 1311244     | 1416982     |
|        | Secondary  | 2559985  | 2557503  | 2843665     | 3000513     |
| 6      | Trade, Repair, Hotels & Restaurants                                    | 2002198  | 1814477  | 2069000     | 2103273     |
| 6.1    | Trade and repair services  | 1919528  | 1739558  | 1986524     | 2020894     |
| 6.2    | Hotel and restaurants  | 82670    | 74919    | 82476       | 82379       |
| 7      | Transport, Storage, Communication and services related to broadcasting | 654981   | 687838   | 752572      | 807058      |
| 7.1    | Railways   | 102300   | 113843   | 127036      | 141564      |
| 7.2    | Transport Other than railway   | 345246   | 372620   | 391923      | 417521      |
| 7.3    | Services Incidental to Transport                                       | 31430    | 31673    | 37314       | 40657       |
| 7.4    | Storage  | 5654     | 5792     | 5952        | 6107        |
| 7.5    | Communication & Services related to Broadcasting                       | 170351   | 163910   | 190347      | 201209      |
| 8      | Financial Services   | 420333   | 440033   | 462996      | 485925      |
| 9      | Real Estate, Ownership of dwelling & Professional Services             | 942080   | 938056   | 899832      | 879424      |
| 10     | Public Administration  | 634052   | 650932   | 629323      | 626972      |
| 11     | Other Services   | 1046848  | 1052151  | 1239872     | 1349346     |
|        | Tertiary   | 5700492  | 5583487  | 6053595     | 6251998     |
|        | Services Sector  | 5700492  | 5583487  | 6053595     | 6251998     |
| 12     | Total NSVA at Basic Prices   | 12203192 | 12148488 | 12795408    | 13140972    |
| 13     | Taxes on Products  | 1172219  | 1209149  | 1227650     | 1305485     |
| 14     | Subsidies on Products  | 436246   | 528887   | 530442      | 607793      |
| 15     | Net State Domestic Product   | 12939165 | 12828750 | 13492616    | 13838664    |
| 16     | Population (in '00 )   | 314410   | 318480   | 322600      | 326775      |
| 17     | Per Capita NSDP (in Rs.)   | 41154    | 40281    | 41825       | 42349       |

Source: Directorate of Economics and Statistics, Assam.

## APPENDIX – 3.5

MOVEMENT OF GROSS STATE DOMESTIC PRODUCT (GSDP)  
OF ASSAM AT CURRENT AND CONSTANT (2011-12) PRICES

| YEAR        | Gross State Domestic Product<br>(Rupees in lakh) |                                 | Per capita Gross State Domestic<br>Product ( in Rupees) |                                 |
|-------------|--|---------------------------------|---|---------------------------------|
|             | At current<br>Prices                             | At constant<br>(2011-12) Prices | At current<br>Prices                                    | At constant<br>(2011-12) Prices |
| 2004-05*    | 5339771  | 5339771                         | 18993   | 18993                           |
| 2010-11*    | 11268796   | 7344442                         | 37053   | 24149                           |
| 2011-12     | 14321244   | 14321244                        | 45550   | 45550                           |
| 2012-13     | 15740627   | 14311229                        | 49424   | 44936                           |
| 2013-14 (P) | 17488383   | 15182041                        | 54211   | 47062                           |
| 2014-15 (Q) | 19514502   | 15689541                        | 59718   | 48013                           |

\* Figures for the year 2004-05 and 2010-11 are of the base year 2004-05

Source: Directorate of Economics and Statistics.

## APPENDIX – 3.6

MOVEMENT OF NET STATE DOMESTIC PRODUCT (NSDP) OF  
ASSAM AT CURRENT AND CONSTANT (2011-12) PRICES

| YEAR        | Net State Domestic Product<br>(Rupees in Lakh) |                                 | Per capita Net State Domestic<br>Product ( in Rupees) |                                 |
|-------------|--|---------------------------------|---|---------------------------------|
|             | At current<br>Prices                           | At constant<br>(2011-12) Prices | At current<br>Prices                                  | At constant<br>(2011-12) Prices |
| 2004-05*    | 4718074  | 4718074                         | 16782   | 16782                           |
| 2010-11*    | 10062671                                       | 6430998                         | 33087   | 21146                           |
| 2011-12     | 12939165                                       | 12939165                        | 41154   | 41154                           |
| 2012-13     | 14258148                                       | 12828750                        | 44769   | 40281                           |
| 2013-14 (P) | 15798957                                       | 13492616                        | 48974   | 41825                           |
| 2014-15 (Q) | 17521046                                       | 13838664                        | 53618   | 42349                           |

\* Figures for the year 2004-05 and 2010-11 are of the base year 2004-05

(P) Provisional : (Q) Quick Estimate

Source: Directorate of Economics and Statistics.

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## CHAPTER – IV

### STATE FINANCE

The Assam Government Budget, 2015-16 was presented with an expected fiscal deficit of Rs.4680.31 crore and a revenue surplus of Rs.5501.26 crore and a primary deficit of Rs.2069.19 crore. The fiscal reform measures adopted by the State started yielding favourable results since 2005-06. During the year 2014-15, the State had a revenue deficit of Rs.896.68 crore after a gap of four years and a fiscal deficit of Rs.5429.54 crore which is 2.78 percent of GSDP below the 3 percent limit recommended by the Thirteenth Finance Commission. The debt-GSDP ratio during 2014-15 in the State was 16.04 percent well below the fiscal target of 28.4 percent prescribed by the Thirteenth Finance Commission. The total own tax revenues of the State during 2014-15 have shown a growth of 5.06 percent over 2013-14 against an increase of 9.01 percent during 2013-14 over the previous year. The gross VAT collection increased by 9 percent in 2014-15 against an increase of 11 percent in 2013-14 over the previous year. The contribution of VAT to the total own tax revenue is 73 percent in 2014-15 against a contribution of 70 percent in 2013-14

#### BUDGET 2015-16

The Assam Government Budget 2015-16 was presented with expected consolidated fund of Rs.64839.69 crore comprising of expected Revenue receipts of Rs.57064.10 crore and Rs.7775.59 crore under Capital Account. Taking into account the consolidated fund and the estimated receipt of Rs.185352.56 crore under Public Accounts and Rs.100.00 crore under Contingency Fund, the total receipts amount is expected to be Rs.250292.25 crore. The total expenditure from the consolidated fund of the State in 2015-16 is estimated at Rs.66142.17 crore, of which Rs.51562.85 crore is on Revenue Account and Rs.14579.32 crore is on Capital Account. Out of the total estimated expenditure of Rs.248682.47 crore for the year 2015-16, Rs.182440.30 crore will be spent from Public Account and Rs.100.00 crore under Contingency Fund. Thus, during the year 2015-16, it is expected to have a surplus of Rs.1609.78 crore which together with the opening deficit of Rs.1875.10 crore for the year 2015-16 will lead to an estimated closing deficit of Rs.265.32 crore.

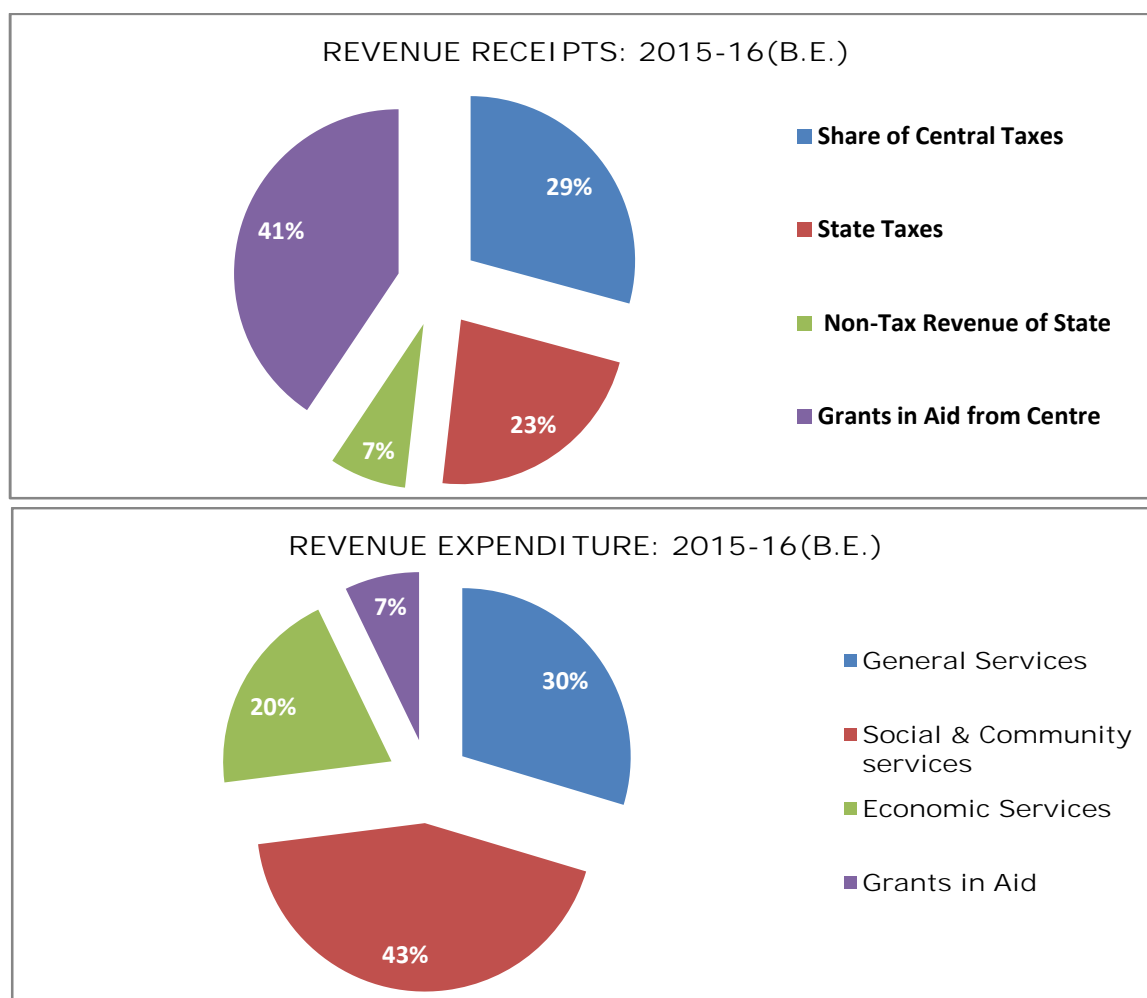
TABLE – 4.1  
BUDGET AT A GLANCE

| I tem  | 2014-15(R.E.) | 2015-16(B.E.) |
|--|---------------|---------------|
| <b>A. Total Receipts</b>                     | 224955.46     | 250292.25     |
| <b>I. Consolidated Fund</b>                  | 51885.10      | 64839.69      |
| Revenue Account                              | 47340.28      | 57064.10      |
| Capital Account                              | 4544.82       | 7775.59       |
| <b>II. Contingency Fund Accounts</b>         | 100.00        | 100.00        |
| <b>III. Public Accounts</b>                  | 172970.36     | 185352.56     |
| <b>B. Expenditure</b>                        | 225125.92     | 248682.47     |
| <b>I. Consolidated Fund</b>                  | 65029.96      | 66142.17      |
| Revenue Account                              | 52429.18      | 51562.85      |
| Capital Account                              | 12600.78      | 14579.32      |
| <b>II. Contingency Fund Accounts</b>         | 100.00        | 100.00        |
| <b>III. Public Accounts</b>                  | 159995.96     | 182440.30     |
| <b>C. Transactions during the year (A-B)</b> |               |               |
| Surplus (+)                                  |               | 1609.78       |
| Deficit (-)                                  | (-)170.46     |               |
| <b>D. Opening balance</b>                    |               |               |
| Surplus (+)                                  | -             | -             |
| Deficit (-)                                  | (-)1704.64    | (-)1875.10    |
| <b>E. Closing balance (C+D)</b>              |               |               |
| Surplus (+)                                  |               |               |
| Deficit (-)                                  | (-)1875.10    | (-)265.32     |

R.E. = Revised Estimate, B.E. = Budget Estimate.  
Source: Assam Budget in Brief, 2015-16, Assam.

## THE REVENUE BUDGET 2015-16

The Government of Assam expects to receive Rs.57064.10 crore under Revenue account against the total outlay of Rs.51562.85 crore. The percentage share of major components of the Revenue account and Revenue expenditure in the Budget 2015-16 may be evident from the figures given below.



It is expected that the total revenue receipts will increase by 49 percent during 2015-16 over the actual of the previous year. During 2015-16, an amount of Rs.17218.26 is expected from the State's Own Resources with expected contribution of Rs.12892.39 crore as Tax Revenues and Rs.4325.87 crore as Non-Tax revenue. The expected transfer from the Centre is Rs.39845.84 crore which include Rs.16,667.31 crore as Share in Central Taxes, Rs.20,282.45 as Plan Grants and Rs.2,896.08 crore as Non-Plan Grants from the Centre. The Revenue Expenditure is segregated into plan and non-plan expenditure. The expected Plan expenditure in the Budget 2015-16 is Rs.16,885.87 crore and the estimated Non-Plan expenditure is Rs.34,676.97 crore of which expected interest payment component is Rs.2,612.11 crore and under Pension the expenditure is expected to be Rs.6,214.97 crore. Budget estimate of 2015-16 shows revenue surplus of Rs.5,501.26 crore and fiscal deficit is pegged at 2.33 percent of GSDP.

## THE CAPITAL BUDGET 2015-16

The Budget estimates anticipate total capital receipts of Rs.9,535.78 crore of which Internal Debt by the State Government is expected to be Rs.7,213.32 crore. As regards to the allocation of funds under the important components of Capital expenditure, the Budget 2015-16 provides Rs.9,412.87 crore for Capital Outlay and Rs.776.04 crore for Repayment for disbursement of Loans and Advances. The expected deficit in Capital budget is estimated at Rs.653.13 crore for 2015-16.

## SHARE OF PLAN EXPENDITURE IN THE BUDGET 2015-16

The table- 4.2 shows the relative share of the Plan Schemes under different heads in the budget provision for 2015-16.

TABLE-4.2  
SHARE OF PLAN EXPENDITURE UNDER DIFFERENT HEADS

(Rs. in crore)

| Heads  | Total Budget Provision |          |          | Budget for Plan Schemes |         |          | Plan expenditure to total Budget provision (%) |
|--|------------------------|----------|----------|-------------------------|---------|----------|--|
|  | Revenue                | Capital  | Total    | Revenue                 | Capital | Total    |  |
| General Service  | 15282.75               | 544.75   | 15827.50 | 141.88                  | 421.38  | 563.26   | 0.85   |
| Social & community service   | 22359.48               | 2170.61  | 24530.09 | 9869.03                 | 2127.23 | 11996.29 | 18.14  |
| Economic   | 10224.10               | 6341.19  | 16565.29 | 6000.31                 | 6278.17 | 12278.48 | 18.56  |
| A) Grants-in-Aid & Contribution (State)  | 518.33                 | -        | 518.33   | 1                       | -       | 1        | -  |
| B) Autonomous Councils   | 3178.19                | 356.33   | 3534.52  | 874.64                  | 356.32  | 1230.96  | 1.86   |
| Loans and Advances   | -                      | 776.04   | 776.04   | -                       | 269.74  | 269.74   | 0.41   |
| Public Debt including Inter State Settlement & Appropriation to Contingency Fund | -                      | 4390.40  | 4390.40  | -                       | -       | -        | -  |
| Total  | 51562.85               | 14579.32 | 66142.17 | 16885.87                | 9452.84 | 26338.71 | 39.82  |

Source: Assam Budget in Brief, 2015-16, Assam.

It reveals from the table that out of the total budget provision for the year 2015-16, the share of total plan expenditure is 39.82 percent of which share of Economic Services is the highest with 18.56 percent followed by Social and Community Services (18.14%), Autonomous Councils (1.86%) and General Services (0.85%).

## FISCAL SCENARIO OF THE STATE

The fiscal scenario in the State took a positive turn in 2005-06 due to the fiscal reform measures adopted by the State in 2004-05 and continued up to 2008-09. After a heavy downslide in 2009-10, the revenue deficit turned into surplus till 2013-14 followed by a revenue deficit of Rs.896.68 crore in 2014-15. The Budget estimate of 2015-16 shows revenue surplus of Rs.5501.26 crore.

During the period 2010-11 to 2013-14, fiscal deficit declined over the fiscal deficit of Rs.4043.42 crore in 2009-10 which stood at a 4.21 percent of GSDP crossing the 3.5 percent of GSDP limit of State's FRBM Act and also 4 percent of GSDP limit raised by Government of India for 2009-10 as a part of stimulus packages to facilitate more borrowings for increasing capital expenditure for recovery from economic recession. The fiscal deficit came down to Rs.1516.49 crore being 0.96 percent of GSDP in 2012-13 but increased to Rs.3782.30 crore with 2.16 percent of GSDP in 2013-14. During 2014-15 it further increased to Rs.5429.54 crore with 2.78 percent of GSDP though remained well below the permissible limit.

The table below shows the trend of fiscal parameters of the State from 2005-06 to 2015-16(BE). The figures of GSDP at current prices from 2011-12 is taken as per new series of national accounts.

TABLE – 4.3  
FISCAL PARAMETERS

(Rs. in crore)

| Year        | Overall Revenue Deficit | Fiscal Deficit | Primary Deficit | Fiscal Deficit as percentage of GSDP | GSDP at Current prices |
|-------------|-------------------------|----------------|-----------------|--------------------------------------|------------------------|
| 2005-06     | (-)1509.08              | (-)355.71      | (-)1865.83      | (-)0.60                              | 59385                  |
| 2006-07     | (-)2210.42              | (-)711.39      | (-)2227.06      | (-)1.10                              | 64692                  |
| 2007-08     | (-)2580.76              | (-)790.39      | (-)2302.33      | (-)1.11                              | 71076                  |
| 2008-09     | (-)3833.71              | (-)1406.79     | (-)3000.12      | (-)1.74                              | 81074                  |
| 2009-10     | (+)1347.71              | (+)4043.42     | (+)2210.84      | (+)4.21                              | 95975                  |
| 2010-11     | (-)53.12                | (+)1990.57     | (+)78.44        | (+)1.77                              | 112688                 |
| 2011-12     | (-)926.85               | (+)1646.05     | (-)428.44       | (+)1.15                              | 143212                 |
| 2012-13     | (-)1554.07              | (+)1516.49     | (-)598.42       | (+)0.96                              | 157406                 |
| 2013-14     | (-)222.91               | (+)3782.30     | (+)1583.85      | (+)2.16                              | 174884                 |
| 2014-15     | (+)896.68               | (+)5429.54     | (+)3095.80      | (+)2.78                              | 195145                 |
| 2015-16(BE) | (-)5501.26              | (+)4680.31     | (+)2068.19      |                                      |                        |

N.B. (-) ve sign indicates surplus.

Source: Department of Finance (Economic Affairs), Government of Assam.

## REVENUE RECEIPTS

Revenue Receipts comprises of two major components – State's Own Resources and Transfer from the Centre. The trend of actual Revenue receipts for the last eight years from 2006-07 to 2014-15 and the Budget Estimate for 2015-16 is indicated in the Table - 4.4 below.

TABLE – 4.4  
TOTAL REVENUE RECEIPTS

(Rs. in crore)

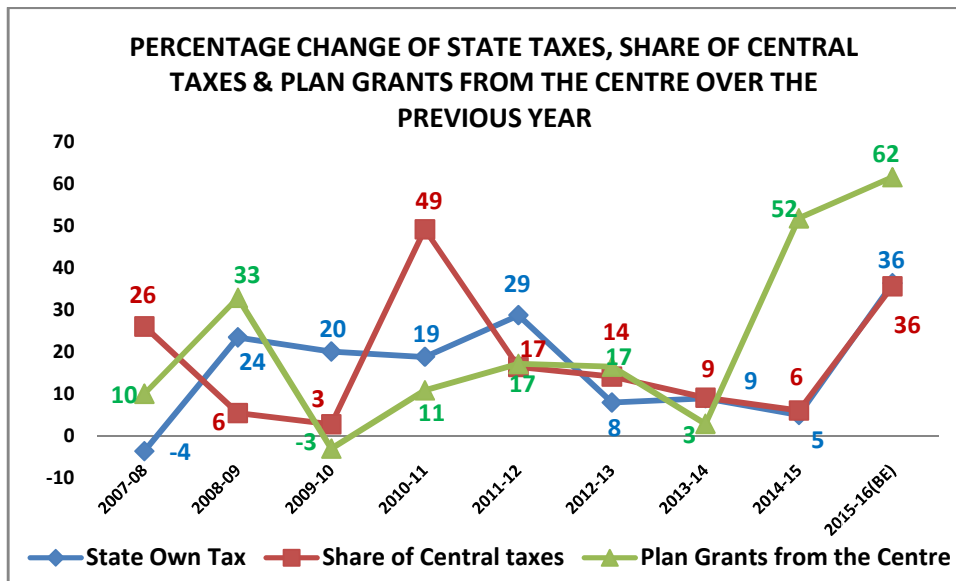
| Year        | State's Own Resources |                  |             | Transfer from the Centre |             |                 |               | Total Revenue Receipts (4+8) |
|-------------|-----------------------|------------------|-------------|--------------------------|-------------|-----------------|---------------|------------------------------|
|             | Tax Revenues          | Non-Tax Revenues | Total (2+3) | Share in Central Taxes   | Plan Grants | Non Plan Grants | Total (5+6+7) |                              |
| 1           | 2                     | 3                | 4           | 5                        | 6           | 7               | 8             | 9                            |
| 2006-07     | 3483.32               | 1859.27          | 5342.59     | 3898.99                  | 3716.67     | 708.70          | 8324.36       | 13666.95                     |
| 2007-08     | 3359.50               | 2134.59          | 5494.09     | 4918.21                  | 4093.65     | 818.98          | 9830.84       | 15324.93                     |
| 2008-09     | 4150.21               | 2271.90          | 6422.11     | 5189.90                  | 5444.10     | 1020.93         | 11654.93      | 18077.04                     |
| 2009-10     | 4986.71               | 2752.94          | 7739.65     | 5339.53                  | 5285.94     | 1519.37         | 12144.84      | 19884.49                     |
| 2010-11     | 5929.84               | 2373.32          | 8303.16     | 7968.61                  | 5864.94     | 868.22          | 14701.77      | 23004.93                     |
| 2011-12     | 7638.24               | 2866.76          | 10505.00    | 9283.53                  | 6876.55     | 790.32          | 16950.40      | 27455.40                     |
| 2012-13     | 8250.21               | 2473.59          | 10723.80    | 10601.26                 | 8017.88     | 1348.04         | 19967.18      | 30690.98                     |
| 2013-14     | 8994.92               | 2705.03          | 11699.95    | 11574.52                 | 8257.40     | 680.92          | 20512.84      | 32212.79                     |
| 2014-15     | 9449.81               | 2412.89          | 11862.70    | 12283.71                 | 12544.13    | 1490.95         | 26318.79      | 38181.49                     |
| 2015-16(BE) | 12892.39              | 4325.87          | 17218.26    | 16667.31                 | 20282.45    | 2896.08         | 39845.84      | 57064.10                     |

Source: Department of Finance (Economic Affairs), Government of Assam.

The above table depicts an increasing trend of total revenue receipts during the last nine years (2006-2015). The percentage increase of State taxes in 2014-15 over 2013-14 was 5 percent against 9 percent increase in 2013-14 over the previous year. The State taxes increased by 8

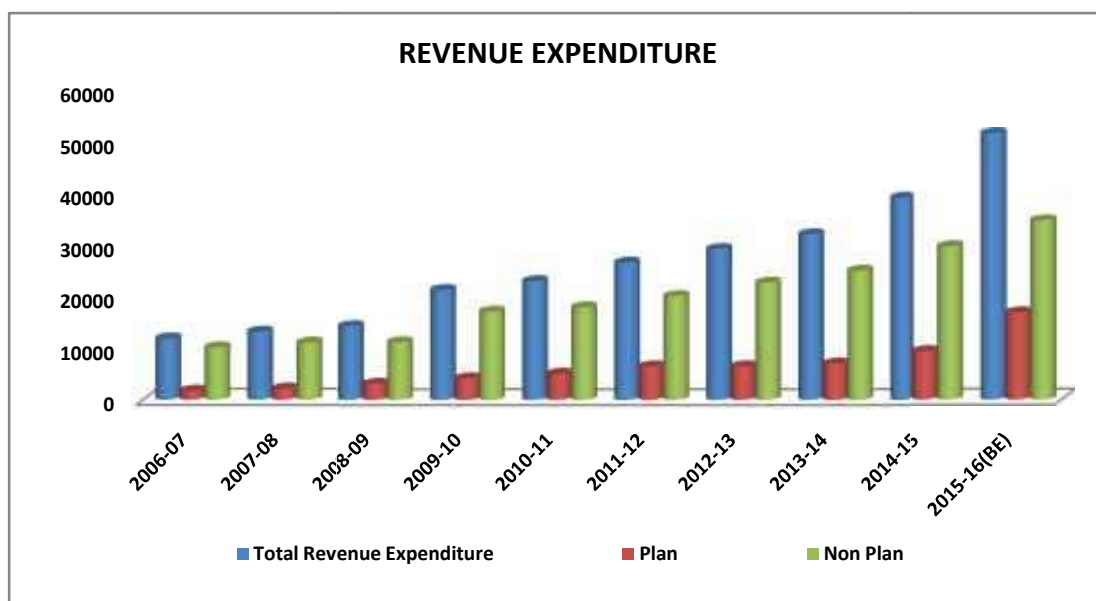
percent in 2012-13 over the previous year. The increase of share in Central taxes in 2014-15 was 6 percent than that of 9 percent increase in 2013-14 over the previous year. During 2014-15, the total Revenue receipts was Rs.38181.49 crore of which the share of State Taxes was 25 percent, non-tax revenue was 6 percent, the share of Central Taxes was 32 percent and Plan Grants from the Centre was 33 percent and Non-Plan Grants from the Centre was 4 percent.

The Budget estimates for the year 2015-16 shows that the State's Own Resources is expected to increase by 45 percent of which, State Own Tax Revenues is expected to increase by 36 percent and Non-Tax Revenues by 79 percent. During the budget year, transfer from the Centre is expected to increase by 51 percent of which share in Central Taxes is expected to increase by 36 percent, Plan grants by 62 percent and Non-Plan Grants by 94 percent. The graph given below shows the percentage change of some components of revenue receipts from 2006-07 to 2014-15 and expected during the year 2015-16.



**REVENUE EXPENDITURE**

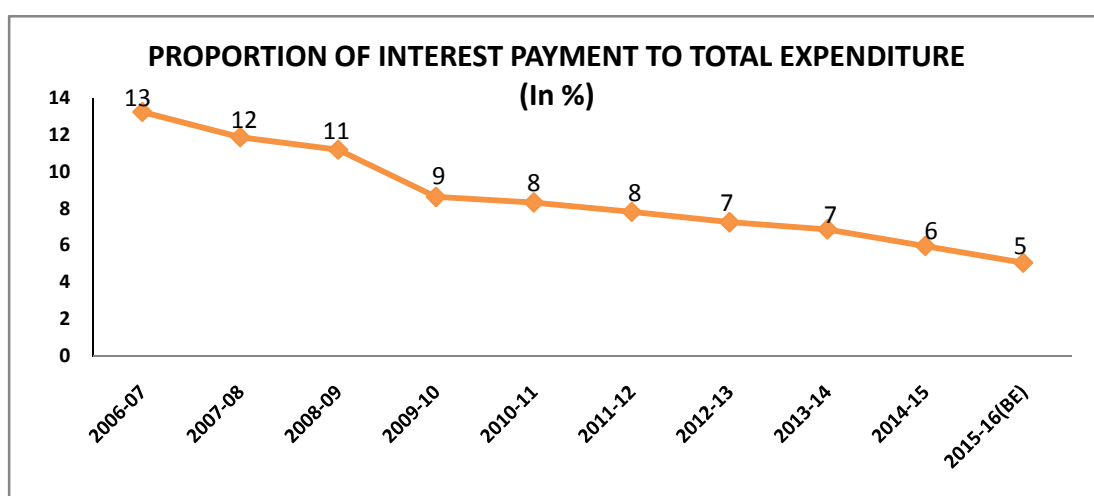
Revenue expenditure is segregated into plan and non-plan expenditure. The volume of total Revenue Expenditure, Plan Expenditure and Non-plan Expenditure from 2006-07 to 2014-15 and budget estimate for 2015-16 is presented through the graph given below.



The steady increase in Plan expenditure shows inclination of the Government to stimulate developmental activities. The volume of Plan expenditure to total expenditure was 15 percent during 2006-07 and 16 percent in 2007-08. The percentage share of plan expenditure to total expenditure remained above 20 percent during the next seven years (2008-2015) with maximum of 24 percent in 2011-12 and 2014-15. It is expected to spend around 33 percent of the total expenditure during 2015-16 on the Plan head.

Out of the total Revenue Expenditure amounting to Rs.11456.53 crore during 2006-07, the proportion of expenditure on salary, wages and pension was as high as 51 percent and remained more or less same up to 2008-09. It declined to 46 percent during 2009-10 and again soared to 56 percent during 2010-11 due to implementation of the Sixth Pay Commission and remained at the same level during 2011-12. During 2012-13, 2013-14 and 2014-15 expenditure on Salary, Wages and pension increased to 59 percent, 62 percent and 58 percent of the total Revenue Expenditure respectively.

Another component of revenue expenditure is interest payment. The trend since 2006-07 shows that the proportion of expenditure on interest payment to the total expenditure is decreasing as depicted below.



The table below shows the trend of actual expenditure of Government of Assam from 2006-07 to 2014-15 and the Budget Estimate for 2015-16.

TABLE – 4.5  
REVENUE EXPENDITURE

| Year          | Plan Expenditure |        | Non-Plan Expenditure |                  |          | Total Revenue Expenditure |          |
|---------------|------------------|--------|----------------------|------------------|----------|---------------------------|----------|
|               | Total            | Salary | Total                | Interest Payment | Salary   |                           | Pension  |
| 2006-07       | 1662.50          | 200.21 | 9794.03              | 1515.67          | 4484.19  | 1177.86                   | 11456.53 |
| 2007-08       | 2067.38          | 172.62 | 10676.78             | 1512.24          | 5068.58  | 1340.68                   | 12744.16 |
| 2008-09       | 3110.65          | 256.68 | 11132.68             | 1593.33          | 5583.70  | 1437.37                   | 14243.33 |
| 2009-10       | 4168.91          | 297.59 | 17063.29             | 1832.58          | 7804.80  | 1769.28                   | 21232.20 |
| 2010-11       | 5055.96          | 413.18 | 17895.86             | 1912.12          | 10030.59 | 2384.53                   | 22951.82 |
| 2011-12       | 6487.76          | 668.89 | 20040.79             | 2074.40          | 10978.54 | 3136.07                   | 26528.55 |
| 2012-13       | 6495.09          | 818.12 | 22641.83             | 2114.91          | 12452.21 | 3778.87                   | 29136.92 |
| 2013-14       | 7027.65          | 773.01 | 24962.23             | 2198.45          | 14841.44 | 4264.13                   | 31989.88 |
| 2014-15       | 9390.82          | 877.83 | 29687.35             | 2333.74          | 16702.00 | 5237.02                   | 39078.17 |
| 2015-16(B.E.) | 16885.87         | 917.54 | 34676.97             | 2612.11          | 20211.66 | 6214.97                   | 51562.84 |

Source: Department of Finance (Economic Affairs), Government of Assam.



## NON-DEBT CAPITAL EXPENDITURE

Non-debt capital Expenditure consists of capital outlay and lending. This excludes loan repayment. The trend of actual capital expenditure during the period from 2006-07 to 2014-15 and budget estimate for 2015-16 is indicated in the table given below.

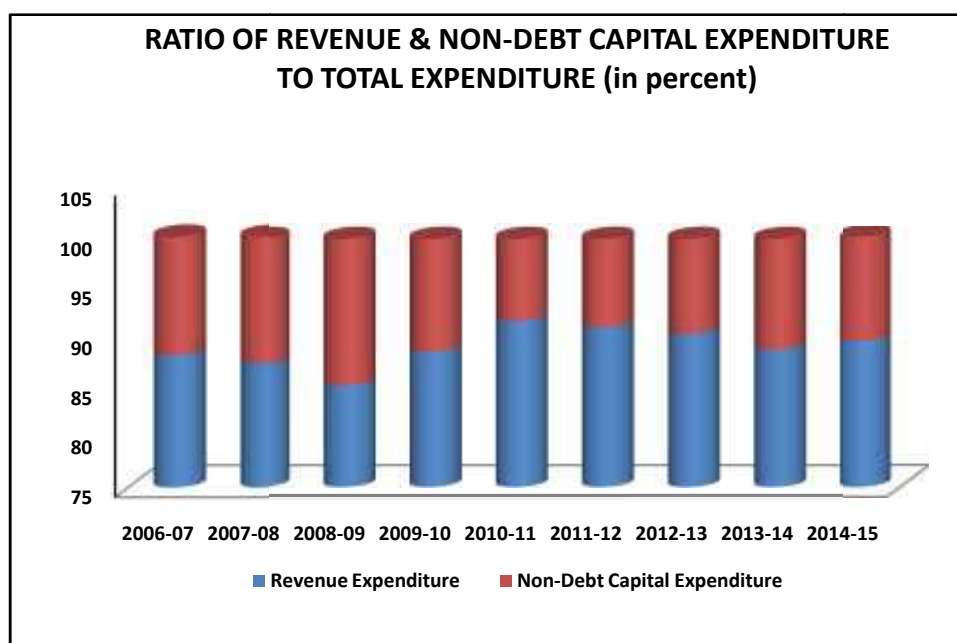
TABLE – 4.6  
NON-DEBT CAPITAL EXPENDITURE

(Rs. in crore)

| Year         | Capital Outlay |          |         | Lending |          |        | Total Non-Debt Capital Expenditure | Total Revenue Expenditure | Total Expenditure<br>(Col 8+ Col 9) |
|--------------|----------------|----------|---------|---------|----------|--------|------------------------------------|---------------------------|-------------------------------------|
|              | Plan           | Non-Plan | Total   | Plan    | Non-Plan | Total  |                                    |                           |                                     |
| 1            | 2              | 3        | 4       | 5       | 6        | 7      | 8(Col.4+ Col.7)                    | 9                         | 10                                  |
| 2006-07      | 1403.11        | 49.86    | 1452.97 | 76.85   | 3.78     | 80.63  | 1533.60                            | 11456.53                  | 12990.13                            |
| 2007-08      | 1470.83        | 217.28   | 1688.11 | 139.80  | 3.09     | 142.89 | 1831.00                            | 12744.16                  | 14575.16                            |
| 2008-09      | 2286.15        | 86.86    | 2373.01 | 75.09   | 13.65    | 88.74  | 2461.75                            | 14243.33                  | 16705.08                            |
| 2009-10      | 2548.98        | 80.37    | 2629.35 | 96.99   | 2.24     | 99.23  | 2728.58                            | 21232.20                  | 23960.78                            |
| 2010-11      | 1929.97        | 70.92    | 2000.89 | 70.78   | 0.10     | 70.88  | 2071.77                            | 22951.82                  | 25023.59                            |
| 2011-12      | 2431.34        | 74.67    | 2506.01 | 81.81   | 6.47     | 88.28  | 2594.29                            | 26528.55                  | 29122.84                            |
| 2012-13      | 2544.96        | 72.32    | 2617.28 | 71.34   | 389.31   | 460.65 | 3077.93                            | 29136.92                  | 32214.85                            |
| 2013-14      | 3088.59        | 100.65   | 3189.24 | 316.01  | 506.03   | 822.04 | 4011.28                            | 31989.88                  | 36001.16                            |
| 2014-15      | 3827.13        | 85.14    | 3912.27 | 306.67  | 324.04   | 630.71 | 4542.98                            | 39078.17                  | 43621.15                            |
| 2015-16 (BE) | 9183.10        | 229.77   | 9412.87 | 269.74  | 506.31   | 776.05 | 10188.92                           | 51562.84                  | 61751.76                            |

Source: Department of Finance (Economic Affairs), Government of Assam.

The graph given below shows the volume of revenue and non-debt capital expenditure to total expenditure from 2006-07 to 2014-15.



The break-up of total expenditure into Revenue Expenditure (Development, Non-Development & Grants-in-Aid & Contributions) is given in the table-4.7. The table 4.7 below shows that of the two constituents of development expenditure, expenditure on social services shows a slight increase

during 2010-11 and again slightly dropped down during 2011-12 and 2012-13. Thereafter expenditure on social services increased to more than 42 percent of total revenue and capital expenditure during the next couple of years. During 2015-16, it is expected to spend 40 percent of total revenue and capital expenditure on social services. The other component of development expenditure is economic services which show an increasing trend during the last six years and is expected to reach 18 percent of the total expenditure during 2015-16. The table shows a decreasing trend of non-development expenditure i.e. less amount is spent on general services thus contributing to the development head under the revenue and capital expenditure. It also reflects that grants-in-aid and contributions under revenue expenditure is on a decreasing trend since 2009-10. However, revenue expenditure still continues to remain above 85 percent of total expenditure during the period from 2009-10 to 2014-15.

TABLE – 4.7  
TREND OF REVENUE EXPENDITURE

(Rs. in crore)

| Year        | Revenue Expenditure     |                    |                             |                               | Total              |
|-------------|-------------------------|--------------------|-----------------------------|-------------------------------|--------------------|
|             | Development Expenditure |                    | Non-Development Expenditure | Grants-in-Aid & Contributions |                    |
|             | Social Services         | Economic Services  | General Services            |                               |                    |
| 2009-10     | 8543.21<br>(35.8)       | 3759.52<br>(15.8)  | 8379.58<br>(35.1)           | 549.89<br>(2.3)               | 21232.30<br>(89.0) |
| 2010-11     | 10158.97<br>(40.7)      | 4668.86<br>(18.7)  | 7766.42<br>(31.1)           | 357.57<br>(1.4)               | 22951.82<br>(92.0) |
| 2011-12     | 11465.79<br>(39.5)      | 4663.27<br>(16.1)  | 9743.67<br>(33.6)           | 655.83<br>(2.3)               | 26528.56<br>(91.0) |
| 2012-13     | 12617.46<br>(39.7)      | 5209.38<br>(16.4)  | 10570.29<br>(33.3)          | 739.79<br>(2.3)               | 29136.92<br>(91.8) |
| 2013-14     | 14850.09<br>(42.2)      | 5835.53<br>(16.6)  | 10928.50<br>(31.1)          | 375.76<br>(1.1)               | 31989.88<br>(90.9) |
| 2014-15     | 18087.75<br>(42.1)      | 7075.32<br>(16.5)  | 12921.60<br>(30.1)          | 993.50<br>(2.3)               | 39078.17<br>(90.9) |
| 2015-16(BE) | 24473.7<br>(40.1)       | 11184.11<br>(18.3) | 15386.71<br>(25.2)          | 518.32<br>(0.9)               | 51562.84<br>(84.6) |

Source: Department of Finance (Economic Affairs), Government of Assam.

N.B. Figures in bracket indicates percentage share of the item to total revenue expenditure & capital outlay.

#### CAPITAL RECEIPTS AND CAPITAL OUTLAY

Capital Receipts increased substantially by 193 percent during 2014-15 over the previous year mainly due to an abrupt increase in internal debt. During 2013-14 capital receipts decreased by 3.92 percent over 2012-13, the year which had an increase of 29.5 percent over the previous year. For the year 2015-16, capital receipts is expected to increase by 22.5 percent of which 18.3 percent is expected to be contributed by internal debt.

Capital expenditure, which was 1.81 percent and 1.96 percent of GSDP respectively in 2011-12 and 2012-13 increased to 2.29 percent in 2013-14 and 2.33 percent of GSDP during 2014-15. In order to accelerate economic growth there is need to substantial increase of capital expenditure.

The table 4.8 below shows total capital receipts and capital expenditure (Development, Non-Development & Hills Area) from 2011-12 to 2014-15 and budget estimate for the year 2015-16.

TABLE – 4.8  
TREND OF CAPITAL RECEIPTS AND CAPITAL OUTLAY

(Rs. in crore)

| Year         | Receipts |                        | Expenditure             |                             |          |                                  |          | Ratio of Capital Expenditure to GSDP (in %) |
|--------------|----------|------------------------|-------------------------|-----------------------------|----------|----------------------------------|----------|---|
|              |          |                        | Capital Outlay          |                             |          | Disbursement of loans & advances | Total    |   |
|              | Total    | Of which internal Debt | Development Expenditure | Non-Development Expenditure | Total    |                                  |          |   |
| 2011-12      | 2135.85  | 922.26                 | 2437.52                 | 68.49                       | 2506.01  | 88.27                            | 2594.28  | 143212                                      |
| 2012-13      | 2765.13  | 1348.70                | 2515.42                 | 101.86                      | 2617.28  | 460.65                           | 3077.93  | 157406                                      |
| 2013-14      | 2656.84  | 1147.46                | 3063.49                 | 125.74                      | 3189.24  | 822.03                           | 4011.27  | 174884                                      |
| 2014-15      | 7786.92  | 6095.80                | 3777.70                 | 134.57                      | 3912.28  | 630.71                           | 4542.99  | 195145                                      |
| 2015-16 (BE) | 9535.78  | 7213.32                | 8511.79                 | 544.75                      | 9412.87* | 776.04                           | 10188.91 |   |

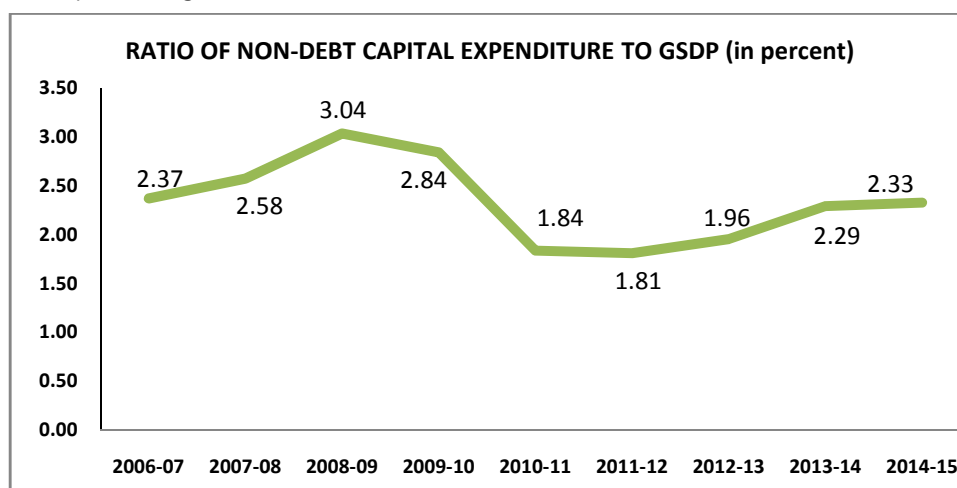
Source: Department of Finance (Economic Affairs), Government of Assam.

N.B. Figures in bracket indicates percentage share of the item to total expenditure.

\*\* includes Rs.356.33 of Hills area

### SHARE OF CAPITAL EXPENDITURE TO TOTAL EXPENDITURE

Size of capital expenditure actually determines the level of investment made for development purposes, which acts as a catalyst for accelerating the economic development. Zero revenue deficit or revenue surpluses help the State for full utilisation of borrowed funds for generating capital assets for revenue earnings. Thus, contracting revenue expenditure to an extent possible helps to generate funds for capital investment. The graph below shows the trend of share Non-Debt capital expenditure as percentage of GSDP since 2006-07.



### BORROWINGS AND REPAYMENT

Sources of borrowings of the State Government are loans from the market, loans from financial institutions/banks, NSSF loans, loans from the Centre against EAPs and State Provident Fund & GIS. State Government usually resorts to borrowings to meet the fiscal deficit. The prudent level of borrowings is the 3 percent fiscal deficit of GSDP. The Table below shows the position of actual borrowings and repayment of loans for the last nine years from 2006-07 to 2014-15 and Budget Estimate for 2015-16.

TABLE – 4.9  
BORROWINGS AND REPAYMENT

(Rs. in crore)

| Year          | Borrowings | Repayment of loans | Net borrowings | Net Borrowing Ceiling fixed by Govt. of India |
|---------------|------------|--------------------|----------------|---|
| 2006-07       | 1681.70    | 711.33             | 970.37         | 2180.00                                       |
| 2007-08       | 1852.00    | 970.89             | 881.11         | 2223.31                                       |
| 2008-09       | 3505.40    | 1018.46            | 2486.94        | 2540.00                                       |
| 2009-10       | 2945.08    | 1272.82            | 1672.26        | 3223.00                                       |
| 2010-11       | 2998.50    | 1336.15            | 1662.35        | 2951.00                                       |
| 2011-12       | 2114.47    | 1673.26            | 441.21         | 3447.00                                       |
| 2012-13       | 2757.75    | 2094.62            | 663.13         | 3115.00                                       |
| 2013-14       | 2650.77    | 1794.77            | 856.00         | 4304.00                                       |
| 2014-15       | 7776.79    | 3931.43            | 3845.36        | 5355.00                                       |
| 2015-16(B.E.) | 9528.43    | 5137.62            | 4390.81        |   |

Source: Department of Finance (Economic Affairs), Government of Assam.

The above table shows that year-wise State's net borrowings are far below the ceiling fixed by the Government of India (GOI) and this gradual decline is on account of revenue surpluses.

#### DEBT POSITION

The standard criteria for determining the debt sustainability of the States has been to arrive at the acceptable level of the debt-GSDP ratio and the ratio of interest payment to total revenue receipts. The outstanding debt position of the State has come down within the limit of 28 percent of GSDP recommended by the Twelfth Finance Commission. Moreover, in 2013-14 the debt stock of Govt. of Assam has declined to 16.88 percent of GSDP as against the limit of 28.4 percent of GSDP prescribed in the ASFRBM (Amendment) Act 2011 as stipulated by the Thirteenth Finance Commission. The Table below summarizes the debt position of the State from 2006-07 to 2013-14.

TABLE – 4.10  
DEBT POSITION OF ASSAM

(Rs. in crore)

| Year    | Year end total outstanding debt | GSDP at Current prices | Debt-GSDP Ratio (%) |
|---------|---------------------------------|------------------------|---------------------|
| 2006-07 | 18792.62                        | 64692                  | 29.05               |
| 2007-08 | 19673.73                        | 71076                  | 27.68               |
| 2008-09 | 22160.67                        | 81074                  | 27.33               |
| 2009-10 | 23832.94                        | 95975                  | 24.83               |
| 2010-11 | 25495.28                        | 112688                 | 22.62               |
| 2011-12 | 25936.49                        | 143212                 | 18.11               |
| 2012-13 | 26599.61                        | 157406                 | 16.90               |
| 2013-14 | 27455.62                        | 174884                 | 15.70               |
| 2014-15 | 31300.99                        | 195145                 | 16.04               |

Source: Department of Finance (Economic Affairs), Government of Assam.

It appears from the above table that outstanding debt position of the State has started improving since 2006-07. The debt-GSDP ratio has gradually come down from 29.05 percent in 2006-07 to 16.04 percent in 2014-15.

The reduction of debt stock has been possible by the State because of the adoption of the Government of India's debt swap policy in 2002-03 and relentless effort to bring down the revenue and fiscal deficits, as envisaged in the Fiscal Reform Facility of 11<sup>th</sup> Finance Commission and FRBM Act, 2005 of 12<sup>th</sup> and 13<sup>th</sup> Finance Commissions.

### INTEREST PAYMENT TO REVENUE RECEIPTS

The position of interest payment to total revenue receipts in terms of percentage is indicated below:

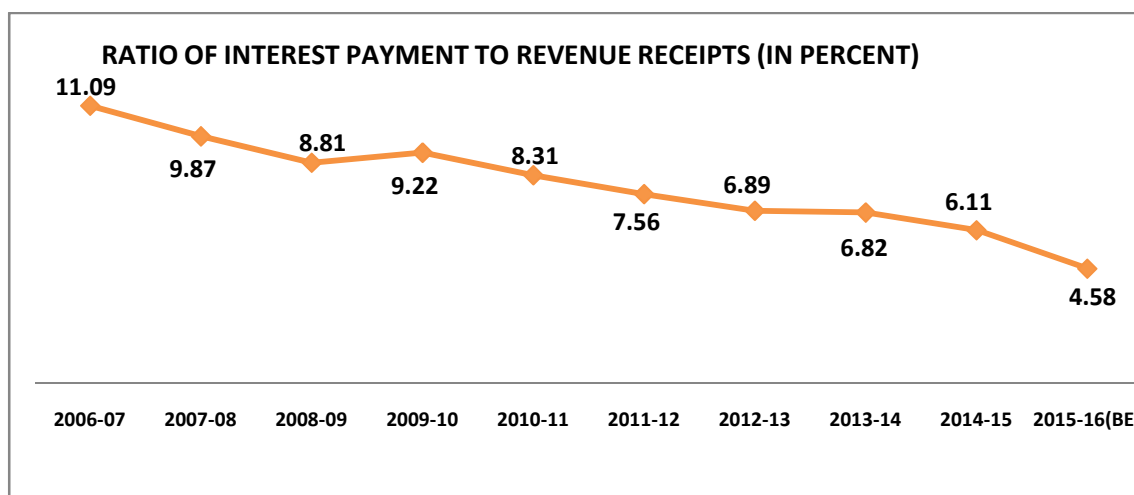
TABLE – 4.11  
INTEREST PAYMENT TO REVENUE RECEIPTS

(Rs. in crore)

| Year        | Total Revenue Receipts | Interest Payment | Ratio of Interest Payment to Revenue Receipts (in percent) |
|-------------|------------------------|------------------|--|
| 2006-07     | 13666.95               | 1515.67          | 11.09  |
| 2007-08     | 15324.93               | 1512.24          | 9.87   |
| 2008-09     | 18077.04               | 1593.33          | 8.81   |
| 2009-10     | 19884.49               | 1832.58          | 9.22   |
| 2010-11     | 23004.94               | 1912.12          | 8.31   |
| 2011-12     | 27455.40               | 2074.40          | 7.56   |
| 2012-13     | 30690.98               | 2114.91          | 6.89   |
| 2013-14     | 32212.79               | 2198.45          | 6.82   |
| 2014-15     | 38181.49               | 2333.74          | 6.11   |
| 2015-16(BE) | 57064.10               | 2612.11          | 4.58   |

Source: Department of Finance (Economic Affairs), Government of Assam.

It revealed from the above Table that the ratio of interest payment to revenue receipts has been falling persistently and has come down to 6.11 percent in 2014-15 from 11.09 percent in 2006-07. During 2015-16, it is expected to fall further to 4.58 percent. The ratio of interest payment to revenue receipts remains well below the benchmark of 15 percent prescribed by the Twelfth Finance Commission.



### ACHIEVEMENT OF TAXATION DEPARTMENT DURING 2014-15

The Finance (Taxation) Department is responsible for collection of major share of tax revenue of the State. It contributes more than 80 percent of the State's Own Tax Revenue. During the year 2014-15, the Department collected Rs.8177.16 crore as against Rs.7719.62 crore in 2013-14

thereby achieving a growth of 5.9 percent during 2014-15. The State Government has fixed a target of Rs.10905.78 crore for the year 2015-16. During the year 2015-16, the fall in petroleum product prices will affect revenue collection in the State. The Department administered nine different Taxation acts during 2014-15 and collection under different Taxation Acts during the years from 2007-08 to 2014-15 is presented in Table-4.12.

TABLE – 4.12  
COLLECTION OF TAXES UNDER DIFFERENT TAXATION ACTS IN ASSAM

(Rs. in crore)

| TAXATION ACT   | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| The Assam Value Added Tax, 2003                                    | 2238.56 | 2694.77 | 3229.44 | 3952.20 | 5181.44 | 5689.88 | 6288.54 | 6859.24 |
| The Central Sales Tax Act, 1956                                    | 443.15  | 415.81  | 305.82  | 366.41  | 512.51  | 533.25  | 559.47  | 492.01  |
| The Assam Entry Tax Act, 2008                                      | 9.13    | 268.84  | 526.64  | 461.67  | 518.75  | 364.14  | 404.69  | 382.88  |
| The Assam Professions, Trades Calling & Employment Tax Act, 1947   | 124.54  | 137.61  | 150.06  | 160.58  | 164.27  | 168.31  | 186.36  | 191.38  |
| The Assam Electricity Duty Act, 1964                               | 4.62    | 22.36   | 27.07   | 41.58   | 36.67   | 41.82   | 40.54   | 44.00   |
| The Assam Amusement and Betting Tax Act, 1939                      | 2.93    | 2.41    | 3.50    | 4.51    | 5.87    | 63.07   | 38.93   | 44.37   |
| The Assam Taxation on Luxuries (Hotels & Lodging Houses) Act, 1989 | 3.11    | 5.75    | 5.17    | 5.42    | 5.89    | 8.04    | 8.67    | 10.55   |
| The Assam Taxation (on Specified Land) Act, 1990                   | 68.55   | 80.00   | 78.87   | 92.02   | 95.64   | 99.72   | 102.43  | 101.66  |
| The Assam Agricultural Income Tax Act, 1939                        | 3.14    | 18.18   | 78.34   | 101.20  | 83.27   | 82.33   | 89.99   | 51.07   |
| Total  | 2897.73 | 3645.73 | 4404.91 | 5185.59 | 6604.31 | 7050.56 | 7719.62 | 8177.16 |
| Growth Rate (in percent)   | (-)2.72 | 25.81   | 21.00   | 17.7    | 27.4    | 6.76    | 9.5     | 5.9     |

Source: Commissionerate of Taxes, Assam.

Collection under the Central Sales Tax Act, the collection during 2014-15 was Rs.492.01 crore as against Rs.559.47 crore in 2013-14 showing a negative growth of 12 percent. The reason for negative growth was mainly due to ban on coal mining in Meghalaya resulting in fall of CST sale of coal from Assam in 2014-15.

Collection of revenue under the Assam Entry Tax Act has shown a negative growth in 2014-15 compared to 2013-14 due to reduction in price of crude oil and also due to fall in local purchase of crude by IOCL, Bongaigaon.

During 2014-15, a negative growth in revenue collection under the Assam Taxation (On Specified Land) Act and the Assam Agricultural Income Tax Act was noticed due to fall in production of green tea leaf.

During 2014-15, the Department under the Assam Value added Tax, collected Rs.6859.24 crore as against Rs.6288.54 crore in 2013-14 registering a growth of 9.1 percent against a growth of 11 percent during 2013-14 over the previous year.

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## CHAPTER – V

### AGRICULTURE

Assam's economy is largely rural by nature, where Agriculture and allied activities plays a very important role in its socio-economic development. As a sector, agriculture contributes significantly to the state's economy, provides as a main source of livelihood to a large proportion of its rural population, which is both rural and agrarian. As per (Census 2011) of the total land mass, 98.4 percent is rural, where agriculture and related activities is the major occupation of its people. The net cultivable area of the state is 28.11 hectares, which is about 87.38 percent of the total land mass available for agricultural cultivation in the state. The operational holding on average is 1.10 hectare only and more than 85 percent of farmer families are either small or marginal farmers [Agriculture Census, Assam 2010-11]with average land holding of only 0.63 hectare but in scattered manner. However, agriculture as a sector, continues to still support more than 75 percent of its population, either directly or indirectly, providing employment and support to more than 50 percent of its total workforce, [Government of Assam has declared 2015-16, as the "Year of Agriculture." A "Task Force on Agricultural Development" has been constituted by the State Government.]

The base year for GDP estimation, in place of 2004-05, is now 2011-12. With it the macro picture of Indian economy, so also of the States, has acquired a new look, with the introduction of substantive changes. Now, for valuation of commodities and services, the "factor cost" is replaced by 'basic prices', entailing wider scope and coverage of sectoral components. Besides, some other methodological improvements have also been introduced. Assam, followed the changed approach in GDP estimation in preparing GSDP estimation of the State from 2011-12 onwards.

The contribution of Agriculture Sector towards State Economy registered a gradual rise [GSDP at constant (2011-12) Prices] for the years 2011-12, 2012-13, 2013-14 (Provisional) and 2014-15 (Quick) estimates. Though the annual growth rate has come down from 7.79 in 2012-13 to 0.16 in 2013-14 (as per provisional estimates). The growth rate is expected some remarkable recovery to 3.91 in 2014-15 (as per Quick estimates).

In spite of having rich and diverse soil conditions, unpredictable weather conditions along with erratic rainfall and presence various impediments like floods and soil erosion, agricultural productivity has been suffering at times. Yet, the State Agriculture Department has been able to give thrust to increase the production of food grains by implementing double cropping patterns for the provision of food security and nutrition to its growing population by adoption of strategies for increasing and enhancing food productivity and cropping intensity. The State Agriculture Department, has also prioritized the optimum and efficient use of available resources for increasing production and productivity of agricultural and horticultural crops, through use of best technologies as available and wherever feasible.

Various steps have been taken for increasing production and productivity like the formulation of State and District specific plans depending on prevailing agro-climatic conditions, growth potentials and specific requirements of districts have been given attention on namely use of quality and HYV seeds, adoption of multi cropping productivity patterns, provision of assured irrigation facilities, use of improved farm mechanization procedures, special use of bio-fertilizers and bio-pesticides, practices of organic farming, development of marketing infrastructure for encouraging the farming community and see to the creation of maximum potentials for income and employments opportunities.

| TABLE– 5.1  |   |   |
|---|---|---|
| TREND OF GROWTH OF AGRICULTURAL SECTOR [GSDP at Constant (2011-12) Prices] (Figure in percentage) |   |   |
| Y e a r s   | Contribution to GSDP (Figure in Rs. Lakh) | Annual Growth Rate over the previous year |
| 2011-12   | 2061487                                   |   |
| 2012-13   | 2222098                                   | 7.79                                      |
| 2013-14 (P)   | 2225760                                   | 0.16                                      |
| 2014-15(Q)  | 2312742                                   | 3.91                                      |
| Source: Directorate of Economics and Statistics, Assam.   |   |   |

The development of agriculture sector in its two hill districts of the State, namely Karbi-Anglong and Dima Hasao, is suffering due to presence of various weakness, and prevalent conditions, namely low infrastructural facilities, low productivity due to practice of extensive Jhum cultivation and non-availability of markets etc. The need is of changing the pattern of cultivation in these two hill districts, which is posing as a great challenge before the State Government. It is a priority for the future to see to the development of Agriculture, in these two hill districts by the introduction of new schemes for the production of cash crops, horticultural crops and practice of settled agriculture in terrace lands. Development of Agriculture in these two hill districts needs attention for infrastructural development and

| Year                  | Total Rice | Wheat | Total Pulses | Total Food grains | Total oilseeds [excl. Coconut] |
|-----------------------|------------|-------|--------------|-------------------|--------------------------------|
| 2001-02               | 3854       | 85    | 66           | 4023              | 156                            |
| 2002-03               | 3738       | 78    | 60           | 3894              | 149                            |
| 2003-04               | 3880       | 73    | 63           | 4034              | 157                            |
| 2004-05               | 3470       | 68    | 61           | 3617              | 146                            |
| 2005-06               | 3552       | 54    | 56           | 3680              | 114                            |
| 2006-07               | 2916       | 67    | 59           | 3060              | 134                            |
| 2007-08               | 3319       | 71    | 61           | 3468              | 139                            |
| 2008-09               | 4009       | 55    | 62           | 4142              | 141                            |
| 2009-10               | 4409       | 65    | 66           | 4557              | 147                            |
| 2010-11               | 5033       | 56    | 72           | 5178              | 159                            |
| 2011-12               | 4716       | 49    | 73           | 4857              | 156                            |
| 2012-13               | 5128       | 44    | 84           | 5279              | 187                            |
| 2013-14               | 5193       | 40    | 104          | 5418              | 186                            |
| 2014-15 (Provisional) | 5222       | 28    | 110          | 5458              | 205                            |

Source: Directorate of Economics and Statistics, Assam.

access to markets, two areas of concern to be looked into for the exploitation of horticultural potentialities, introduction of cultivation suitable for fruits like citrus, spices, their value addition, which will bring in substantial contributing to the economy of these two hill districts.

#### REQUIREMENT OF FOOD GRAINS DURING THE TWELFTH FIVE YEAR PLAN PERIOD.

The Food grains requirements, during the Twelfth Five Year Plan period in Assam has been estimated on the basis of growth of population (Projected) of Census 2001, as presented in Table-5.3. To fulfil the needs of food requirements, the State Agriculture Department has given thrust in the areas like making available of quality seeds and various inputs to farmers, enhancement of areas under assured irrigation, enhancement of areas under farm power, emphasis on SRL, increase coverage of areas under HYV/Hybrid paddy, increase areas under pulses, Oilseeds, institutional support of credit, crop insurance to farmers, marketing reforms introduced by establishment of markets on PPP modes and procurement of paddy at GP level etc.

TABLE- 5.3

#### FOOD REQUIREMENT DURING THE TWELFTH FIVE YEAR PLAN PERIOD IN ASSAM

| Year    | Projected Population (in lakh) | Adult Population (in lakh) | Food requirement (in lakh MT) |       |        |          | Total Food grains (in lakh MT) |
|---------|--------------------------------|----------------------------|-------------------------------|-------|--------|----------|--------------------------------|
|         |                                |                            | Rice                          | Wheat | Pulses | Oilseeds |                                |
| 2012-13 | 316.97                         | 253.58                     | 41.65                         | 5.55  | 2.78   | 3.70     | 50.91                          |
| 2013-14 | 322.34                         | 257.87                     | 42.35                         | 5.65  | 2.82   | 3.76     | 51.77                          |
| 2014-15 | 327.79                         | 262.23                     | 43.07                         | 5.74  | 2.87   | 3.83     | 52.64                          |
| 2015-16 | 333.34                         | 266.67                     | 43.80                         | 5.84  | 2.92   | 3.89     | 53.53                          |
| 2016-17 | 338.40                         | 270.72                     | 44.46                         | 5.92  | 2.96   | 3.95     | 54.35                          |

# Figure rounded off to nearest Zero.

Source: Draft Annual Plan 2014-15, Planning and Development Department, Assam.



## AGRICULTURE SCENARIO – 2014-15

### WEATHER AND RAINFALL

The climate of Assam is humid, having a sub-tropical nature, with warm humid summers and cool dry winters. Due to its unique geographical location, along with the presence of varied physiography, Assam has an array of climatic conditions. It is situated in the high rainfall zone with annual average rainfall of 2297.4 mm. The state normally receives 2 percent rainfall in Winter Season (January-February), 25 percent in Summer Season (March-May), 65 percent in Mansoon Season (June-September) and 7 percent in Post-Mansoon Season (October-December). Assam is, however, prone to floods and sometimes there is also the presence of drought like situations with the lack of rains. Thus, though the State has enough natural potentialities for growing food grains in abundance, it at times faces losses to contribute its share to the national granary, due to the presence of erratic and unpredictable weather conditions, as experienced specially during the last few years.

It has been observed that the impact of climate change has affected and led to erratic rainfall and unpredictable mansoon behaviour patterns in the state. This has in turn affected the agricultural productions to a great extent. The experience of crop season wise pattern of average rainfall is evident from Table-5.4

TABLE– 5.4  
CROP SEASON WISE AVERAGE RAINFALL IN ASSAM

(Figure in mm)

| Year | Kharif season |        |                           |           | Rabi season |        |                           |           | All Season |        |                           |           |
|------|---------------|--------|---------------------------|-----------|-------------|--------|---------------------------|-----------|------------|--------|---------------------------|-----------|
|      | Actual        | Normal | Deviation from normal (%) | Pattern   | Actual      | Normal | Deviation from normal (%) | Pattern   | Actual     | Normal | Deviation from normal (%) | Pattern   |
| 2007 | 1816.6        | 2118.2 | (-)14.2                   | Normal    | 259.7       | 313.6  | (-)1.7                    | Normal    | 2076.3     | 2431.9 | (-)14.6                   | Normal    |
| 2008 | 1773.0        | 2038.1 | (-)13.0                   | Normal    | 275.1       | 314.8  | (-)12.6                   | Normal    | 2048.1     | 2352.9 | (-)13.5                   | Normal    |
| 2009 | 1512.4        | 1953.6 | (-)22.6                   | Deficient | 187.8       | 302.2  | (-)37.9                   | Deficient | 1700.2     | 2255.8 | (-)25.0                   | Deficient |
| 2010 | 2066.3        | 1976.0 | (+)4.6                    | Normal    | 189.0       | 306.2  | (-)38.3                   | Deficient | 2255.3     | 2282.2 | (-)1.2                    | Normal    |
| 2011 | 1411.1        | 2001.0 | (-)29.5                   | Deficient | 155.5       | 295.3  | (-)47.3                   | Deficient | 1566.6     | 2296.3 | (-)29.5                   | Deficient |
| 2012 | 1953.2        | 2001.0 | (-)2.0                    | Normal    | 198.6       | 294.8  | (-)32.6                   | Deficient | 2151.8     | 2295.8 | (-)6.3                    | Normal    |
| 2013 | 1529.5        | 2016.3 | (-)24.0                   | Deficient | 177.3       | 294.8  | (-)40.0                   | Deficient | 1706.8     | 2311.1 | (-)26.1                   | Deficient |
| 2014 | 1774.6        | 2001.0 | (-)11.0                   | Normal    | 79.8        | 294.8  | (-)73.0                   | Scanty    | 1854.4     | 2295.8 | (-)62.0                   | Deficient |

Source: Directorate of Agriculture, Assam

### RAINFALL DURING 2014-15

It is evident from the Table 5.4 that the State had experienced 1854.4 mm rainfall during 2014-15 against normal rainfall of 2295.8 mm. During the kharif crop season, 1774.6 mm of rainfall occurred in the state (against a normal of 2001.0 mm). Thus, according to the State Agriculture Department, the pattern of overall rainfall in the State was Normal during the kharif season, both in terms of total rainfall and its spread being [(-)11.0] percent below normal. However, the State has experienced "Scanty" rainfall during the Rabi season with only 79.8 mm of actual rainfall against a normal of 294.8 mm recording a deviation of (-) 73.0 percent.

Although the occurrence of rainfall was 'normal' during Kharif Season and 'Scanty' during Rabi Season 2014 and the overall rainfall pattern throughout the state was 'Deficient' during 2014-15, according to the State Agriculture Department the spread and pattern varies from district to district, during the period. To know about the details of rainfall experienced by the districts in Assam, during the year 2014-15, is evident from Table-5.5

TABLE- 5.5  
MONTHWISE RAINFALL IN ASSAM DURING KHARIF AND RABI SEASON, 2014-15

| Months                       | Rainfall during Kharif 2014-15 |             |                       |           |
|------------------------------|--------------------------------|-------------|-----------------------|-----------|
|                              | Actual (mm)                    | Normal (mm) | Deviation from Normal | Pattern   |
| April, 2014                  | 48.1                           | 172.9       | -72                   | Scanty    |
| May, 2014                    | 326.5                          | 304.2       | 7                     | Normal    |
| June, 2014                   | 359                            | 427.3       | -16                   | Normal    |
| July, 2014                   | 337.2                          | 454.2       | -26                   | Deficient |
| August, 2014                 | 374.6                          | 356.7       | 5                     | Normal    |
| September, 2014              | 329.2                          | 285.7       | 15                    | Normal    |
| Total During Kharif, 2014-15 | 1774.6                         | 2001        | -11                   | Normal    |
| Rainfall during Rabi 2014-15 |                                |             |                       |           |
| Months                       | Actual (mm)                    | Normal (mm) | Deviation from Normal | Pattern   |
| October, 2014                | 25                             | 131.8       | -81                   | Scanty    |
| November, 2014               | 3.2                            | 24.9        | -87                   | Scanty    |
| December, 2014               | 0.3                            | 11.8        | -97                   | Scanty    |
| January, 2015                | 10.8                           | 16.2        | -33                   | Deficient |
| February, 2015               | 14.3                           | 32          | -55                   | Deficient |
| March, 2015                  | 26.2                           | 78.1        | -66                   | Scanty    |
| Total during Rabi, 2014-15   | 79.8                           | 294.8       | -73                   | Scanty    |

Source: Directorate of Agriculture, Assam.

TABLE: 5.6  
PATTERN OF RAINFALL EXPERIENCED BY THE  
DISTRICTS IN ASSAM DURING 2014-15

| Month/<br>Year  | Pattern of Rainfall |           |        |           |         | Month/<br>Year | Pattern of Rainfall |           |        |           |         |
|-----------------|---------------------|-----------|--------|-----------|---------|----------------|---------------------|-----------|--------|-----------|---------|
|                 | Normal              | Deficient | Scanty | Excessive | No Rain |                | Normal              | Deficient | Scanty | Excessive | No Rain |
| Kharif Season   |                     |           |        |           |         | Rabi Season    |                     |           |        |           |         |
| April, 2014     | Nil                 | 6         | 21     | Nil       | Nil     | October, 2014  | Nil                 | 3         | 22     | Nil       | 2       |
| May, 2014       | 13                  | 6         | Nil    | 8         | Nil     | November, 2014 | 4                   | 1         | 11     | 1         | 13      |
| June, 2014      | 12                  | 12        | Nil    | 3         | Nil     | December, 2014 | Nil                 | 1         | 8      | Nil       | 18      |
| July, 2014      | 8                   | 9         | 6      | 4         | Nil     | January, 2015  | 7                   | 5         | 9      | 3         | 1       |
| August, 2014    | 11                  | 6         | Nil    | 10        | Nil     | February, 2015 | 5                   | 12        | 9      | Nil       | 1       |
| September, 2014 | 8                   | 3         | 1      | 15        | Nil     | March, 2015    | 2                   | 8         | 15     | 2         | Nil     |

Note: Figure refers to number of districts. Two (2) districts have not reported for the month of January 2015, namely Dhemaji and Darrang.

Source: Directorate of Agriculture, Assam.

## AREA UNDER CROPS

Production of all agricultural crops including food grains is directly related to area coverage. In Assam, the soil, topography, rainfall and climate in general are conducive for agricultural activity, mainly for the cultivation of paddy. Therefore, concentration is high for paddy production both from the side of farmers and the Agriculture Department. As per final estimates, the total area under paddy cultivation during the year 2014-15 was 24.95 lakh hectares or 72.30 percent of the total area under food grains in the state.

Total area under paddy although increasing in the state, shows a gradual decline due to area covered under Autumn Rice. This is also due to choice of farmers to switch over to Summer Rice for its higher productivity and less hazard risk. The final forecast estimates show (Table-5.7) that the area under Autumn Rice has declined from 4.36 lakh hectares in 2004-05 to 1.96 lakh hectares in 2014-15.

The area under Winter Rice, the principal Kharif crop of the State, has increased to 18.82 lakh hectares during 2014-15 from 18.57 lakh hectares in 2012-13 and 18.81 lakh hectares in 2013-14.

According to final estimates, the area covered for cultivation of Summer Rice has increased from 3.93 lakh hectares in 2012-13 to 3.99 lakh hectares in 2013-14, and increased further to 4.16 lakh hectares in 2014-15.

The area under Pulses and Oilseeds had both increased, as per final estimates in 2013-14 from 2012-13, however both declined in 2014-15 from 2013-14. In respect of Pulses, the increase was 1.50 lakh hectares in 2013-14 from 1.42 lakh hectares in 2012-13. In respect of Oilseeds, the increase was 3.25 lakh hectares in 2013-14 from 3.05 lakh hectares in 2012-13.

The trend of crop-wise land utilization in Assam during the last eleven years is evident from the Table 5.7.

TABLE- 5.7  
AREA UNDER CROPS IN ASSAM DURING THE PERIOD 2004-05 to 2014-15

(In lakh hectares)

| Year    | Autumn Rice | Winter Rice | Summer Rice | Total Rice* | Wheat | Total Pulses | Total Food grains | Total Oilseeds (excl. Coconut) |
|---------|-------------|-------------|-------------|-------------|-------|--------------|-------------------|--------------------------------|
| 2004-05 | 4.36        | 16.36       | 3.11        | 23.83       | 0.64  | 1.08         | 25.82             | 2.77                           |
| 2005-06 | 3.98        | 17.07       | 3.15        | 24.20       | 0.50  | 1.00         | 25.97             | 2.42                           |
| 2006-07 | 3.79        | 14.98       | 3.12        | 21.89       | 0.60  | 1.07         | 23.82             | 2.70                           |
| 2007-08 | 3.54        | 16.47       | 3.23        | 23.24       | 0.56  | 1.13         | 25.18             | 2.66                           |
| 2008-09 | 3.51        | 17.73       | 3.60        | 24.84       | 0.50  | 1.14         | 26.70             | 2.53                           |
| 2009-10 | 3.46        | 17.89       | 3.94        | 25.29       | 0.60  | 1.19         | 27.33             | 2.77                           |
| 2010-11 | 3.13        | 18.59       | 3.99        | 25.71       | 0.45  | 1.26         | 27.67             | 2.72                           |
| 2011-12 | 2.76        | 18.76       | 3.94        | 25.46       | 0.40  | 1.32         | 27.43             | 2.76                           |
| 2012-13 | 2.38        | 18.57       | 3.93        | 24.88       | 0.34  | 1.42         | 26.92             | 3.05                           |
| 2013-14 | 2.23        | 18.81       | 3.99        | 25.03       | 0.31  | 1.50         | 27.14             | 3.25                           |
| 2014-15 | 1.96        | 18.83       | 4.16        | 24.95       | 0.23  | 1.46         | 27.00             | 3.07                           |

\*Total may not be equal due to rounding off.

Source: Directorate of Economics and Statistics, Assam.

## PRODUCTION

As per final estimates, [reference Table-5.2] total food grains production in the State had increased from 54.18 lakh metric tonnes in 2013-14 (Revised estimates) to 54.58 lakh metric tonnes in 2014-15 (Provisional estimates). The Table-5.2, also reveals that the total foodgrains production in the State was the highest in 2014-15.

".....the Ministry of Agriculture, Government of India has categorised Assam among the 'Highest Ranked States' for production of foodgrains. Hon'ble Union Finance Minister in his budget speech has acknowledged Assam's contribution to increased rice production of the country. He has assured his support to the Eastern Indian States with Rs.1000 crore allocation in their endeavour to take forward the green revolution in Eastern India farther. In recognition of commendable production of pulses, the State has received the 'Krishi Karman' Award from the Hon'ble President of India." [Source: Budget Speech of Finance Minister, Assam 2013-14].

The total production of Rice in the State was 52.22 MT in 2014-15 (Provisional estimates) in comparison to 51.93 MT in 2013-14 (Revised estimates) and 51.28 MT in 2012-13.

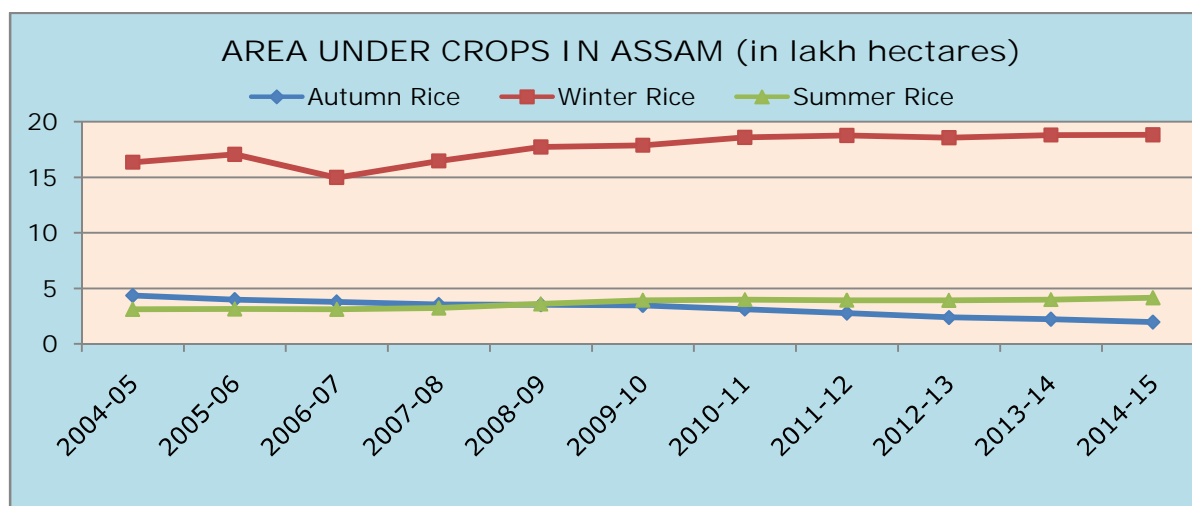
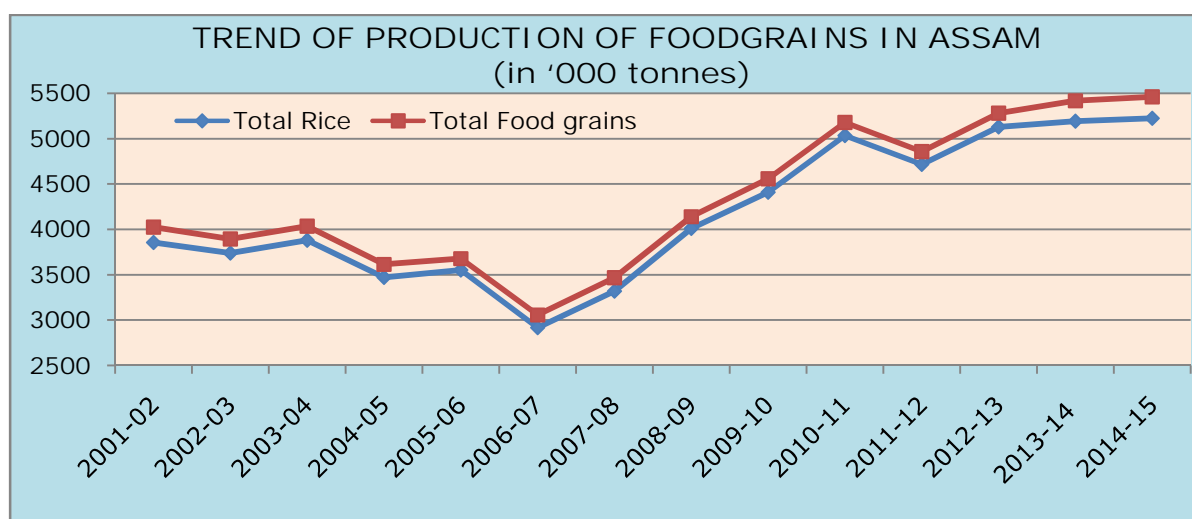
The production of total Pulses has increased from 0.84 lakh in 2012-13 to 1.04 lakh MT in 2013-14 (Revised estimates) to 1.10 lakh MT in 2014-15 (Provisional estimates). This increasing trend of total Pulses continued since 2005-06. On the other hand, the production of Oilseeds, recorded a slight decrease during 2013-14 in comparison to 2012-13 due to deficient rainfall experienced by the State during that Rabi Season, however production of Oilseeds has increased again in 2014-15.

Against the negative growth rate of agriculture in Assam during 2000-01, a growth rate of 4.5 percent was achieved during 2013-14. During the last fourteen years from 2000-01, Government has achieved 40% increase in the contribution of agriculture to GDP. The State has achieved all time high production of 51.93 lakh MT during 2013-14 with surplus by 6.00 lakh MT. In order to build on these successes, there is a strive with renewed vigour to support farmers. During 2015-16, it has been proposed to develop rainfed and waste land along with reclamation of unproductive cultivable land in order to improve total cultivable agricultural lands.

(Budget Speech of Finance Minister 2015-16. Dated 10<sup>th</sup> March, 2015)

Government of Assam, has been able to increase Rice production from 39.98 lakh metric tonnes in 2000-01 to 52.23 lakh metric tonnes in 2014-15. Similarly, Horticulture production has also increase from 43.4 lakh metric tonnes to 77 lakh metric tonnes in 2015. This one more step towards increase food production has led to a better livelihood.

(The Assam Tribune, dated 8<sup>th</sup> February, 2016)



## BISWANATH FARMER WINS NATIONAL AWARD

Neelam Dutta, a progressive and innovative organic farmer from Pabhoi under Biswanath Sub-Division was awarded the prestigious Haladhar Organic Farmer Award, 2014 by the Indian Council of Agricultural Research, Government of India recently in New Delhi. The award was presented to him by Radha Mohan Singh, Minister of Agriculture, Government of India.

Neelam Dutta is deeply involved in a number of methodically planned organic agricultural activities also integrating diary and fishery components in a scientific manner. At a time when the Government of India is giving a renewed thrust on organic agriculture, particularly in NE region of the country, the young farmer with a basket of proven organic technologies is expected to serve as a leading role model in state of Assam

Source: Assam Tribune 6<sup>th</sup> February, 2016.

## YIELD RATE

It is evident from Table-5.8, that the trend of yield rate of autumn rice was erratic during the period 2004-05 to 2012-13. However, since 2010-11, it is maintaining a continuous increasing trend and in 2014-15, it has reached the level of 1454 kg/hectares.

The productivity of winter rice, maintained an increasing trend since 2008-09 to 2014-15, except in the year 2011-12 due to 'deficient rainfall' in the State during kharif season in that year.

The productivity of Summer Rice also continued to maintain its increasing trend during the period 2004-05 to 2013-14, except in the year 2005-06 and 2008-09. In the year 2014-15, it declined slightly from its previous year production.

The productivity of both pulses and Oilseeds though erratic from 2004-05 to 2009-10 has, gradually increased from 2012-13 to 2014-15.

| Year    | Autumn Rice | Winter Rice | Summer Rice | Total Pulses | Total Oilseeds (excl. Coconut) |
|---------|-------------|-------------|-------------|--------------|--------------------------------|
| 2004-05 | 667         | 1598        | 1959        | 569          | 529                            |
| 2005-06 | 1016        | 1543        | 1780        | 550          | 465                            |
| 2006-07 | 899         | 1321        | 2017        | 547          | 491                            |
| 2007-08 | 999         | 1380        | 2267        | 596          | 525                            |
| 2008-09 | 1084        | 1641        | 2133        | 545          | 549                            |
| 2009-10 | 982         | 1894        | 2180        | 558          | 529                            |
| 2010-11 | 1155        | 1993        | 2577        | 572          | 580                            |
| 2011-12 | 1242        | 1785        | 2744        | 560          | 563                            |
| 2012-13 | 1317        | 1998        | 2965        | 597          | 610                            |
| 2013-14 | 1340        | 2002        | 2981        | 695          | 611                            |
| 2014-15 | 1454        | 2005        | 2940        | 749          | 670                            |

Source: Directorate of Economics and Statistics. Assam.

### Distinctive features of Assam agriculture

- Assam has become rice surplus state since 2010-11.
- The Productivity of fruits, spices and vegetables in the State is higher than that of national level productivity.
- In 2013-14, the Marketable surplus was as follows: Rice (6 lakh MT), Fruits (4.70 lakh MT), Spices (0.75 lakh MT and vegetables (8.60 lakh MT).
- Hybrid rice cultivation was taken up since 2009-10. During 2013-14, 2.03 lakh hectares (8 percent of total rice area) was covered under by hybrid rice apart from 15.90 lakh Hectares (69 percent of total rice area) under HYV rice.
- In the financial year 2013-14, the State produced 1.04 lakh MT of lentil, which was highest in the country.

## AREA UNDER HIGH YIELDING VARIETY (HYV)

Total area under HYV of Autumn Rice, Summer Rice and Winter rice was 17.65 lakh hectares during 2014-15 (Table-5.9). The area coverage under HYV Rice was 70.7 percent of the total area under rice, during the year.

From the above table, it is evident that the area coverage under HYV Rice during the period 2006-07 to 2014-15, remained 60 percent or more. However the area coverage under HYV Rice was 6.3 percent less during 2013-14 in comparison to its previous year 2012-13. According to the Agriculture Department, increasing concentration of area under HYV Rice was possible due to bumper production of rice in the state, as an outcome of additional impetus for enhancing productivity and farm income thereby. Moreover, the production of HYV Summer Rice is more than that of both Winter Rice and Autumn Rice, due to various practices taken up during summer season, being free of any risk factor. Considering the productivity, cultivators prefer the seed of HYV Rice, namely, Mala, IR-36, Lachit, Masuri, Joya, Ranjit, Ratna, China Bora, Biplov, Bahadur, Kaveri, Krishna etc.

### HYBRID RICE

The State Agriculture Department has put special efforts for increasing the cultivation of hybrid variety of rice on experiment basis in the State since 2009-10 considering the productivity of hybrid rice more than double in comparison to HYV rice and also to enhance farm income [Table 5.10]. The area coverage of hybrid rice has increased to 234.0 thousand hectares or 9.1 percent of the total area under rice in the State during the year 2013-14, in comparison to 97.2 thousand hectares or 3.9 percent of the total area under rice in the State during the year 2012-13.

### INDEX OF AGRICULTURAL PRODUCTION

The Index of Agricultural Production for all crops (Base triennium ending 2007-08=100) for the State stands at 145.32 in 2014-15 in comparison to 141.56 in 2013-14 and 135.70 in 2012-13. In respect of food crops, the Index of Agricultural Production for the State was 157.43 in 2014-15, in comparison to 155.81 in 2013-14 and 152.29 in 2012-13. The All-India Agricultural Production Index for all major crops, stands at 129.2 [Base Triennium ending 2007-08=100] in 2014-15 in comparison to 128.9 in 2013-14. In respect of food crops, the Index of Agricultural production for India as a whole was 123.1 in 2014-15. Table (5.11), shows the trend of Index of Agricultural Production in the State as well as in the country as a whole for the last six years from 2009-10 to 2014-15.

TABLE- 5.9  
AREA UNDER HIGH YIELDING VARIETY RICE  
(Area in lakh hectares)

| Year    | Autumn Rice | Winter Rice | Summer Rice | Total HYV Rice area |
|---------|-------------|-------------|-------------|---------------------|
| 2005-06 | 2.35        | 9.50        | 2.65        | 14.5(59.9)          |
| 2006-07 | 2.15        | 8.63        | 2.67        | 13.45(61.4)         |
| 2007-08 | 2.23        | 8.94        | 2.78        | 13.95(60.0)         |
| 2008-09 | 2.24        | 9.75        | 3.14        | 15.13(60.9)         |
| 2009-10 | 2.29        | 10.2        | 3.41        | 15.9(62.8)          |
| 2010-11 | 2.13        | 11.34       | 3.54        | 17.01(66.2)         |
| 2011-12 | 2.19        | 12.8        | 4.02        | 19.01(74.0)         |
| 2012-13 | 1.60        | 11.70       | 3.61        | 16.91(68.0)         |
| 2013-14 | 1.43        | 12.22       | 2.24        | 15.89(63.5)         |
| 2014-15 | 1.28        | 12.42       | 3.95        | 17.65(70.7)         |

Total figure may not be equal due to rounding off to nearest zero; Figure in bracket shows the percentage to Total Rice Area.

Source: Directorate of Agriculture, Assam.

TABLE- 5.10  
AREA UNDER HYBRID RICE IN ASSAM  
(Area in '000 hectare)

| Year        | Kharif Rice (Autumn + Winter) | Rabi Rice (Summer Rice) | Total*     |
|-------------|-------------------------------|-------------------------|------------|
| 2009-10     | 32.9                          | 14.1                    | 47.0 (1.9) |
| 2010-11     | 37.7                          | 25.0                    | 62.7 (2.4) |
| 2011-12     | 2.5                           | 21.7                    | 24.2 (1.0) |
| 2012-13     | 12.4                          | 84.8                    | 97.2 (3.9) |
| 2013-14 (P) | 28.0                          | 206.0                   | 234.0(9.1) |

P: Provisional, N.A. – Not Available

\*Total figure may not be equal due to rounding off to nearest zero.

Figure in bracket shows the percentage to Total Rice Area.

Source: Directorate of Agriculture, Assam.

TABLE– 5.11

INDEX OF AGRICULTURAL PRODUCTION IN ASSAM AND INDIA  
(Base : Triennium ending 2007-08=100)

| Year    | Assam  |          |                 | India |          |                 |
|---------|--------|----------|-----------------|-------|----------|-----------------|
|         | Food   | Non-Food | All Commodities | Food  | Non-Food | All Commodities |
| 2009-10 | 131.43 | 107.00   | 120.57          | 100.6 | 105.0    | 102.8           |
| 2010-11 | 149.34 | 106.43   | 130.25          | 114.3 | 128.1    | 121.1           |
| 2011-12 | 140.08 | 109.42   | 126.44          | 119.5 | 131.3    | 125.3           |
| 2012-13 | 152.29 | 115.11   | 135.70          | 119.4 | 129.1    | 124.2           |
| 2013-14 | 155.81 | 123.81   | 141.56          | 122.9 | 135.0    | 128.9           |
| 2014-15 | 157.43 | 130.24   | 145.32          | 123.1 | 135.4    | 129.2           |

- N. B.: 1. The Agricultural indices for Assam are constructed on the basis of crops covered by Crop Forecast.  
2. Figure rounded to nearest zero.  
3. Data for 2014-15 in Assam are based on Provisional Estimates.  
4. Data for 2014-15 in India are based on Advance Estimates.

Source: (1) Directorate of Economics and Statistics. Assam.

(2) Economic Survey of India 2014-15.

### LAND UTILIZATION STATISTICS

As per the Land Utilization Statistics for the year 2011-12(Provisional), the total reporting area (Village paper) of the State was 78.50 lakh hectares. Out of the total reporting area, net sown area constitutes 28.11 lakh hectares or 35.80 percent, 18.53 lakh hectares or 23.61 percent was under forest, 26.20 lakh hectares or 33.38 percent was 'land not available for cultivation' and 4.34 lakh hectares or 5.5 percent was other uncultivable area. While Fallow land constitutes 1.68 percent of the total reporting area with around 1.32 lakh hectares, land under still water and water logged area jointly constitutes 1.78 lakh hectares or 2.27 percent. The area under Social forestry was only 0.16 lakh hectare or 0.16 percent of the total reporting area.

The Gross Cropped Area in the State increased to 41.74 lakh hectares in 2011-12 from 41.60 lakh hectares in 2010-11. In 2008-09, the gross cropped area was 39.99 lakh hectares. The Gross Cropped Area in the State, thus, increased by 4.38 percent during the year 2011-12 over 2008-09.

The area sown more than once while recorded 1.04 percent increase with 13.63 lakh hectares in 2011-12 over 2010-11[13.49 lakh hectare], the net cropped area remained at the same level with 28.11 lakh hectares during 2011-12 as it was in 2010-11. Thus, it reveals from the above that the ratio of area sown more than once to the net area sown was 48.5 percent during the year 2011-12 compared to 48.0 percent during the year 2010-11. The ratio of area sown more than once to the net sown area in the State was to 46 percent in 2009-10. The ratio of net sown area to gross cropped area, on the other hand, was calculated at 67.34 percent during the year 2011-12 compared to 67.57 percent during the year 2010-11. During the year 2009-10, the ratio of net sown area to gross cropped area was 68.48 percent.

### AGRICULTURAL HOLDING

It reveals from the Agricultural Census, 2010-11 that there were 27.2 lakh operational holdings in Assam covering an operated area of 29.99 lakh hectares as against 27.5 lakh operational holdings covering an operated area of 30.49 lakh hectares in 2005-06 and 27.1 lakh operational holdings covering an operated area of 31.1 lakh hectares in 2000-01. Thus, the agricultural operated area shows decreasing in the State by 3.69 percent in 2010-11 over 2000-01 which largely affected by soil erosion of ever widening Brahmaputra River, increasing urbanization, industrialization, expansion of roadways and other infrastructural development activities, conversion of agricultural land for setting up of industries as well to homestead land to accommodate ever increasing population etc. The Table 5.12 depicts the trend of number of holding and area between the Agricultural censuses, 2000-01, 2005-06 and 2010-11.



TABLE– 5.12  
AGRI CULTURAL CENSUSES 2000-01, 2005-06 AND 2010-11

| Size class<br>(In hectare) | Number of holding |         |         | Area operated<br>(in hectare) |         |         |
|----------------------------|-------------------|---------|---------|-------------------------------|---------|---------|
|                            | 2000-01           | 2005-06 | 2010-11 | 2000-01                       | 2005-06 | 2010-11 |
| Marginal (Below 1.0)       | 1699107           | 1752989 | 1831115 | 662780                        | 760145  | 774796  |
| Small (1.0-2.0)            | 561039            | 591431  | 496574  | 730513                        | 718383  | 687156  |
| Semi-medium (2.0-4.0)      | 351521            | 317859  | 303528  | 957959                        | 846006  | 817982  |
| Medium (4.0-10.0)          | 95500             | 82933   | 84869   | 498797                        | 425403  | 437372  |
| Large (10.0 & above)       | 4970              | 4902    | 4137    | 263529                        | 298606  | 271763  |
| Total                      | 2712137           | 2750114 | 2720223 | 3113578                       | 3048543 | 2999070 |

Total figure may not be equal due to rounding off to nearest zero

Source: Directorate of Economics and Statistics, Assam.

The disaggregated data also shows that the marginal holdings with less than one hectare of land accounted for 67.3 percent of the total holdings and 25.8 percent of the total operated area of the State in 2010-11 compared to 63.7 percent of the total holdings and 24.9 percent of the total operated area of the State in 2005-06. It also reveals from the Table 5.13 that the small holding with size class between 1-2 hectares, shared 18.25 percent of the total holdings and 22.91 percent of the total operational area and the large holdings (10 hectares and above) constituted only 0.15 percent of the total number of holdings and 9.1 percent of the total operated area in the State in 2010-11.

The Table 5.13 shows the trend of agricultural holdings and operated area in the State from 1970-71 to 2010-11.

TABLE– 5.13  
AGRI CULTURAL HOLDINGS AND OPERATED AREA IN ASSAM  
(AS PER AGRICULTURAL CENSUSES)

| Agricultural<br>Census Year | Number of<br>Holdings(in'000) | Total operated area<br>(in thousand hect.) | Average size of<br>Holdings (in hect.) |
|-----------------------------|-------------------------------|--|--|
| 1970-71                     | 1964.38                       | 2882                                       | 1.47                                   |
| 1976-77                     | 2254.65                       | 3079                                       | 1.37                                   |
| 1980-81                     | 2298.59                       | 3121                                       | 1.36                                   |
| 1985-86                     | 2419.16                       | 3161                                       | 1.31                                   |
| 1990-91                     | 2523.38                       | 3205                                       | 1.27                                   |
| 1995-96                     | 2683.00                       | 3138                                       | 1.17                                   |
| 2000-01                     | 2712.14                       | 3114                                       | 1.15                                   |
| 2005-06                     | 2750.11                       | 3049                                       | 1.11                                   |
| 2010-11                     | 2720.22                       | 2999                                       | 1.10                                   |

Total may not be equal due to rounding off to nearest zero.

Source: Directorate of Economics and Statistics, Assam.

## HORTICULTURE

Assam having diverse and unique agro climatic conditions is traditionally very rich in horticultural production, which is very conducive for growing a wide variety and range of various horticultural crops like various types of fruits, vegetables, flowers, spices, nut crops, tuber crops, medicinal and aromatic plants, mushrooms etc. Assam is being encompassed as one under 14 global bio-diversity hotspots. The State has enough options for farming as well as making investments in horticulture sector. Moreover, the sector also has the capacity of opening up enough opportunities for employment generation of unemployed youths in the state.

Horticulture crops occupies about 15 percent of the gross cultivable area of the state, with an annual production of more than 76 lakh MT of various horticultural produces. The sector significantly contributes towards food and nutritional security of the State. Horticulture also has a commitment which no other sector may come up to or as parallel to, judging in terms of its importance and contribution in achieving nutritional security and being a most viable component of



an environment, friendly industrial base. As a sector, horticulture is gaining importance day by day and the main reasons for calling it as a sunrise area are- diverse nature of its products to suit different agro climatic situations, higher bio-mass production per unit area and thereby more income per unit area, scope for improvement in rural diet with minimum investment, scope for massive employment generation, unveiling of new horizons for value additions and the science itself being intellectually satisfying with aesthetic outlook which has a universal appeal for both developed and developing nations.

To keep in view of the requirement against projected population of Assam by the year 2020 and to give top most priority for commercialization of this sector, crop specific strategies are being formulated, including a gist of targets of various major sector of horticulture to be covered and included.

The Union Government has also laid great stress on organic cultivation in the North East Region. In Assam, under the Chief Ministers Organic Farming Scheme, 4500 hectares of land have already been brought under organic cultivation. In this year, it is proposed to double the area under organic farming. Horticulture Department will be imparting training to 15,000 unemployed youths and provide them Green House and such other facilities to make them self-employed.

Source: Budget Speech 2014-15 by Chief Minister, Assam.

After 2001-02, Assam is making inroads towards commercialization of horticulture sector for gaining sustainable economic development of the rural farming community. To make the horticulture sector more viable and sustainable, due emphasis have also been given in raising the productivity of various commercially potential crops through use of better technology, management and planting materials being provided to the farmers. Similarly due importance has also been given on various aspects of facilities provisions like pre-harvest treatment, proper harvest techniques, setting up of collection centres with grading facilities, transport facilities, Marketing facilities.

According to the Directorate of Horticulture and Food Processing, Assam the growth of area, production and productivity of horticulture have been assessed at 50.32 percent, 91.0 percent and 20.31 percent respectively. The Horticulture Directorate has also taken up positive steps towards self. Employment opportunities under horticulture sector by helping about 15,000 rural women for engaging themselves by the establishment of 156 mini fruit processing units during the Eleventh Five Year Plan Period. The details of Area, production and productivity of horticulture crops in Assam, is evident from the Table-5.14 below:

TABLE- 5.14  
AREA, PRODUCTION & PRODUCTIVITY OF HORTICULTURAL CROPS

| Year    | Fruits            |                       |                              | Spices            |                       |                              | Vegetables        |                       |                              |
|---------|-------------------|-----------------------|------------------------------|-------------------|-----------------------|------------------------------|-------------------|-----------------------|------------------------------|
|         | Area (lakh hect.) | Pro-Duction (lakh MT) | Producti-vity (Kg./ hectare) | Area (lakh hect.) | Pro-Duction (lakh MT) | Producti-vity (Kg./ hectare) | Area (lakh hect.) | Pro-Duction (lakh MT) | Producti-vity (Kg./ hectare) |
| 2005-06 | 1.13              | 13.52                 | 12005                        | 0.86              | 2.12                  | 2475                         | 2.32              | 18.18                 | 16485                        |
| 2006-07 | 1.14              | 13.72                 | 12139                        | 0.86              | 2.14                  | 2476                         | 2.36              | 38.87                 | 16469                        |
| 2007-08 | 1.16              | 14.08                 | 14142                        | 0.88              | 2.18                  | 2478                         | 2.38              | 39.18                 | 16462                        |
| 2008-09 | 1.34              | 16.61                 | 12425                        | 0.93              | 2.80                  | 3023                         | 2.46              | 44.20                 | 17923                        |
| 2009-10 | 1.27              | 15.65                 | 12370                        | 0.94              | 2.35                  | 2505                         | 2.51              | 42.55                 | 16952                        |
| 2010-11 | 1.37              | 16.56                 | 12485                        | 1.01              | 2.30                  | 2277                         | 2.57              | 44.33                 | 17231                        |
| 2011-12 | 1.38              | 17.75                 | 12885                        | 1.04              | 2.56                  | 2464                         | 3.66              | 52.51                 | 24325                        |
| 2012-13 | 1.51              | 20.74                 | 13760                        | 1.10              | 3.28                  | 2970                         | 3.86              | 60.34                 | 27536                        |
| 2013-14 | 1.42              | 20.25                 | 14219                        | 1.04              | 2.67                  | 2578                         | 3.65              | 53.30                 | 24797                        |
| 2014-15 | 1.44              | 20.12                 | 13956                        | 1.08              | 2.97                  | 2750                         | 3.91              | 58.58                 | 25455                        |

Total may not be equal due to rounding off to nearest zero.

Source: Directorate of Agriculture, Assam and Directorate of Horticulture & FP, Assam.

## INTEGRATED NUTRIENT MANAGEMENT (INM)

### FERTILIZER AND MANURE

Fertilizer is a very important input of agriculture, and it plays a dominant role in augmenting the productivity of crops. Therefore, thrust has been given on “Integrated Nutrient Management” (INM) to make a major breakthrough in the direction of the following objectives:

- i) Less use and dependence and use on inputs from outside source and encourage farmers to utilize on farm resources.
- ii) Economize the production cost by using optimum dose of fertilizer.

The trend in the use of bio-fertilizer, compost and green manures and organic farming practices have been increasing gradually, as the application of chemical fertilizer is posing a major threat in depletion soil nutrients.

The State Government is also giving much stress on timely availability of fertilizers at the door step of farmers during peak period of cultivation. AAIDC, NAFED, GPSS, and organizations like IFFCO, BVFCL, Green Chemicals Ltd, Teesta Agro Industries Ltd. have been playing a pivotal role in distribution of fertilizer through their respective branches located at various corners of the State. At present, there are 416 nos. of whole sale points and 6855 nos. of fertilizer sale points in Assam.

### CONSUMPTION OF FERTILISER

To augment the productivity of crops thrust has been given to increase the consumption of chemical fertilizers under the banner of “Integrated Nutrient Management” as consumption of nutrients (NPK) per hectare in the state is much lower than the National average. The consumption of fertilizer in Assam is low because of low consumption during kharif season. Farmers are reluctant to invest on fertilizer due to fear of loss for heavy rainfall and flood. Consumption of fertilizers during summer and rabi season is low due to non-availability. According to the State Agriculture Department, the consumption of fertiliser in the State was 68.6 kgs per hectare during the year 2014-15 compared to 65.4 kgs per hectare during 2013-14. The detail of consumption of fertilizers in Assam is presented in the Table 5.15 below:

TABLE– 5.15  
CONSUMPTION OF (CHEMICAL) FERTILISERS  
(Fig in '000 MT)

| Fertilizer          | Year    |         |         |         |         |         |         |         |         |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                     | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| Nitrogen            | 102.6   | 109.0   | 114.0   | 135.6   | 129.3   | 155.0   | 135.3   | 151.3   | 155.9   |
| Phosphorus          | 51.1    | 57.7    | 52.5    | 56.1    | 47.2    | 60.0    | 36.0    | 41.7    | 50.2    |
| Potash              | 50.0    | 57.6    | 59.1    | 71.9    | 71.4    | 75.0    | 44.8    | 80.1    | 80.3    |
| Total               | 203.7   | 224.3   | 225.7   | 263.6   | 248.0   | 290.0   | 216.1   | 273.0   | 286.4   |
| Consumption (kg/Ha) | 52.3    | 56.2    | 57.8    | 63.2    | 67.1    | 74.6    | 58.5    | 65.4    | 68.6    |

Total may not be equal due to rounding off to nearest zero.

Source: Draft Annual Plan 2014-15, Planning and Development Department and Directorate of Agriculture.

### SOIL HEALTH MANAGEMENT

The State Agriculture Department has taken up initiatives to preserve depletion of soil nutrients and Sustain the Crop Production System. Use of Bio-fertilizers has given tremendous results in crop production, increase in productivity and maintenance of soil health by narrowing the gap between nutrient removals and supply along with additional applications of Micronutrient, lime, green manuring and vermi compost including FYM. Lately, the trend in the use of Bio-fertilizer has increased significantly due to motivation through extension machinery and initiation of demonstration programmes by the State Agriculture Department. Special thrust has been given for the use of Bio-fertilizer by initiating Programme ‘Input support to the agriculturist having KCC’ under State Priority Scheme, which has been implemented since 2006-07, with an aim to attract

the farming communities to go for credit support in cultivating crops. The consumption of Bio-fertilizers in Assam can be known from Table-5.16

TABLE – 5.16  
CONSUMPTION OF BIO-FERTILISER

| ITEM                                     | YEAR    |         |         |         |         |         |         |
|--|---------|---------|---------|---------|---------|---------|---------|
|  | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| Bio-Fertilizer (MT)                      | 178     | 227     | 175     | 350     | 365     | 380     | N.A.    |
| Micronutrient (MT)                       | 441     | 101     | 142     | 500     | 548     | 697     | N.A.    |
| Lime(Lakh MT)                            | 2.1     | 0.3     | 1.4     | 0.05    | 0.2     | 0.3     | N.A.    |
| Organic Manure (including FYM) (Lakh MT) | 81.24   | 81.92   | 82.67   | 85.00   | 88.00   | 97.00   | N.A.    |

Note: N.A. - Not Available  
Source: Directorate of Agriculture, Assam.

The season-wise consumption of fertilizers in terms of nutrients for the last three years is shown in Table-5.17

TABLE-5.17  
CONSUMPTION OF FERTILIZERS IN TERMS OF NUTRIENTS  
(In MT)

| Nutrient | 2012-13 |        |        | 2013-14 |        |        | 2014-15 |        |        |
|----------|---------|--------|--------|---------|--------|--------|---------|--------|--------|
|          | Kharif  | Rabi   | Total  | Kharif  | Rabi   | Total  | Kharif  | Rabi   | Total  |
| N        | 68175   | 67151  | 135326 | 68406   | 82845  | 151251 | 72466   | 83449  | 155915 |
| P        | 20860   | 15101  | 35961  | 18464   | 23237  | 41701  | 22984   | 27200  | 50184  |
| K        | 16922   | 27898  | 44820  | 33319   | 46759  | 80078  | 39878   | 40457  | 80335  |
| Total    | 105957  | 110150 | 216107 | 120189  | 152841 | 273030 | 135328  | 151106 | 286434 |

Source : Directorate of Agriculture, Assam.

In addition, there are 11 nos.(eleven) State owned Soil Testing Laboratories functioning in the State of which 7 nos. are Static and 4 nos. are Mobile. One Soil Testing Laboratory is also functioning under Private Sector. All these Soil Testing Laboratories have total annual analyzing capacity of 90,000 soil samples.

TABLE– 5.18  
SOIL SAMPLE ANALYSED AND SOIL HEALTH CARD ISSUED (NOS)

| Soil Testing Labs | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|-------------------|---------|---------|---------|---------|---------|---------|
| State Owned       | 59124   | 59296   | 60147   | 61608   | 61608   | 60229   |
| Private           | 728     | 776     | 400     | 321     | N.A.    | N.A.    |
| Total             | 59852   | 60072   | 60547   | 61929   | N.A.    | N.A.    |

Note: N.A. – Not Available

Source: Draft Annual Plan, 2014-15, Planning and Development Department and Directorate of Agriculture.

## INTEGRATED PEST MANAGEMENT (IPM)

For sustainable agricultural production the key component is Integrated Pest Management (IPM). Assam has a diverse eco-system and sub-tropical climate, the crop production is associated with loss of biotic stress problem which share 20-30 percent of the yield loss. Excessive and injudicious use of chemical pesticides in the field as well as horticultural crops result into development of pest resistance, pest resurgence, pest replacement and pesticides residue problem.

Intensification of agriculture with the introduction of HYV, Hybrid, STW, Mechanization and other advance inputs also enhance the pest population dynamics and pest status.

In order to facilitate the availability of the Bio-Control Agent (BCA) in the biological pest management intensive IPM (BIPM), the thrust has been given to increase production of the already established BCA and the newly introduced BCA in the State Bio-Control Laboratory (SBCL).

The State Agriculture Department is trying to popularize the use of bio-pesticides and other methods of IPM by organizing training demonstrations. As a result, the consumption of bio-pesticide is increasing in the State.

The trend of consumption of both chemical and bio-pesticides during the last nine years is evident from Table-5.19 below.

TABLE– 5.19  
CONSUMPTION OF PESTICIDES

(Figure in MT)

| Pesticide Consumption | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Chemical Pesticide    | 165.0   | 158.0   | 150.0   | 143.0   | 150.0   | 160.0   | 183.0   | 190.0   | 180.0   |
| Bio-pesticide         | -       | 6.7     | 18.0    | 19.0    | 24.0    | 87.0    | 143.0   | 155.0   | 135.0   |

Source: Directorate of Agriculture, Assam.

### SEED: DEVELOPMENT OF SEED SECTOR

The most vital component for increasing production & productivity of crops is seed. Quality seed is the primary input for crop production. Certified Seed production is a process through which seeds are produced in conformity with the standard variety, characters by taking specific measure as required for seed production. In Assam, production of certified seed has been taken up in the Field Trial Stations (FTSs), in some of the State Govt. Seed Farms and Assam Seed Corporation's seed farms. But, there is a dearth of quality seeds in the State and so the Seed Replacement Rate (SRR) stands at a very low level. Moreover, the State has to depend on outside sources for quality seeds of some crops every year to meet the demand immediately after every natural calamity. To meet the growing demand and increase quality seed production, the Agricultural Department has taken the following steps:

- Expansion of Seed Village Programme;
- Production of certified seeds of Paddy, Pulse & Oilseeds in Seed Village in large scale;
- To focus on capacity building of Registered Seed Growers;
- Strengthen Seed Farms to facilitate production, processing & storage of seeds.

### SEED REPLACEMENT RATE (SRR)

Seed and its provision is the most basic key input for any crop productivity and without which the impact of overall other inputs applied in crop production cannot be expected. The State Agriculture Department has continuously made efforts towards it through its popularisation of HYV, SRR has been increased and is carried on to a great extent. Achievements of SRR of some of the important crop is placed at Table-5.20

TABLE– 5.20  
SEED REPLACEMENT RATE (SRR) IN ASSAM

(Figure in %)

| Crop           | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|----------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Paddy          | 17.0    | 23.0    | 33.0    | 50.0    | 46.8    | 47.9    | 31.1    | 32.77   |
| Blackgram      | 20.5    | 7.0     | 64.4    | 48.0    | 79.7    | 25.8    | 40.5    | 44.66   |
| Greengram      | -       | 6.0     | 33.0    | 38.0    | 100.0   | 37.5    | 45.2    | 76.00   |
| Lentil         | 21.0    | 7.0     | 50.6    | 34.0    | 26.2    | 100.0   | 54.1    | 30.11   |
| Pea            | 20.2    | 37.0    | 88.0    | 37.0    | 40.5    | 59.7    | 46.7    | -       |
| Rape & Mustard | 16.0    | 24.0    | 60.0    | 16.0    | 26.2    | 46.8    | 38.1    | 45.24   |
| Sesamum        | -       | 20.0    | 30.7    | 4.0     | 0.9     | 0.0     | 0.0     | -       |
| Jute           | 57.0    | 52.0    | 22.5    | 42.0    | 51.1    | 10.2    | 19.2    | 63.22   |

Source: Directorate of Agriculture, Assam

## SEED CERTIFICATION

Assam State Seed Certification Agency (ASSCA) is the Nodal Agency who has been entrusted with the important responsibility of Seeds Certification of namely Paddy, Mustard and Pulses as per feasibility in the State. For planting crops namely Coconuts, Litchi, and Guava etc are under consideration for the purpose of certification. Under ASSCA, there are 3 (three) nos. of notified Seed Testing Laboratories located at Guwahati, Jorhat and Silchar. The total annual testing capacity of these three notified laboratories is about 20,000 samples. Seed testing and certification guidelines are to be strictly followed for proper quality control and certification as per set norms. Table 5.21 below shows the performance of seed certification taken up in Assam during the last six years.

TABLE– 5.21  
STATUS OF SEED CERTIFICATION  
(Figure in Quintal)

| Crop(Seeds) | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|-------------|---------|---------|---------|---------|---------|---------|
| Paddy       | 20500   | 19750   | 18960   | 28686   | 18555   | 18555   |
| Mustered    | 8470    | 3840    | 3840    | 7450    | 9210    | 11324   |
| Blackgram   | Nil     | 1250    | 1250    | 2800    | 700     | 1840    |
| Potato      | -       | -       | -       | 3412    | 11300   | 23350   |

Source: Draft Annual Plan 2014-15, Planning and Development Department.

## SYSTEM OF RICE INTENSIFICATION (SRI)

The annual growth of production of major crops mainly rice and food grains in the State is significantly increasing due to adoption of SRI system of Rice intensification and the use of Hybrid seeds. As compared to normal practices, adoption of SRI system enhances the productivity of Rice significantly and also facilitates use of low volume of seeds, fertilizers, water, low cost of production and further also shortens the crop duration period and thereby open and increase the scope of double cropping as added benefits. The status of Rice Intensification is shown below in Table-5.22

TABLE– 5.22  
STATUS OF SYSTEM OF RICE INTENSIFICATION

| Year    | Area under SRI (in Ha) | Average Yield under Normal Practice (Ton/Ha) | Average Yield under SRI (Ton/Ha) | Percentage of increase over normal practice |
|---------|------------------------|--|----------------------------------|---|
| 2008-09 | 882.20                 | 2.65   | 5.08                             | 219   |
| 2009-10 | 43836.00               | 5.80   | 5.85                             | 209   |
| 2010-11 | 50438.00               | 2.65   | 5.65                             | 217   |
| 2011-12 | 57900.00               | 2.88   | 5.70                             | 205   |
| 2012-13 | 65150.00               | 2.90   | 6.14                             | 212   |

Source: Draft Annual Plan-2014-15, Planning and Development Department.

## CROP DEVELOPMENT (MISSION DOUBLE CROPPING)

Under double/multiple cropping, the net cropped area is about 48 percent or 13.49 lakh hectares. To attract farmers towards the practice of taking up double /multiple cropping the State Government has taken up initiatives to drive massive cultivation of Summer Paddy, Rabi Pulses and Oilseeds as per feasibility/potentiality under Mission Double Cropping with additional coverage of 1.00 lakh hectares, and areas under mono cropping with an allocation of Rs. 6200.00 lakh. Additional area of 3.0 lakhs hectares is proposed to be covered under double cropping to increase cropping intensity to 160.0 percent.

## FARM MECHANIZATION AND IRRIGATION

Farm mechanization though is a very important input for timely agricultural operation, is slow in Assam. The main problems in this regard which are also major constraints are highly fragmented and small land holdings, which stands as an hindrance in bringing the entire farming community under high volume of mechanization. Moreover, low Farm Power provision in the State also hampers the achievement of coveted schemes of double or multiple cropping. However, an effort to boost up farm mechanization is carried on in a systematic and schematic manner. The State Agriculture Department has taken initiatives to procure farm equipment like Tractors, Power Tillers and other farm machineries under various Externally Aided, Centrally Sponsored and State Plan Schemes for the benefit of farmers mainly for Small and Marginal farmers. According to the State Agriculture Department, the Farm power created in the State till the end of 2014-15 is 1.78 HP per hectare which was 1.52 HP per hectare till the end of 2012-13 and 1.02 HP per hectare till the end of 11<sup>TH</sup> Five Year Plan period in comparison to 2.05 HP per hectare at national level.

Various farm machineries and equipments during the period 2006-07 to 2014-15 is evident from the Table 5.23.

TABLE- 5.23  
STATUS OF FARM MECHANISATION

(Figure in Nos.)

| Year    | Tractors | Power Tillers | Power Pumps | Small Implements | Rotovators | Farm power available [HP per hectare] |
|---------|----------|---------------|-------------|------------------|------------|---------------------------------------|
| 2006-07 | 338      | 2112          | 3994        | 958              | -          | 0.54                                  |
| 2007-08 | 855      | 4232          | 9960        | 850              | -          | 0.60                                  |
| 2008-09 | 1719     | 861           | 18163       | 1527             | 158        | 0.60                                  |
| 2009-10 | 511      | 3782          | 30634       | 92492            | 59         | 0.69                                  |
| 2010-11 | 962      | 3136          | 85506       | 0                | 65         | 0.90                                  |
| 2011-12 | 824      | 5138          | 12852       | -                | 335        | 1.02                                  |
| 2012-13 | 588      | 3339          | 24337       | N.A.             | 93         | 1.52                                  |
| 2013-14 | 0        | 73            | 15000       | N.A.             | N.A.       | N.A.                                  |
| 2014-15 | 460      | 1559          | 60656       | N.A.             | 430        | 1.78                                  |

N.A. =Not Available

Source: Directorate of Agriculture, Assam.

## IRRIGATION

For the achievement of more agricultural growth in the State there is considerable potential by increasing cropping intensity, raising crop yield and diversifying into pulses and oilseeds through better irrigation facilities and looking into its provisions. Considering the uncertainties faced in the production of Kharif crops due to floods and high rainfall, the State Agriculture Department is giving more emphasis on Rabi crops by assigning top priority to develop assured irrigation facilities through installation of Pump Sets (Shallow Tube Well & Low Lift Pump). Irrigation by way of Shallow Tube Well and Low Lift Pumps is considered to be the efficient method of water utilization for crop growth.

TABLE- 5.24  
IRRIGATION INFRASTRUCTURE CREATED BY THE  
AGRICULTURE DEPARTMENT

| Component of irrigation | Nos. installed |         |         |         |         |         |         |         |         |
|-------------------------|----------------|---------|---------|---------|---------|---------|---------|---------|---------|
|                         | 2006-07        | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| Shallow Tube Wells(Nos) | 2812           | 8190    | 30080   | 53208   | 141452  | 25704   | 43938   | 30000   | 55590   |
| Low Lift Pumps (Nos)    | 5176           | 11730   | 6246    | 8060    | 29560   | 0       | 4736    | 0       | 5066    |

Source: Directorate of Agriculture, Assam.

## IRRIGATION POTENTIAL CREATED BY AGRICULTURE DEPARTMENT & UTILIZABLE IRRIGATION (As on 31<sup>st</sup> March, 2015)

|  |   |
|--|---|
| Irrigation Potential Created             | 11.27 lakh hectares (40% of net cropped Area) |
| Area under utilizable assured irrigation | 7.33 lakh hectare (26% of net Cropped Area)   |

At present, only 11.27 lakh hectares has been covered by Irrigation Potential created by the Agriculture Department i.e.; 40% percent of net cropped area has been covered. The area under utilizable assured irrigation is 7.33 lakh hectares i.e.; 26 percent of net cropped area.

To increase the irrigation command of additional assured irrigation area by 2.0 lakh hectares and to regain the loss of area coverage by deplorable condition of STWs installed prior to 2000, the scope/popularity towards use of assured irrigation in the field of Agriculture is felt one of the most prime needs of the department. Therefore, the department proposed to install 1.00 lakh STWs under RIDF Scheme of NABARD.

### CROP INSURANCE

The state of Assam has been experiencing floods almost every year and about 4.75 lakh hectares of area in the State is chronically flood prone and about 0.94 lakh hectares area is draught prone. Therefore, the Crop Insurance is a very important area to look into to help farmers at the time when there is crop loss/crop damage due to recurring natural calamities, severe pest infestations and diseases in notified crops.

The Government of India has launched a Crop Insurance programme under the nomenclature "National Agricultural Insurance Scheme" (NAIS). All farmers who avail loans from financial institutions are covered under the scheme and it is optional for non-loanee farmers. Here 50 percent of the premium amount is contributed as subsidy to small and marginal farmers which will be shared equally by Government of India and State Government. This scheme is expected to be a critical instrument for development in the field of crop production by providing financial support to the farmers in the event of crop failure and help in maintaining flow of agricultural credit. This programme covers 8 (Eight) crops i.e. 3 crops in Kharif Season and 5 crops in Rabi season.

The Crops are:

Kharif Season : Autumn / Ahu Paddy, winter / Sali Paddy and Jute.

Rabi Season : Rape & Mustard, Wheat, Potato, Sugarcane and summer / Boro Paddy.

This scheme, under the Area Approach, not only facilitate insurance coverage to each of the notified crop damage within the defined area for widespread calamities but also on an individual basis for localized calamities such as hailstorm, landslide, cyclone and flood.

National Agriculture Insurance Scheme, unfortunately, has not been able to provide the desired solution to the risk in the agriculture sector in the State. Various reasons for the same are lack of awareness, low subsidy premiums (10 percent) for small and marginal farmers, delayed claim settlement, slow response of banks in issuance of Kissan Credit Cards etc., has in turn affected large number of farmers of the State from getting benefit from the NAIS. Moreover, some important horticulture crops like ginger etc. are not covered under the Scheme.

TABLE-5.25  
AGRICULTURE CREDIT  
YEARWISE KISAN CREDIT CARDS (KCC) ISSUED & FINANCING

| Year                              | No. of KCCs issued | Credit limit Sanctioned (Rs. In Crore) |
|-----------------------------------|--------------------|--|
| 2001-02                           | 8,041              | 8.98                                   |
| 2002-03                           | 43,977             | 49.11                                  |
| 2003-04                           | 51,815             | 40.02                                  |
| 2004-05                           | 88,732             | 88.02                                  |
| 2005-06                           | 63,853             | 79.05                                  |
| 2006-07                           | 50,130             | 60.75                                  |
| 2007-08                           | 44,621             | 69.19                                  |
| 2008-09                           | 26,881             | 51.89                                  |
| 2009-10                           | 1,49,822           | 42.98                                  |
| 2010-11                           | 1,21,584           | 197.59                                 |
| 2011-12                           | 3,78,101           | 131.54                                 |
| 2012-13                           | 2,65,797           | 932.20                                 |
| 2013-14                           | 3,08,306           | 15.06                                  |
| 2014-15                           | 2,81,889           | 1331.36                                |
| 2015-16<br>(up to December, 2015) | 1,31,907           | 2663.00                                |
| Total :                           | 20,15,456          | 5702.65                                |

Source : Directorate of Agriculture



## NATIONAL AGRICULTURAL INSURANCE SCHEME (NAIS)

- National Agricultural Scheme (NAIS) has been implemented in the State since Rabi 1999-2000
- Crops covered : Autumn Rice, Winter Rice, Summer (Boro) Rice, Wheat, Jute, Rape & Mustard, Potato and Sugarcane
- Calculation of claim under NAIS :

$$\text{Claim} = \frac{\text{Shortfall in yield}}{\text{Threshold yield}} \times \text{Sum Insured for the farmers in the concerned notified area}$$

i) Shortfall in Yield = Threshold yield – Actual yield for the Defined Area : Threshold yield = 3 years of Average yield for paddy and 5 years of Average yield for other crops.

ii) As per Scheme, the Agriculture Insurance Co. of India Ltd. (AICL) pays 100% amount of premium collected towards claim if any, and the remaining portion of the claim is equally shared by Govt. of India and Govt. of Assam.

iii) The scheme provides 10% subsidy to small & marginal farmers. Total premium subsidy is also shared equally between Govt. of India and Govt. of Assam.

TABLE– 5.26

### CROP SEASON-WISE PERFORMANCE OF NATIONAL AGRICULTURAL INSURANCE SCHEME (NAIS) IN ASSAM

| Season & Year | Area covered (Ha) | Sum Insured (Rs in Crore) | Premium Received (Rs. In crore) | Total Claims (Rs. In crore) | Farmers covered (No.) | Farmers benefited (No.) |
|---------------|-------------------|---------------------------|---------------------------------|-----------------------------|-----------------------|-------------------------|
| Kharif 2006   | 8304.30           | 10.838                    | 0.173                           | 0.919                       | 8800                  | 3882                    |
| Rabi 2006-07  | 4757.90           | 9.115                     | 0.246                           | 0.077                       | 5818                  | 491                     |
| Kharif 2007   | 7541.80           | 11.721                    | 0.205                           | 0.067                       | 8938                  | 2181                    |
| Rabi 2007-08  | 5854.91           | 13.598                    | 0.504                           | 0.045                       | 10780                 | 853                     |
| Kharif 2008   | 7332.90           | 8.265                     | 0.172                           | 0.054                       | 7458                  | 198                     |
| Rabi 2008-09  | 20126.26          | 41.715                    | 1.244                           | 0.669                       | 28359                 | 3592                    |
| Kharif 2009   | 24099.81          | 48.018                    | 0.978                           | 0.687                       | 24619                 | 3727                    |
| Rabi 2009-10  | 19003.26          | 57.200                    | 1.755                           | 3.292                       | 27288                 | 7512                    |
| Kharif 2010   | 17277.05          | 4.655                     | 0.987                           | 0.597                       | 21433                 | 2598                    |
| Rabi 2010-11  | 10464.97          | 31.033                    | 1.293                           | 0.163                       | 14675                 | 533                     |
| Kharif 2011   | 18281.07          | 62.040                    | 1.551                           | 2.022                       | 23770                 | 5457                    |
| Rabi 2011-12  | 20317.33          | 73.911                    | 2.734                           | 1.450                       | 32547                 | 15405                   |
| Kharif 2013   | 24195.66          | 89.454                    | 2.237                           | 0.137                       | 32053                 | 1654                    |
| Rabi 2012-13  | 13925.24          | 63.917                    | 2.088                           | 0.983                       | 24012                 | 1954                    |
| Kharif 2013   | 21410.64          | 96.459                    | 2.495                           | 0.361                       | 30678                 | 561                     |
| Rabi 2013-14  | 23537.00          | 73.630                    | 2.125                           | 0.924                       | 21943                 | 1770                    |
| Kharif 2014   | 2567.67           | -                         | 2.748                           | 0.281                       | 2895                  | 57                      |
| Rabi 2014-15  | 15525.16          | -                         | 2.434                           | 2.490                       | 23643                 | 282                     |
| Kharif 2015   | 2227.60           | -                         | 2.453                           | -                           | -                     | -                       |

Source: Directorate of Agriculture, Assam.



### MODIFIED NATIONAL AGRICULTURAL INSURANCE SCHEME (MNAIS)

- The scheme is being implemented on pilot basis in 50 districts in the country. NAIS is withdrawn from those districts in which MNAIS will be implemented.
- Unit of insurance for major crops is Village / Village Panchayat.
- Scheme is compulsory for loanee farmers & voluntary for non-loanee farmers. Uniform seasonality norms will be applicable for both loanee & non-loanee farmers.
- Sum insured can be opted up to 150% of the value of average yield. Premium subsidy is available up to the value of threshold yield / loan amount only.
- Entire claim will be borne by the implementing agency. The scheme provides account payment up to 25% of likely claim for immediate relief to the farmers.
- Minimum indemnity level will be 70% against 60% in case of NAIS.
- Calculation of threshold yield: Average yield of last 7 years excluding up to 2 years of declared natural calamity.
- The scheme is implemented in two districts of Assam viz., Kamrup and Dhubri from Rabi, 2010-11.

The summary of progress of implementation of MNAIS in the above mentioned districts presented in the table below:

TABLE- 5.27  
STATUS OF MNAIS (Kamrup & Dhubri district)

| Season & Year | Area covered (hectare) | Sum insured (Rs. In crore) | Premium received (Rs. In crore) | Total Claims (Rs. In crore) | Farmers covered (No.) | Farmers benefited (No.) |
|---------------|------------------------|----------------------------|---------------------------------|-----------------------------|-----------------------|-------------------------|
| Rabi, 2010-11 | 1564.19                | 4.98                       | 0.12                            | 0.039                       | 2097                  | -                       |
| Kharif, 2011  | 3192.02                | 13.89                      | 0.80                            | 0.193                       | 4641                  | 711                     |
| Rabi, 2011-12 | 2670.87                | 8.75                       | 0.32                            | 0.060                       | 3942                  | 299                     |
| Kharif, 2012  | 3375.95                | 9.038                      | 0.326                           | 0.598                       | 2722                  | 388                     |
| Rabi, 2012-13 | 1849.32                | 12.284                     | 0.298                           | 0.096                       | 2229                  | 216                     |
| Kharif, 2013  | 2628.82                | 13.443                     | 0.424                           | Not yet settled             | 3604                  | Not yet settled         |
| Rabi, 2013-14 | 486.33                 | 2.911                      | 0.126                           | Not yet settled             | 828                   | Not yet settled         |
| Total :       | 15767.50               | 65.296                     | 2.414                           | 0.986                       | 20063                 | 1614                    |

Source: Directorate of Agriculture, Assam.

### WEATHER BASED CROP INSURANCE SCHEME (WBCIS)

- With the objective to overcome the shortcoming regarding delay in settlement of claims etc. under NAIS, a Pilot Weather Based Crop Insurance Scheme (WBCIS) was introduced for implementation in 20 States on pilot basis. WBCIS has been implemented in Assam since Rabi, 2013-14.
- WBCIS is intended to provide insurance protection to the farmers against adverse weather incidence. Such as deficit and excess rainfall, high or low temperature, humidity etc. which are deemed to impact adversely the crop production
- WBCIS is based on actuarial rates of premium but to make the scheme attractive, premium actually charged from farmers have been restricted to at par with NAIS. The difference between actuarial rates and premium actually paid by farmers are borne by the Government (both Centre and State concerned on 50:50 basis). Besides. A cap on premium payable by farmers for annual commercial/horticultural crops has been provided.
- The scheme is available to all the farmers- loanee and non-loanee-irrespective of their size of holding. As under NAIS, the loanee farmers area covered on compulsory basis in a notified area for notified crops whereas for non-loanee farmers scheme is voluntary.
- Further, to provide competitive service private insurance companies i.e. ICICI-Lombard. IFFCO-TOKIO. M.S Cholamandalam and HDFC-ERGO General Insurance Companies have been involved for implementation besides Agriculture Insurance Company of India (AIC).

TABLE-5.28  
STATUS OF WEATHER BASED CROP INSURANCE SCHEME (WBCI S)

| Season & Year | Area covered (Ha.) | Sum Insured (Rs. In crore) | Premium Received (Rs. In crore) | Total Claims (Rs. In crore) | Farmers covered (No.) | Farmers benefited (No.) |
|---------------|--------------------|----------------------------|---------------------------------|-----------------------------|-----------------------|-------------------------|
| Rabi 2013-14  | 924.230            | 5.825                      | 0.495                           | Not yet settled             | 1844                  | Not yet settled         |
| Kharif 2014   | 11479.830          | NA                         | 7.022                           | 11.963                      | 21776                 | 19471                   |
| Rabi 2014-15  | 853.350            | NA                         | 0.514                           | 0.291                       | 1593                  | 572                     |
| Kharif 2015   | 17681.425          | NA                         | 10.758                          | NA                          | 29151                 | NA                      |
| Total:        | 30938.84           | 5.825                      | 18.789                          | 12.254                      | 54364                 | 20043                   |

### PROCUREMENT OF PADDY AS A MEASURE OF PRICE SUPPORT

Assam has been able to become marginally surplus in Rice production for remarkable improvements achieved in productivity through better input management practices and adoption of improved technology. But the problem of disposal of produce by the farmers at un-remunerative prices discourages them considerably in the adopting improved measures that can result in more yields. With the consideration of the interest of the farmers the State Government has engaged Assam State Agricultural Marketing Board (ASAMB) for procurement of paddy at Minimum Support Price apart from procurement to be done by FCI. Table-5.29 shows MSP procurement for the last 9 years from 2008-09 to 2015-16.

TABLE-5.29  
MSP & PROCUREMENT  
MINIMUM SUPPORT PRICE OF AGRICULTURAL PRODUCE (Rs. Per quintal)

| Commodity       | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16  | 2016-17 |
|-----------------|---------|---------|---------|---------|---------|---------|---------|----------|---------|
| Paddy (Common)  | 900.00  | 1000.00 | 1000.00 | 1080.00 | 1250.00 | 1310.00 | 1360.00 | 1410.00  | -       |
| Paddy (Grade-A) | 930.00  | 1030.00 | 1030.00 | 1110.00 | 1280.00 | 1345.00 | 1400.00 | 1450.00  | -       |
| Wheat           | 1080.00 | 1100.00 | 1320.00 | 1285.00 | 1350.00 | 1400.00 | 1450.00 | 1525.00  | -       |
| Maize           | 840.00  | 840.00  | 880.00  | 980.00  | 1175.00 | 1310.00 | 1310.00 | 1325.00  | -       |
| Arahar          | 2000.00 | 2300.00 | 3000.00 | 3200.00 | 3580.00 | 4300.00 | 4350.00 | 4425.00# | -       |
| Greengram       | 2520.00 | 2760.00 | 3170.00 | 3500.00 | 4400.00 | 4500.00 | 4600.00 | 4650.00# | -       |
| Blackgram       | 2520.00 | 2520.00 | 2900.00 | 3300.00 | 4300.00 | 4300.00 | 4350.00 | 4425.00# | -       |
| Lentil          | 1870.00 | 1870.00 | 2250.00 | 2800.00 | 2900.00 | 2950.00 | 3075.00 | 3325.00* | -       |
| Gram            | 1730.00 | 1760.00 | 2100.00 | 2800.00 | 3000.00 | 3100.00 | 3175.00 | 3425.00* | -       |
| Rape & Mustard  | 1830.00 | 1830.00 | 1850.00 | 2500.00 | 3000.00 | 3050.00 | 3100.00 | 3350.00  | -       |
| Sesamum         | 2750.00 | 2580.00 | 2900.00 | 3400.00 | 4200.00 | 4500.00 | 4600.00 | 4700.00  | -       |
| Jute (TD-5)     | 1250.00 | 1375.00 | 1575.00 | 1675.00 | 2200.00 | 2300.00 | 2400.00 | 2700.00  | 3200.00 |
| Sugarcane       | 81.18   | 129.84  | 139.13  | 145.00  | 170.00  | 210.00  | 220.00  | 230.00   | -       |

# - Bonus of Rs. 200.00 per quintal is payable over and above the Minimum Support Price.

\*-Bonus of Rs. 75.00 per quintal is payable over and above the Minimum Support Price.

TABLE-5.30

## STATUS OF PROCUREMENT OF PADDY IN ASSAM AT MINIMUM SUPPORT PRICE

| Procurement Agency | Year-wise procurement of Paddy under CMR (MT) |          |          |          |          |         |          |
|--------------------|---|----------|----------|----------|----------|---------|----------|
|                    | 2008-09                                       | 2009-10  | 2010-11  | 2011-12  | 2012-13  | 2013-14 | 2014-15  |
| FCI                | 4103.00                                       | 12146.00 | 23282.00 | 34073.00 | 20104.00 | 45.00   | 6461.00  |
| ASAMB              | Nil   | Nil      | Nil      | Nil      | 7885.00  | 236.00  | 7577.15  |
| Total              | 4103.00                                       | 12145.00 | 23282.00 | 34073.00 | 27989.00 | 281.00  | 14038.15 |

TABLE-5.31

## STATUS OF PROCUREMENT OF JUTE IN ASSAM BY JUTE CORPORATION OF INDIA (JCI) AT MINIMUM SUPPORT PRICE

| Region   | Districts covered                  | 2012-13                  |                        | 2013-14                  |                           |
|----------|------------------------------------|--------------------------|------------------------|--------------------------|---------------------------|
|          |                                    | Quantity procured (Qtl.) | Value of produce (Rs.) | Quantity procured (Qtl.) | Value of produce (In Rs.) |
| Guwahati | Darrang, Kamrup, Goalpara, Barpeta | 39741.74                 | 87431828.00            | 40263.92                 | 87438626.00               |
| Nagaon   | Nagaon, Morigaon                   | 28701.60                 | 63143520.00            | 73343.41                 | 158159084.00              |
| Dhubri   | Dhubri, Bongaigaon                 | 4375.17                  | 9625374.00             | 5074.07                  | 10957844.00               |
| Total    | 8 (eight) districts                | 78,772.85                | 16,02,00,722.00        | 1,18,681.40              | 25,65,55,554.00           |

## AGRICULTURE MARKETING AND STORAGE

Marketing of Agriculture produces in the State is a serious problem for the farming community. Lack of organized marketing facility, lack of storage infrastructure near the field, poverty and need of money after harvest for repayment of agricultural debt forced the farmers to dispose off their hard earned produces at the earliest and that too at low prices. However, there is good potential for development of Agricultural Marketing Infrastructure and Storage facilities with Private Sector Participation. Keeping in view of the interest of farmers the State govt. has encouraged procurement of Paddy at Minimum support Price by engaging the Assam State Agriculture Marketing Board in addition to the procurement done by the FCI.

At present, there are 24 Regulated Market Committees, 20 Primary Market Yards, 143 Trader's Shop, 532 Auction Platform/retailers Shed, 806 Rural Primary Markets, 405 Wholesale Markets, One Organic Market, 18 Packaging Room, 42 Drying Platform and 15 Processing units in the State. The Regulated Markets have been covered under AGMARKNET. As regards to cold storage infrastructure in the State, there are 26 numbers of cold storages (Govt. Sector-3, private sector-23) are available in the State at present. In his budget speech for the year 2013-14, Hon'ble Chief Minister, Assam has proposed for setting up of 30 cold storages in different parts of Assam at an estimated cost of Rs.150 crore.

| Organisations                   | No. of Godowns | Storage Capacity (in MT) |
|---------------------------------|----------------|--------------------------|
| FCI                             | 18             | 206964                   |
| Central Warehousing Corporation | 6              | 64200                    |
| State Warehousing Corporation   | 44             | 248181                   |
| ASAMB                           | 58             | 40110                    |
| Total                           | 126            | 559455                   |

Source: Directorate of Agriculture, Assam

To assist the farmers for carrying vegetables to the distant market, the Assam State Agriculture Marketing Board provided transport subsidy to 980 farmers. The State Government proposed to construct three-storied Market at Pamohi (Guwahati), Growers Consumers Market Complex at Ulubari (Guwahati) and establish 11 nos. of Sale Counters for marketing of farm products. For transportation of agricultural produces from field to market as many as 1102 numbers of three/four wheelers are provided during the year 2012-13. During the year 2013-14, the State Agriculture Department has planned to provide 2372 numbers of three/four wheel Auto Vans, 35 numbers of refrigerated vans and develop 15 numbers of Rural Hats to the farmers to facilitate marketing of farm produce. The Department has also taken initiative for establishment of market infrastructure, storage facility and to eradicate the transportation bottlenecks by distributing 224 auto vans, 610 mini trucks and providing transport for carrying the produces from remote areas to different markets. The rural connectivity scheme implemented under PMGSY is a major step towards benefit of farmers to take out their agricultural products to nearest urban markets.

| Market Infrastructure   | Number |
|---|--------|
| Cold Storage  | 26     |
| Wholesale Market Developed<br>(Out of 405 nos.)                           | 21     |
| Rural Primary Market<br>(Out of 735 nos)                                  | 272    |
| Organic Market  | 1      |
| Sale Counter  | 11     |
| Seed Storage Godown   | 18     |
| Drying Platform   | 33     |
| Three/Four Wheel Auto Van   | 4687   |
| Source: Draft Annual Plan 2014-15,<br>Planning and Development Department |        |

Some of the major steps taken up to boost up marketing support and for post harvest management:

- Farming community has been mobilized to form 25 numbers of Farmer Producer Organizations (FPO) for securing better produce price;
- Rural farm women have been empowered by training and providing mini processing units of Pulses and oil seeds from which they can earn from their homes;
- Tie up has been made for export of Red Bao Paddy to USA and the process has started in 2012-13 on regular basis;
- Export of Pineapple cubes, orange, ginger, dendrobium orchids to other States and Countries have already been started;
- 0.56 lakh SHGs assisted to take up Agri-Horti activities including post harvest management; etc.

#### NATIONAL MISSION ON OILSEEDS & OIL PALM

The State is highly deficient in Oil seed production. To achieve targeted area coverage of 4.65 lakh hectares and 3.44 lakh MT production during 2014-15 to drive the State towards self sufficiency at the end of 12<sup>TH</sup> Five Year Plan an amount of Rs.5000.00 lakh has been earmarked for launching Mini-Mission-I-Development of Cultivation of vegetable oilseeds crop, Mini-Mission-II-Development of Cultivation of Oil Palm and Mini-Mission-III-Development of Cultivation of Tree Borne Oil seeds.

#### ESTABLISHMENT OF MINI OIL MILL WITH PACKAGING UNIT

For employment generation from value added products of oilseeds and to facilitate the farming community to assure supply of pure cooking oil locally with maximum return from oilseeds cultivation. The State Agriculture Department proposed to establish 800 mini oil mills with packaging unit involving an amount of Rs.2000.00 lakh. The Scheme will be envisaged for marketing linkage of oil produced involving ASAMB.

#### WOMEN WELFARE SCHEME AS A GENDER RESPONSIVE BUDGET

Rural women are considered as the most productive workforce in all aspects of cultivation/crop production and processing to marketing. Development of farming women has been given special thrust by the State Govt. for which the scheme has been formulated which will cover 500 women. 200 spice and pulses grinding mills, 200 numbers of power weeder and 50 numbers of paddy

transplanter will be provided to the women SHGs for their economic upliftment during the year 2014-15 with special reference to Chief Minister's Vision of Women & Children of 2016.

#### BRING GREEN REVOLUTION TO EASTERN INDIA INCLUDING ASSAM

Central and State Governments have chalked out a strategy to achieve the planned growth in agriculture sector particularly with a view to achieving self-sufficiency in food production to provide food security. Several interventions with emphasis such as Bringing Green Revolution to Eastern India (BGREI), double cropping, supply of improved seeds, fertilizer and technology equipment etc. have been taken. Under this new initiative BGREI, the Government of India covers the states namely Assam, Bihar, Chhatisgarh, Jharkhand, Odisha, Eastern U.P. and West Bengal because of having excellent potential for increasing food grain production and productivity but is mired by low credit availability, poor extension facilities and infrastructure bottlenecks etc. To remove these impediments on a priority basis and transform these States into the best performing States steps have been taken by putting better Seed Replacement Ratio, adequate and timely availability of critical inputs, improving infrastructure facilities and other required programmatic interventions including bank credit etc.

In Assam, the scheme was launched in 2010-11 as a sub-scheme of RKVY to overcome the constraints limiting the productivity of rice based cropping system in the state by adopting short term activities related to Transfer of Technology through Rice demonstration in farmers field along with activities pertaining to assets building like creation of irrigation facilities to maximize agricultural production on sustainable basis. The scheme targets the main food grain crop of the State, i.e. Rice.

After 3 years (2010-11 to 2012-13) of implementation of the scheme the productivity and production of Rice has been increased by 21 percent and 19 percent respectively.

For successful implementation of the Scheme, [though the scheme is a sub-scheme of RKVY], separate fund has been provided by the Govt. of India. During the period 2010-11 to 30<sup>th</sup> September, 2013, the State has received an amount of Rs.19501.00 lakh from the Govt. of India.

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## APPENDIX - 5.1

## AREA, PRODUCTION AND AVERAGE YIELD UNDER FOOD AND NON- FOOD CROPS COVERED BY CROP FORECAST IN ASSAM, 2014-15 (PROVISIONAL)

| Sl.No. | Commodities                 | Area (In Hect.) | Production (In Tonnes) | Average Yield (In Kg/Hect) |
|--------|-----------------------------|-----------------|------------------------|----------------------------|
| 1      | Autumn Rice                 | 196188          | 280693                 | 1454                       |
| 2      | Winter Rice                 | 1872756         | 3771906                | 2005                       |
| 3      | Summer Rice                 | 416353          | 1224046                | 2940                       |
|        | Total Rice                  | 2495297         | 5222645                | 2119                       |
| 4      | Maize                       | 27953           | 93179                  | 3333                       |
| 5      | Wheat                       | 23646           | 28769                  | 1217                       |
| 6      | Other Cereals and Millets   | 5433            | 3221                   | 603                        |
|        | Total Cereals               | 2552239         | 5347814                | 2095                       |
| 7      | Gram                        | 2094            | 1956                   | 935                        |
| 8      | Tur                         | 6047            | 5738                   | 949                        |
| 9      | Other Rabi Pulses           | 140082          | 103268                 | 744                        |
|        | Total Pulses                | 148223          | 110962                 | 749                        |
|        | Total Food Grains           | 2700462         | 5458776                | 2013                       |
| 10     | Sesamum                     | 12172           | 9232                   | 758                        |
| 11     | Rape and Mustard            | 281006          | 187522                 | 667                        |
| 12     | Linseed                     | 5619            | 3948                   | 702                        |
| 13     | Castor                      | 941             | 556                    | 588                        |
| 14     | Nizer                       | 7152            | 4427                   | 619                        |
| 15     | Coconut                     | 21141           | 146786                 | 53                         |
|        | Total Oilseeds              | 328031          | 205685                 | 670                        |
| 16     | Cotton                      | 912             | 428                    | 79                         |
| 17     | Jute                        | 70403           | 767548                 | 1962                       |
| 18     | Mesta                       | 4599            | 25716                  | 1006                       |
|        | Total Fibres                | 75914           | 793692                 | 2105                       |
| 19     | Banana                      | 51279           | 865669                 | 16882                      |
| 20     | Pineapple                   | 16007           | 281271                 | 17572                      |
| 21     | Orange                      | 15761           | 202378                 | 12840                      |
| 22     | Papaya                      | 7418            | 148857                 | 20067                      |
| 23     | Potato                      | 104521          | 783768                 | 7499                       |
| 24     | Sweet Potato                | 6213            | 32858                  | 5289                       |
| 25     | Topeoca                     | 3301            | 30090                  | 9116                       |
| 26     | Onion                       | 8283            | 32421                  | 3915                       |
|        | Total Fruits and Vegetables | 212783          | 2377312                |                            |
| 27     | Areca nut                   | 68038           | 56994                  | 126                        |
| 28     | Chillies                    | 19605           | 17287                  | 882                        |
| 29     | Turmeric                    | 16244           | 15906                  | 987                        |
| 30     | Sugarcane                   | 29900           | 1099134                | 36760                      |
| 31     | Tobacco                     | 261             | 138                    | 516                        |
|        | Total Misc. Crops           | 134048          | 1189459                |                            |
|        | All Crops                   | 3451238         |                        |                            |

Source: Directorate of Economics and Statistics, Assam.

## APPENDIX - 5.2

## INDEX NUMBERS OF AREA, PRODUCTION AND PRODUCTIVITY FOR FOOD AND NON-FOOD CROPS IN ASSAM, 2014-15 (PROVISIONAL)

(Base Triennium ending 2007-08=100)

| Sl.No. | Commodities                 | Area Index | Production Index | Productivity Index |
|--------|-----------------------------|------------|------------------|--------------------|
| 1      | Autumn Rice                 | 55.40      | 80.66            | 145.95             |
| 2      | Winter Rice                 | 114.31     | 166.07           | 145.27             |
| 3      | Summer Rice                 | 128.95     | 167.25           | 129.71             |
| 4      | Total Rice                  | 111.36     | 157.37           | 141.32             |
| 5      | Maize                       | 152.23     | 699.70           | 459.62             |
| 6      | Wheat                       | 42.17      | 40.64            | 96.36              |
| 7      | Other Cereals and Millets   | 77.00      | 91.48            | 118.81             |
| 8      | Total Cereals               | 106.16     | 156.97           | 147.86             |
| 9      | Gram                        | 111.92     | 206.98           | 184.94             |
| 10     | Tur                         | 102.61     | 135.65           | 132.20             |
| 11     | Other Rabi Pulses           | 133.04     | 184.31           | 138.54             |
| 12     | Total Pulses                | 130.43     | 181.30           | 139.00             |
| 13     | Total Food Grains           | 106.55     | 157.43           | 147.76             |
| 14     | Linseed                     | 73.62      | 101.60           | 137.99             |
| 15     | Castor                      | 78.88      | 109.23           | 138.49             |
| 16     | Sesamum                     | 95.89      | 127.55           | 133.02             |
| 17     | Rape & Mustard              | 119.68     | 152.58           | 127.50             |
| 18     | Coconut                     | 112.38     | 99.80            | 88.81              |
| 19     | Nizer                       | 82.90      | 100.16           | 120.81             |
| 20     | Total Oilseeds              | 114.06     | 123.28           | 108.09             |
| 21     | Jute                        | 117.65     | 116.86           | 99.33              |
| 22     | Cotton                      | 67.11      | 67.40            | 100.44             |
| 23     | Mesta                       | 87.55      | 95.61            | 109.21             |
| 24     | Total Fibres                | 116.42     | 115.98           | 99.62              |
| 25     | Plantation Crop (TEA)       | 100.28     | 122.89           | 122.55             |
| 26     | Chillies                    | 121.76     | 170.58           | 140.10             |
| 27     | Turmeric                    | 129.65     | 184.33           | 142.18             |
| 28     | Areca nut                   | 102.72     | 100.58           | 97.92              |
| 29     | Total Condiments & Spices   | 108.36     | 119.53           | 110.31             |
| 30     | Potato                      | 139.00     | 150.48           | 108.26             |
| 31     | Banana                      | 116.55     | 142.67           | 122.42             |
| 32     | Total Fruits and Vegetables | 126.91     | 146.28           | 115.26             |
| 33     | Sugarcane                   | 116.19     | 112.19           | 96.56              |
| 34     | Tobacco                     | 52.10      | 52.08            | 99.96              |
| 35     | Total Misc. Crops           | 115.77     | 111.80           | 96.57              |
| 36     | Total Non-Food Crops        | 118.38     | 130.24           | 110.02             |
| 37     | All Commodities             | 109.10     | 145.32           | 133.21             |

Source: Directorate of Economics and Statistics, Assam.1



## CHAPTER – VI

### IRRIGATION

Irrigation is an essential input of Agriculture. Assam is predominantly an agrarian economy as agriculture is still the principal occupation of the rural population in terms of employment and livelihood. Out of the total geographical area of 78.50 lakh hectare, the gross cropped area of the State is 41.74 lakh which is more than half of the total area. Assam agriculture is primarily rain-fed. But, due to adverse and unpredictable weather conditions as well as to pursue double/multiple cropping and modernization of agriculture practices in the State agriculture sector to cope with the growing needs of agriculture production to feed the burgeoning population, irrigation is highly essential in Assam. Thus, availability of assured irrigation facility is paramount for sustained development in agriculture as well as economic development of the state.

Out of the total gross cropped area of 41.74 lakh hectare [2011-12] the ultimate gross irrigation potential (Annually Irrigable Area) of the State is estimated at 27 lakh hectare, which constitutes 64.7 percent of the Gross Cropped Area. It is planned to irrigate 17 lakh hectare through Minor Irrigation schemes and 10 lakh hectare through Major and Medium Irrigation projects. Further, it is planned to irrigate 10 lakh hectares through Minor Irrigation Schemes taken up on surface water sources and the rest 7 lakh hectares through Minor Irrigation Schemes taken up on ground water sources.

There are three types of irrigation systems practiced in Assam. These are:

- a) Surface Flow Irrigation System- construction of diversion weir across the river to convey water through canal system by surface gravity flow.
- b) Surface Lift Irrigation System – lifting of water by pump from river, lake or pond etc. and convey water through canal system.
- c) Ground water Lift Irrigation System – lifting of ground water by installing Deep Tube well or Shallow Tube well and drawing water to the crop field through canal or through over ground or underground network of pipe.

The development programmes for improvement of irrigation facility in Assam taken up under two broad heads, viz., Minor Irrigation and Major & Medium Irrigation. While the Irrigation Schemes are classified as Major, Medium and Minor, they are categorized as Surface Flow, Surface Lift (for Major / Medium and Minor) and Ground Water Lift (for Minor only). Three Departments, viz. Irrigation, Agriculture and Panchayat and Rural Development are associated with development of irrigation facilities in the State. The State Irrigation Department, being the Nodal Department for development of irrigation in the State, executes and maintains Major, Medium and Minor Irrigation Schemes, the irrigation works of the other two departments are confined to minor irrigation schemes like Shallow Tube Wells, Low Lift Points and Temporary Minor Irrigation Schemes only. The state Agriculture Department and Panchayat & Rural Development Department execute the Minor Irrigation schemes (shallow Tube wells, Low Lift Points and Temporary small diversions), the Irrigation Department alone executes and maintains Major, Medium and Minor Irrigation Schemes both on surface water and ground water sources.

Out of the Gross Cropped Area of 41.74 lakh hectares of the State, the Irrigation Department alone created irrigation potential of 9.07 (approx) lakh hectares up to March, 2015 by operating both completed and ongoing irrigation schemes of which 2.79 lakh hectares through both Major and Medium Irrigation Projects and the rest 6.28 lakh hectares through Minor Irrigation Schemes. Out of the 6.28 lakh hectares of created potential under Minor Irrigation Sector, a potential of 4.79 lakh hectares was created through the Govt. Minor Irrigation Schemes executed by the State Irrigation Department and the rest 1.49 lakh hectares through Shallow Tube Wells (STWs) and Low Lift points (LLPs) installed by the Assam State Minor Irrigation Development Corporation (ASMIDC) Limited. It is pertinent to mention that ASMIDC Ltd. was created in 1980 and its field work was started from 2081-82. As many as 35571 shallow tube wells and 14164 Low Lift Points (total being 49735 Nos.) were installed creating an irrigation potential of 149205 hectares in the plain districts of Assam except in Barak Valley. But its field works have been suspended since



1992-93 (April, 1992) Even though the STWs and LLPs installed through ASMIDC Ltd. contributed a lot towards creating irrigation potential of 149205 hectares. The position of creation of irrigation potential under different sectors is presented in Table-6.1

TABLE – 6.1  
IRRIGATION POTENTIAL CREATED (AIA) UPTO 2013-14

| Department/<br>Agency                           | (In hectares)                       |                            |        |
|---|-------------------------------------|----------------------------|--------|
|   | Major & Medium<br>Irrigation Sector | Minor Irrigation<br>Sector | Total  |
| Irrigation Department                           | 278783                              | 478927                     | 757710 |
| ASMIDC Ltd (now merged with Irrigation, Deptt.) | NIL                                 | 149205                     | 149205 |
| Total   | 278783                              | 628132                     | 906915 |

Source: Chief Engineer, Irrigation Department, Assam.

The State Agricultural Department has also created irrigation potential of 11.27 lakhs till the end of 2014-15 through Shallow Tube Wells and Low lift Points of which 7.33 lakhs hectare area under utilizable/assured irrigation. The achievement made by the Agriculture Department in installation of Shallow Tube Wells and Low lift Points to create irrigation facilities to the farmers till 2014-15 may be evident from the Table-6.2 below.

TABLE – 6.2  
IRRIGATION INFRASTRUCTURE CREATED BY THE  
AGRICULTURE DEPARTMENT

| Component of<br>irrigation | No. installed |         |         |         |         |         |         |         |
|----------------------------|---------------|---------|---------|---------|---------|---------|---------|---------|
|                            | 2007-08       | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| Shallow Tube<br>Wells      | 8190          | 30080   | 53208   | 141452  | 25704   | 43938   | 30000   | 42648   |
| Low Lift Pump              | 11730         | 6246    | 8060    | 29560   | 0       | 4736    | 0       | 5320    |

#### CREATION OF IRRIGATED AREA AND UTILISATION OF POTENTIAL

It is worth mentioning that no works of Irrigation Schemes could be successfully completed under normal State Plan due to low allocation of fund during VIII<sup>th</sup> to IX<sup>th</sup> Plan period. However since 1996-97 Central Assurances have been obtained under Accelerated Irrigation Benefit Programme (AIBP) in respect of Major and Medium Irrigation Sector. Since 2000-01 Central Assurances also provided for Minor Irrigation Sector also. Such assurances were also received from other programmes like Non Lapsable Central Pool of Resources (NLCPR), Assam Rural Infrastructure for Agricultural Services Programme (ARIASP) funded by the World Bank and National Bank for Agriculture and Rural Development (NABARD) under RIDF-X and RIDF-XI. With the above sources of funding the position of creation of irrigation potential has been improved in the State to certain extent. The year wise irrigation potential created during the last six years is as follows.

TABLE – 6.3  
IRRIGATION POTENTIAL CREATED THROUGH GOVT. IRRIGATION  
SCHEMES BY IRRIGATION DEPARTMENT

| Year    | (In hectare)              |                  |       |
|---------|---------------------------|------------------|-------|
|         | Major & Medium Irrigation | Minor Irrigation | Total |
| 2007-08 | 484                       | 14966            | 15450 |
| 2008-09 | 9425                      | 18375            | 27800 |
| 2009-10 | 7162                      | 29838            | 37000 |
| 2010-11 | 4426                      | 16456            | 20882 |
| 2011-12 | 10678                     | 15029            | 25707 |
| 2012-13 | 270                       | 9485             | 9755  |
| 2013-14 | 8000                      | 11713            | 19713 |
| 2014-15 | 16170                     | 38774            | 54944 |

Source: Chief Engineer, Irrigation Department, Assam.

## IRRIGATION INFRASTRUCTURE

The category wise and status wise number of Government Irrigation schemes executed by Irrigation Department up to 2014-15 is as follows.

TABLE– 6.4

| Status of Irrigation Schemes | Category          | No. of Govt. Irrigation schemes up to 2014-15 |       |       |
|------------------------------|-------------------|---|-------|-------|
|                              |                   | Major & Medium                                | Minor | Total |
| Completed                    | Surface Flow      | 12  | 589   | 601   |
|                              | Surface Lift      | 3   | 399   | 402   |
|                              | Ground Water Lift |   | 443   | 443   |
| Total                        |                   | 15  | 1431  | 1446  |
| Ongoing                      | Surface Flow      | 4   | 841   | 845   |
|                              | Surface Lift      | 1   | 179   | 180   |
|                              | Ground Water Lift |   | 539   | 539   |
| Total                        |                   | 5   | 1559  | 1564  |
| Grand Total Assam            |                   | 20  | 2990  | 3010  |

Source: Chief Engineer, Irrigation Department, Assam

## a) Major and Medium Irrigation Sector

At present there are 4(four) AIBP funded ongoing Major/Medium Irrigation Projects (Dhansiri I/P, Champamati I/P, Borolia I/P and Buridehing I/P) and all are in different stages of progress.

Reconstruction of flood damaged Bordikorai Irrigation Project (Major) in Sonitpur District has been taken up for Rs. 47.22 Crore under One Time ACA to revive lost potential of 34000 hectares. Till March 2013 revival of 30,300 Hectares covering 93 villages (out of the total 130 villages) within its command has been completed.

Under Assam Bikash Yojana, revival/ improvement work of Rupahi Irrigation Project (Medium) was taken up with the estimated amount of Rs. 2.47 Crore to restore lost potential of 5668 Hectares. The project is in progress.

In addition to the above, modernization of Sukla Irrigation Project (Major) in Baksa District has been completed with NABARD (RIDF-XI) and BTC fund and revived lost potential of 27400 hectares.

The State Irrigation Department has planned to complete all the ongoing projects within the 12th Five Year Plan period. In addition, one Major Irrigation Project viz., Puthimari Irrigation Project at an estimated potential of 12280 hectare and 3 medium Irrigation Projects –Burisuti Medium Irrigation Project, Dikhow Medium Irrigation project and Buroi Medium Irrigation Project having potential of 6500 hectares, 6000 hectares and 5000 hectares respectively have been proposed in the 12<sup>TH</sup> Five Year Plan with estimate costs of Rs. 1225.09 crore for creating additional potential of 29780 hectares (net Irrigation area).

## b) Minor Irrigation Sector

Under AIBP, State Irrigation Department received sanction of 778 nos. of minor irrigation schemes at an estimated cost of Rs.307856.96 lakh to achieve a target of 369568.71 hectares since 2000-01. Till now 493 nos has been completed creating (including revival) a potential of 203456 hectares against the release of Rs.164048.62 lakh by GOI for the period from 2000-01 to 2014-15.

Under the Non Lapsable Central Pool of Resources (NLCPR) fund, 12 nos of schemes have been taken up since 1999-2000 at the cost of Rs.79.88 crore for a target of 10,099 hectare and out of

these schemes 5 nos have been completed while remaining 7 are partially completed achieving potential of 2,339 hectare.

Two NEC funded Minor Irrigation Schemes have been completed achieving a potential of 370 hectares. Works of another two new Minor irrigation Schemes are in progress with estimated amount of Rs.9.03 crore to achieve a potential of 635 hectares.

All total 33 Minor Irrigation Schemes have been completed with the NABARD assistance (RIDF-X and XI) creating potential of 14179 hectare. Construction of 2 Minor Irrigation Schemes are in progress with NABARD assistance to create a targeted irrigation potential of 570 hectares.

Another 102 nos. incomplete schemes are sanctioned under RIDF-XVII with estimated cost of Rs.78.86 crore to achieve a potential of 6862 hactre and under RID-XIX, 21 schemes sanctioned with estimated amount of Rs.115.66 crore to achieve irrigational potential of 9127 hectare.

Under Scheduled Caste Sub-Plan (SCSP), the Department has taken up works of 253 nos. of minor schemes since 2005-06 with estimated amount of Rs.153.92 crore to achieve irrigation potential of 30078 hectares. Till March, 2015, 134 nos. completed creating a potential of 16426 hectare.

Under the Tribal Sub-Plan (TSP) Schemes the Irrigation Department has taken up works of 102 minor irrigation schemes since 2005-06 with an estimated amount of out Rs.57.48 crore to achieve irrigation potential of 14135 hectare. Till March 2015, 45 nos. schemes completed creating a potential of 9757 hectare.

Under the Assam Vikash Yojana renovation/reconstruction of 27 sick Minor Irrigation Schemes are in progress for revival of lost potential of 1780 hectares. Out of the total aforementioned Schemes, 19 Schemes have been completed reviving a lost potential of 1367 hectare.

During the 12<sup>TH</sup> Five year Plan period, the State Irrigation department has targeted to create irrigation potential of 228664 hectares. According to the department, under AIBP there are 319 Minor Irrigation Schemes in different stages of completion. On completion the State could achieve an additional irrigation potential of 148680 hectares. The department has also proposed to take up 779 new Minor Irrigation Schemes to create additional potential of 151878 hectares in different districts subject to their feasibility during the Plan period.

The Department has also undertaken a Pilot Project of Solar Power Driven Deep Tube Well Scheme at Borlah near Hajo of Kamrup District on experimental basis to combat the problem of erratic power supply situation with a target of 30 hactare of irrigational potential. Proposal has been formulated to take up some irrigation schemes powered by solar energy for hassle free opertation.

#### c) Command Area Development and Water Management (CADWM)

The Centrally Sponsored Command Area Development Programme was launched in the year 1974-75 for development of adequate delivery system of Irrigation Water upto the farmers' field with an objective to enhance water use efficiency and production and productivity of crops per unit of land and water for improving socio-economic condition of farmers.

Under the CADWM, 8 (eight) projects have been taken up –Jamuna Irrigation Project, Kaliabor Irrigation Project, Sukla Irrigation Project, Kolong & Sonai River Basin Irrigation Schemes (Integrated Irrigation Scheme), Kaldiya Irrigation Project, Dekadong Irrigation Project, Bordikrai Irrigation Project and Pahumara CAD Project. Out of these a(four) nos. of schemes namely Jamuna Irrigation Project, Kaliabor Irrigation Project, Sukla Irrigation Project and Kolong & Sonai River Basin Irrigation Schemes (Integrated Irrigation Scheme), has been completed and deleted from the CADWM programme, Assam during 2003-04.

At present 4(four) nos. of schemes namely Kaldiya, Dekadong, Bordikrai and Pahumara are running as ongoing schemes under CADWM programme. During the 11<sup>TH</sup> Five Year Plan period, overall physical achievement was 11090 hectare out of the total target of 35755 hectare against the existing 4(four) ongoing schemes.

During the 12<sup>TH</sup> Five Year Plan period (2012-2017), the State Irrigation Department planned to continue and complete the pending works of all the ongoing works to achieve the objective to cover 96557 hectare. Accordingly planned to complete 4 (four) ongoing projects Viz., Kaldiya Irrigation Project, Dekadong Irrigation Project, Pahumara Command Area Development Project and Bordikorai Irrigation Project and initiate works of 8(eight) new projects as under:

- (1) Bhumki Command Area Development Project.
- (2) Moradiya Command Area Development Project.
- (3) CAD to LIS from River BurhiDihing in Khowang Area.
- (4) Sapkata Command Area Development Project.
- (5) Longa Command Area Development Project.
- (6) Dhansiri Command Area Development Project.
- (7) Champamati Command Area Development Project.
- (8) New Minor Irrigation Scheme (17 nos. of Clust), under Tangla Division Irrigation.

The Department has also undertaken a Pilot Project of Solar Power Driven Deep Tube Well Scheme at Borlah near Hajo of Kamrup District on experimental basis to combat the problem of erratic power supply. Introduction of the system is being proposed for more Schemes being the running cost is less.

TABLE- 6.5  
FINANCIAL ACHIEVEMENTS OF SOME OF THE CENTRAL SECTOR  
AND CENTRALLY SPONSORED SCHEME

(Rs. in lakh)

| Year    | Schemes      |             |          |             |         |             |         |             |         |             |
|---------|--------------|-------------|----------|-------------|---------|-------------|---------|-------------|---------|-------------|
|         | AIBP         |             | AIBP     |             | CADWM   |             | NLCPR   |             | NEC     |             |
|         | Major/Medium |             | Minor    |             | Target  | Achievement | Target  | Achievement | Target  | Achievement |
|         | Target       | Achievement | Target   | Achievement |         |             |         |             |         |             |
| 2011-12 | 19503        | 4950        | 36046    | 34379.94    | 1736    | 292         | 625     | 156.63      | 610     | 135.66      |
| 2012-13 | 21313        | 648.65      | 36676.10 | 14575.19    | 2933    | 80          | 800     | 22.04       | 500     | 351.28      |
| 2013-14 | 13353        | 1140.80     | 43230    | 29614.17    | 2743    | 722.34      | 1200    | 31.79       | 543.68  | 140.00      |
| 2014-15 | 10452.50     | 4043.76     | 47949.00 | 18901.45    | 3960.00 | 179.23      | 1345.47 | 0           | 1037.77 | 263.11      |

Source: Chief Engineer, Irrigation Department, Assam.

TABLE- 6.6  
PHYSICAL ACHIEVEMENTS OF SOME OF THE CENTRAL SECTOR  
AND CENTRALLY SPONSORED SCHEME

(Area in Hect.)

| Year    | Schemes      |             |        |             |        |             |        |             |        |             |
|---------|--------------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
|         | AIBP         |             | AIBP   |             | CADWM  |             | NLCPR  |             | NEC    |             |
|         | Major/Medium |             | Minor  |             | Target | Achievement | Target | Achievement | Target | Achievement |
|         | Target       | Achievement | Target | Achievement |        |             |        |             |        |             |
| 2011-12 | 19244        | 4000        | 28580  | 36321       | 5430   | 1350        | 3010   | 2010        | 500    | 0           |
| 2012-13 | 53973        | 270         | 58334  | 35868       | 2100   | 360         | 2500   | 0           | 500    | 0           |
| 2013-14 | 48625        | 8000        | 33800  | 13543       | 7400   | 1508        | 2000   | 0           | 635    | 0           |
| 2014-15 | 32915        | 15220       | 44084  | 11266       | 8500   | 405         | 250    | 0           | 635    | 333         |

Source: Chief Engineer, Irrigation Department, Assam.

TABLE- 6.7  
FINANCIAL ACHIEVEMENTS OF THE SCHEMES  
FUNDED UNDER DIFFERENT SOURCES

(Rs. in lakh)

| Year    | Scheme                   |             |                  |             |                     |             |        |             |         |             |                  |             |
|---------|--------------------------|-------------|------------------|-------------|---------------------|-------------|--------|-------------|---------|-------------|------------------|-------------|
|         | NABARD                   |             | NABARD           |             | Assam Vikash Yojana |             | TSP    |             | SCSP    |             | State Plan (ACA) |             |
|         | Major/ Medium Irrigation |             | Minor Irrigation |             | Minor Irrigation    |             | Target | Achievement | Target  | Achievement | Target           | Achievement |
|         | Target                   | Achievement | Target           | Achievement | Target              | Achievement |        |             |         |             |                  |             |
| 2011-12 | 50.00                    | 50.00       | 500              | 65.64       | 0.00                | 0.00        | 450    | 440.89      | 1450    | 1381.23     | 1667             | 325.80      |
| 2012-13 | 0.00                     | 0.00        | 415              | 274.26      | 100.00              | 59.90       | 735    | 680.04      | 2328    | 1475.73     | 0.00             | 0.00        |
| 2013-14 | 0.00                     | 0.00        | 415              | 209.84      | 122.60              | 120.48      | 800    | 799.15      | 2628    | 2627.15     | 1356             | 718.18      |
| 2014-15 | 600.00                   | 42.55       | 4500.00          | 4222.21     | 0                   | 0           | 925.00 | 907.23      | 3105.00 | 3096.25     | 0                | 0           |

Source: Chief Engineer, Irrigation Department, Assam.

TABLE- 6.8  
PHYSICAL ACHIEVEMENTS OF THE SCHEMES  
FUNDED UNDER DIFFERENT SOURCES

(Area in Hect.)

| Year    | Scheme           |             |                     |             |        |             |        |             |                  |             |
|---------|------------------|-------------|---------------------|-------------|--------|-------------|--------|-------------|------------------|-------------|
|         | NABARD           |             | Assam Vikash Yojana |             | TSP    |             | SCSP   |             | State Plan (ACA) |             |
|         | Minor Irrigation |             | Minor Irrigation    |             | Target | Achievement | Target | Achievement | Target           | Achievement |
|         | Target           | Achievement | Target              | Achievement |        |             |        |             |                  |             |
| 2011-12 | 1300             | 700         | 497                 | 0           | 3130   | 1040        | 8112   | 1156        | 5455             | 3100        |
| 2012-13 | 570              | 0           | 627                 | 110         | 2100   | 574         | 11239  | 1670        | 3700             | 0           |
| 2013-14 | 570              | 0           | 497                 | 35          | 1518   | 1220        | 3577   | 2292        | 3700             | 3650        |
| 2014-15 | 780              | 670         | 0                   | 0           | 1779   | 1760        | 4028   | 3903        | 0                | 0           |

Source: Chief Engineer, Irrigation Department, Assam.

## d) Thirteenth Finance Commission: GRANT-IN-AID

Under 13<sup>th</sup> Finance Commission's Grant-in-aid, Rs.15.00 crore is proposed for repairing of 78 nos. of Deep Tube Well points, 10 nos. of Lift Irrigation Schemes and 5 Nos. of Flow irrigation Schemes in Minor Irrigation Sector to revive lost potential of 3940 Hectares during the financial year 2011-12. Another amount of Rs.7.00 crore are proposed for repairing of 3 Nos. Major/Medium Irrigation Projects to make them operational. But the Schemes could not be implemented during the year 2011-12 and therefore the same was revalidated during 2012-13. The total 2553 Hectare irrigation potential revived during 2012-13 under Minor Irrigation Sector (DTW-1959 hectare, LIS-54 hectare and FIS-540 hectare)

In respect of Major/Medium Sector, revival of irrigation potential was 400 hectare.

## e) Utilisation of Irrigation potential

Out of the cumulative Irrigation Potential Created through Govt. Irrigation schemes, the crop season wise utilisation of Irrigation Potential under Irrigation Department during the last five years is evident from the table below.

TABLE- 6.9  
CROP SEASON WISE IRRIGATION POTENTIAL UTILISED

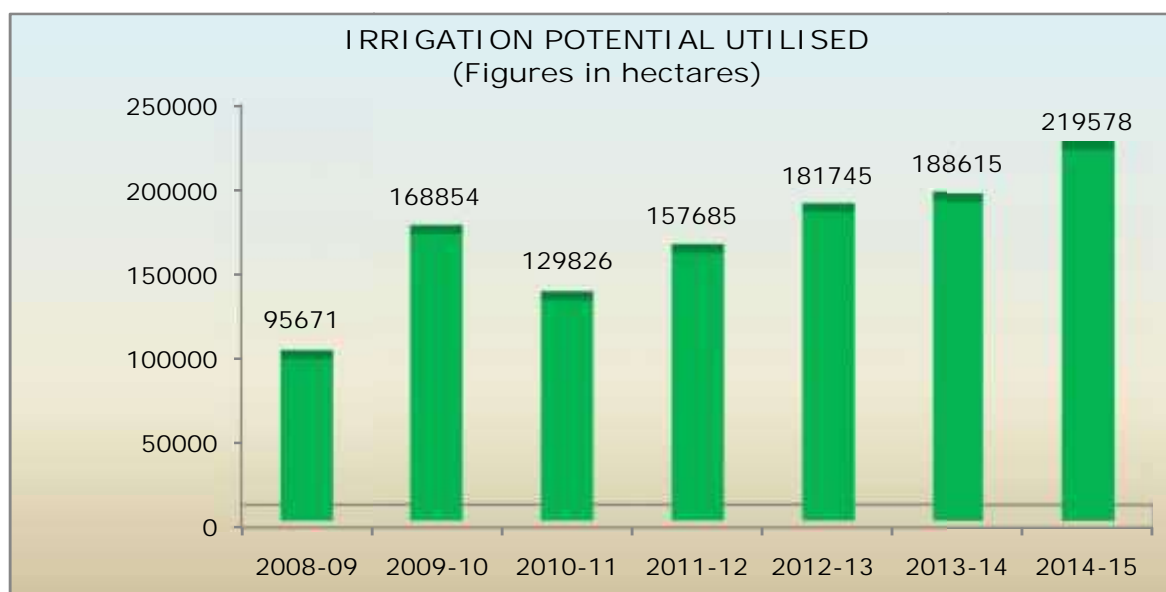
(Figures in hectares)

| Year    | Crop Season         |                  |        |                                |                  |       |        |                  |        |
|---------|---------------------|------------------|--------|--------------------------------|------------------|-------|--------|------------------|--------|
|         | Kharif crops season |                  |        | Rabi & Pre-Kharif crops season |                  |       | Total  |                  |        |
|         | Minor               | Major/<br>Medium | Total  | Minor                          | Major/<br>Medium | Total | Minor  | Major/<br>Medium | Total  |
| 2007-08 | 41795               | 32668            | 74463  | 10486                          | 4322             | 14808 | 52281  | 36990            | 89271  |
| 2008-09 | 40775               | 34902            | 75677  | 10923                          | 9071             | 19994 | 51698  | 43973            | 95671  |
| 2009-10 | 77495               | 70274            | 147769 | 11178                          | 9907             | 21085 | 88673  | 80181            | 168854 |
| 2010-11 | 63649               | 44691            | 108340 | 15612                          | 5874             | 15612 | 79261  | 50565            | 129826 |
| 2011-12 | 71650               | 61028            | 132678 | 18360                          | 6647             | 25007 | 90010  | 67675            | 157685 |
| 2012-13 | 92677               | 60700            | 153377 | 23546                          | 4822             | 28368 | 116223 | 65522            | 181745 |
| 2013-14 | 99199               | 60058            | 159257 | 25301                          | 4057             | 29358 | 124500 | 64115            | 188615 |
| 2014-15 | 129734              | 48142            | 177876 | 37549                          | 4153             | 41702 | 167283 | 52295            | 219578 |

Source: Chief Engineer, Irrigation Department, Assam.

It is clear from the above that the utilisation of Irrigation Potential is not up to the expectation and there is a vast gap between Irrigation Potential Created and Irrigation Potential Utilised. There are many reasons for less utilisation and the identified causes are-

- i) General wear and tear of the Irrigation schemes and non-availability of funds for their repair in due time.
- ii) Onslaught natural calamities like flood, storm etc. which damages the machineries of the Irrigation schemes.
- iii) Change of river course in respect of Surface Flow and Surface Lift Irrigation schemes.
- iv) Erratic power supply in respect of the electrically operated schemes like Surface Lift and Ground Water Lift schemes.
- v) Damage of Transformer, HT line and mechanical components at peak hour of irrigation.
- vi) Damage of Canal system.
- vii) Stealing of motors and pumps in some areas resulting in non-functioning of the schemes.
- viii) Lack of demand from the cultivators for Irrigation water.
- ix) The farmers are mostly dependent on rain water and adopt the traditional system of single crop only in their fields instead of multiple cropping system where irrigation is necessary.
- x) Imposition of Irrigation Service Charges is another major factor for the reluctance of the farmers to use irrigation. As they are poor, they are unable to pay the Irrigation Service charges and want free irrigation from Govt. Irrigation schemes.



In order to minimize the gap between irrigation potential created and irrigation potential utilised in the State as well as to encourage utilisation of irrigation facilities created by the state government departments, the following steps have been initiated :

- a) Emphasis has been given on Participatory Irrigation Management (PIM) where the farmers can take part in the system and process of irrigation as well as its maintenance. Keeping this in view, the Department encouraged the farmers to form Water Users' Associations within the Command Areas of Irrigation schemes. A total of 1375 Water Users' Associations (WUA) have been formed up to 2014-15 out of which 769 WUAs have already been registered under the Society Registration Act, 1860.
- b) State Level Co-ordination Committee as well as District Level Co-ordination Committees have been formed with the officials of Irrigation Department, Agriculture Department and other concerned Departments/ organizations to motivate farmers for optimum use of water.
- c) Out of State exposure visit in Tamil Nadu, Andhra Pradesh and Jharkhand have been organized for some Irrigation officials, NGOs and WUA farmers.
- d) Farmers' Motivation Trainings are conducted in every district to encourage them to go for more and more multiple cropping using assured irrigation provided by Govt. Irrigation Schemes.
- e) The Assam Irrigation Act, 1983 and The Assam Irrigation Rules, 1997 have been enacted providing safeguard to the Irrigation Schemes and the cultivators as well.
- f) The Assam Irrigation Water Users' Act, 2012 has been enacted with a view to safeguarding the right of the beneficiary cultivators of the Govt. Irrigation Schemes wherein provision for active participation of the cultivators has been made. Preparation of necessary Rules under the Act are under process.

#### Creation of Irrigation Potential and its utilization

##### [As per Census of Minor Irrigation Schemes]

The 4<sup>th</sup> Minor Irrigation Census was conducted with reference year 2006-07 under the guidance and supervision of Ministry of Water Resources, Govt. of India. As per 4<sup>th</sup> Census of Minor Irrigation, 2006-07, there were 104312 Ground Water Schemes (Shallow Tube wells and Deep Tube wells) and 6442 Surface Water Schemes (Surface Flow and Surface Lift) creating 306905 hectares and 322856 hectares of irrigation potential respectively in the State under Minor Irrigation Sector. Of the total potential of 629761 hectares (306905 hectares + 322856 hectares) created under Minor Irrigation Sector, a total of 323297 hectares of area was irrigated

(utilized) during that particular year 2006-07. Thus, there exists large gap between irrigation potential created and irrigation potential utilized.

The table below shows the category wise number of Minor Irrigation Schemes, creation of irrigation potential and its utilization.

TABLE – 6.10

## IRRIGATION POTENTIAL CREATED AND UTILISED IN ASSAM IN 2006-07

| Category of Schemes | Total no. of Schemes | Schemes in use (No). | Irrigation Potential Created (In hect.) |            |        | Irrigation Potential Utilised out of the created potential in use ( in hect) |
|---------------------|----------------------|----------------------|---|------------|--------|--|
|                     |                      |                      | In use                                  | Not in use | Total  |  |
| Surface Water       | 104312               | 5025                 | 207049                                  | 115807     | 322856 | 137786   |
| Ground Water        | 6442                 | 91453                | 244216                                  | 62689      | 306905 | 185511   |
| Total               | 110754               | 96478                | 451265                                  | 178496     | 629751 | 323297   |

Source: Chief Engineer, Irrigation Department, Assam.

## IRRIGATED AREA AS PER AGRICULTURE CENSUS-2010-11

As per Agriculture Census 2010-11, there is about 1.61 lakh hectare net irrigated area (including private sources) in the State of which 0.33 lakh hectare area irrigated from 'canal', 0.048 lakh hectare from 'tanks', 0.02 lakh from 'wells', 0.27 lakh hectare from 'tubewells' and 0.94 lakh hectare receives irrigation from 'other sources'. The table below shows the size class wise area receiving irrigation from different source

TABLE– 6.11

## SIZE CLASS AND SOURCE-WISE AREA IRRIGATED IN ASSAM

(Area in Hectare)

| Sl. No. | Size Class (in Ha) | Area under Operational Holding | Area Receiving Irrigation from Sources |         |         |            |               | Net Irrigated Area |
|---------|--------------------|--------------------------------|--|---------|---------|------------|---------------|--------------------|
|         |                    |                                | Canal                                  | Tanks   | Wells   | Tube wells | Other Sources |                    |
| 1       | Below 0.5          | 385255.42                      | 1526.19                                | 118.44  | 101.62  | 3529.43    | 8669.36       | 13944.04           |
| 2       | 0.5-1.0            | 389541.03                      | 3196.83                                | 468.34  | 84.74   | 1850.74    | 6593.15       | 12193.80           |
| 3       | 1.0-2.0            | 687156.19                      | 6559.21                                | 698.40  | 153.37  | 4339.87    | 16900.42      | 28651.27           |
| 4       | 2.0-3.0            | 480948.66                      | 5841.16                                | 1169.86 | 213.77  | 3413.60    | 11237.00      | 21875.39           |
| 5       | 3.0-4.0            | 337033.83                      | 4578.28                                | 879.46  | 159.52  | 2728.56    | 9871.89       | 18217.71           |
| 6       | 4.0-5.0            | 214768.17                      | 2484.95                                | 562.97  | 57.31   | 2207.41    | 7263.68       | 12576.32           |
| 7       | 5.0-7.5            | 184189.82                      | 2763.62                                | 256.95  | 48.59   | 1748.33    | 6113.66       | 10931.15           |
| 8       | 7.5-10.0           | 38414.24                       | 892.87                                 | 79.07   | 0.00    | 103.15     | 2361.59       | 3436.68            |
| 9       | 10.0-20.0          | 24567.50                       | 988.38                                 | 0.00    | 0.00    | 152.35     | 1264.93       | 2405.66            |
| 10      | 20 & above         | 257195.09                      | 4268.05                                | 542.82  | 1016.72 | 7095.84    | 24079.25      | 37002.68           |
| 11      | All Classes        | 2999069.95                     | 33098.54                               | 4776.31 | 1835.64 | 27169.28   | 94354.93      | 161234.70          |

Source: Report of Agriculture Census, Assam 2010-11



## AREA IRRIGATED DURING 2014-15

The table below shows the crop season-wise area irrigated during the year 2014-15 in different districts of Assam from Government source of irrigation:

TABLE- 6.12

| Name of District | Kharif  |            | Rabi & Pre-kharif |            | Total   |            |
|------------------|---------|------------|-------------------|------------|---------|------------|
|                  | 2013-14 | 2014-15(P) | 2013-14           | 2014-15(P) | 2013-14 | 2014-15(P) |
| Dhubri           | 94      | 108        | 517               | 437        | 611     | 545        |
| Kokrajhar        | 10204   | 15985      | 260               | 133        | 10464   | 16118      |
| Bongaigaon       | 1143    | 610        | 933               | 812        | 2076    | 1422       |
| Goalpara         | 2333    | 2747       | 528               | 620        | 2861    | 3367       |
| Barpeta          | 2629    | 3845       | 523               | 138        | 3152    | 3983       |
| Nalbari          | 207     | 221        | 150               | 77         | 357     | 298        |
| Kamrup           | 4024    | 3050       | 349               | 248        | 4373    | 3298       |
| Kamrup Metro     | 1355    | 1005       | 1165              | 1100       | 2520    | 2105       |
| Darrang          | 4472    | 5386       | 359               | 194        | 4831    | 5580       |
| Sonitpur         | 10243   | 12403      | 63                | 125        | 10306   | 12528      |
| Lakhimpur        | 810     | 2053       | 280               | 500        | 1090    | 2553       |
| Dhemaji          | 22      | 1533       | 5                 | 945        | 27      | 2478       |
| Morigaon         | 716     | 423        | 797               | 832        | 1513    | 1255       |
| Nagaon           | 2991    | 18430      | 3335              | 125        | 33326   | 21593      |
| Golaghat         | 593     | 928        | 186               | 446        | 779     | 1374       |
| Jorhat           | 1686    | 2146       | 469               | 772        | 2155    | 2918       |
| Sivasagar        | 292     | 927        | 29                | 25         | 321     | 952        |
| Dibrugarh        | 305     | 924        | -                 | -          | 305     | 924        |
| Tinsukia         | 1561    | 843        | 14                | 133        | 1575    | 976        |
| Karbi-Anglong    | 27067   | 40760      | 11021             | 24416      | 38088   | 65176      |
| Dima Hasao       | 3951    | 3840       | -                 | -          | 3951    | 3840       |
| Karimganj        | 265     | 2579       | 95                | 161        | 360     | 2740       |
| Hailakandi       | 977     | 225        | 46                | 46         | 1023    | 271        |
| Cachar           | 6570    | 6570       | 2261              | 1491       | 8831    | 8061       |
| Chirang          | 9997    | 13844      | 3671              | 600        | 13668   | 15444      |
| Baska            | 11392   | 12503      | 1044              | 1876       | 12436   | 14379      |
| Udalguri         | 26358   | 23728      | 1258              | 1110       | 27616   | 24838      |
| Total            | 159257  | 177616     | 29358             | 41400      | 188615  | 219016     |

P= Provisional

Source: Chief Engineer, Irrigation Department, Assam.

## IMPOSITION OF IRRIGATION SERVICE CHARGES

The system of realisation of Irrigation Service Charges from the beneficiaries was introduced in Assam with the passing of the Assam Irrigation Act, 1983 on adhoc basis only. As sufficient fund is required for operation and maintenance of Irrigation schemes and as adequate fund is not made available in the State's Annual Budget, it was expected that a percentage of the Operation and Maintenance cost will be accrued through imposition of Irrigation Service Charges. The rates of Irrigation Service charges were subsequently revised in the year 2000 doubling the former rates to accommodate at least some fraction of the operation and maintenance cost of the Irrigation schemes. This was done in accordance with the Fiscal Reforms Programme of Govt. of Assam (Reforms in Non-Tax Revenue). The current rates of Irrigation Service Charges are as follows-

TABLE- 6.13  
IRRIGATION SERVICE CHARGES

| Crops                | Rate/Bigha (Rs.) | Rate/Hect. (Rs.) |
|----------------------|------------------|------------------|
| Kharif               | 37.50            | 281.24           |
| Wheat and Other Rabi | 75.00            | 562.50           |
| Early Ahu            | 100.00           | 751.00           |
| Ahu                  | 100.00           | 751.00           |
| Jute                 | 20.00            | 150.00           |
| Sugarcane            | 29.60            | 222.00           |

Source: Chief Engineer, Irrigation Department, Assam.

The position of realisation of Irrigation Service charges is not at all satisfactory in spite of Irrigation Department's endeavour to collect the charges. The amount collected during the last few years are as follows: -

TABLE-6.14  
IRRIGATION CHARGES  
REALISED

(Rupees in Lakh)

| Year    | Amount realized |
|---------|-----------------|
| 2005-06 | 3.53            |
| 2006-07 | 2.02            |
| 2007-08 | 1.96            |
| 2008-09 | 2.02            |
| 2009-10 | 3.40            |
| 2010-11 | 4.72            |
| 2011-12 | 12.06           |
| 2012-13 | 7.63            |
| 2013-14 | 7.95            |
| 2014-15 | 7.12            |

Source: Chief Engineer, Irrigation Department, Assam.

In order to improve the position of realisation of Irrigation Service Charges the Department has undertaken the following steps-

- The Assam Irrigation Act, 1983 as well as the Assam Irrigation Rules, 1997 were enacted.
- The Assam Irrigation Water Users' Act, 2004 has been enacted and the preparation of rules under the Act are under process.
- District wise Farmers' Motivation Training Programmes are conducted from time to time to create awareness about the utility of irrigation for Multiple Cropping with a view to uplift their economic condition of cultivators through scientific agriculture and do not feel the pinch to pay the Irrigation Service Charges..
- A total of 1375 Water Users' Associations (WUA) have been formed up to 2014-15 out of which 769 WUAs have already been registered under the Society Registration Act, 1860..
- District wise WUA Farmers' Training was conducted to adopt scientific agriculture in Irrigation Command.
- Out-of-State exposure visit in Tamilnadu, Andhra Pradesh and Jharkhand have been organised for officials of Irrigation Department, NGOs and WUA farmers.

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## CHAPTER - VII

## FLOOD AND FLOOD CONTROL MEASURES

The State of Assam comprises of two valleys namely the Brahmaputra and Barak Valley and it is situated in between 90° to 96° North Latitude and 24° to 28° East Longitude. The geographical area of Assam is 78,438.00 Sq. Km out of which 56,194.00 Sq. Km and 22,244.00 Sq. Km fall under the Brahmaputra and Barak Valley including 2 (Two) Hill Districts respectively.

The Brahmaputra Valley has an average width of about 80 Km. The main river of the valley, Brahmaputra is one of the largest rivers in the world and is ranked fifth with respect to its average discharge. The river originates from the Kailash ranges of Himalayas at an elevation of 5300 M. After flowing through Tibet it enters India through Arunachal Pradesh and flows through Assam and Bangladesh before it joins Bay of Bengal.

The catchments area of Brahmaputra in Tibet is 2,93,000 Sq. Km. in India and Bhutan is 2,40,000 Sq. Km. and in Bangladesh is 47,000 Sq. Km. The Brahmaputra basin extends over an area of 5,80,000 Sq. Km. up to its confluence within Bangladesh.

The average width of Brahmaputra is 5.46 Km. The maximum discharge of Brahmaputra at Pandu near Guwahati was recorded as 72,779 cumec on 23.08.62 and minimum discharge was recorded as 1757 cumec on 22.02.63. The average annual discharge is about 20,000 cumec and average dry season discharge is 4,420 cumec.

The Barak valley has a geographical area of 6922.00 Sq. Km excluding 2(two) hill districts. The local rainfall run off of the valley along with that of adjacent hilly areas flows through river Barak and its various tributaries and is drained out to Bangladesh. The Katakhal, Jiri, Chiri, Modhura, Longai, Sonai, Ruksni and Singla are the main tributaries of the valley. The tributaries are mainly rain fed and cause flood problems when precipitation occurs.

Flood and Erosion are two main natural disasters being faced by the state. The flood prone area of the state is 31,500.00 Sq Km as assessed by the Rastriya Barh Ayog which is about 40.16 % of the total land area of Assam. This is about 9.40% of total flood prone area of the whole country. The flood prone area of the country as a whole stands at about 10.2 % of the total area of the country. It signifies that the flood prone area of Assam is four times the national mark of the flood prone area of the country. Records show that average annual area affected by flood is 9.31 Lakh Hectares. The flood protected area of the state is 16500.00 Sq. Km till date.

The severity of flood problem of the state has been further aggravated by the acuteness of erosion on both banks of river Brahmaputra and its tributaries. Study reveals that an area of 4.27 Lakh Hectare of the state has been eroded by the rivers since 1950, which is 7.40 % of area of the state. The average annual rate of erosion is 8000.00 Ha.

#### FLOOD AND EROSION PROBLEM OF THE STATE

The Brahmaputra and Barak rivers with their 48 nos. of major tributaries and innumerable sub-tributaries have crises-crossed the plains of both valleys. Floods, bank erosion and drainage congestion are major problems faced by the state during the monsoon season. The flood of this region is a recurring phenomenon, every year several waves of flood cause damage to huge areas in the state. The loss to people in terms of houses, crops and cattle is immense. The figures of loss run into hundreds of crore every year apart from huge damages to roads, bridges, schools, communication systems and other such facilities. This diminishes the wealth of the nation and has adverse effects on the development of the state.

During post independence period, Assam faced major floods in 1954, 1962, 1972, 1977, 1984, 1988, 1998, 2002 and 2004. Almost every year three to four waves of flood ravage the flood prone areas of Assam. Average annual loss due to flood in Assam is to the tune of Rs.200.00 Crores and particularly in 1998, the loss suffered was about Rs.500.00 Crores and during the year 2004 it was about Rs.771.00 Crores.

After the unprecedented floods in the country in 1954, the Govt. of India announced a National Policy on Floods comprising three phases viz. -

- The immediate,
- The short term and
- The long term measures.

The flood control activities in Assam started mainly after the announcement of National Water Policy. Subsequently, "Outlined plan for flood control in Assam" along with various comprehensive plans were prepared and the priority areas, which need immediate and urgent attention were identified.

Till date, the Water Resources Department has taken up works primarily for the general development of the rural sector and for the protection of major townships in both the Brahmaputra and Barak valley. Schemes have also been taken up to relieve the drainage congestion in the cities and other important areas.

- Construction of Embankments and Flood walls
- River training and bank protection works
- Anti erosion and town protection works
- River channelization with pro siltation device
- Drainage improvement/ Sluices
- Raised Platform
- Flood forecasting and warning
- Flood zoning

The Water Resources Department, Assam has been implementing various flood management schemes from the beginning of 2nd Five Year Plan and is continuing till now. The Physical achievement of the department during Tenth Plan, Eleventh Plan and up to March, 2015 of the Twelfth Five Year plan is shown below :

TABLE-7.1  
PHYSICAL ACHIEVEMENT OF THE WATER RESOURCES DEPARTMENT  
Up to 12<sup>th</sup> Plan (upto March'15) since 10<sup>th</sup> Plan

| Nature of Work                              | 10 <sup>th</sup> Plan<br>(2002-2007) |         | 11 <sup>th</sup> Plan<br>(2007-2012) |         | 12 <sup>th</sup> Plan<br>(2012-2017) |         |
|---|--------------------------------------|---------|--------------------------------------|---------|--------------------------------------|---------|
|   | Achievement<br>during the<br>plan    | Total   | Achievement<br>during the<br>plan    | Total   | Achievement<br>up to<br>30.03.15     | Total   |
| Construction of Embankments (Km)            | 6.929                                | 4465.85 | 7.97                                 | 4473.82 | 0.6                                  | 4474.42 |
| Town Protection & Anti Erosion Works (Nos.) | 23                                   | 746     | 138                                  | 884     | 40                                   | 924     |
| Construction of Major Sluice (Nos.)         | 2                                    | 86      | 8                                    | 94      | 2                                    | 96      |
| Construction of Minor Sluice (Nos.)         | -                                    | 539     | 6                                    | 545     | -                                    | 545     |
| Drainage Channel(Km)                        | 6.00                                 | 854.19  | 20.776                               | 874.966 | -                                    | 874.966 |
| Raising & Strengthening of Embankment (Km)  | -                                    | -       | 527.758                              | 527.758 | 210.344                              | 738.102 |

Source: Chief Engineer, Water Resource Department, Assam.

Implementation of the above structures, have provided reasonable protection to about 16.50 Lakh Hectares of flood affected areas out of the total 31.05 Lakh Hectare of flood prone area as identified by the R.B.A. for the state.

The embankments were constructed with a sense of urgency to provide maximum coverage to protect the inundated areas because of topographical features and thick population settlement in both Brahmaputra and Barak valley. Erosion along the embankments and natural banks of the river system has been a serious problem because of the fact that most of the embankments were constructed very near to the bank line with a view to protect as many area as possible during those period. In the course of time due to natural change taking place in the meandering pattern of river, many reaches have been subjected to erosion threatening the embankments. Though embankment systems provided reasonable protection from recurring floods, the system itself had to withstand massive active erosion in many places. So, it has been necessary to take up anti erosion measures to protect the embankments as well as the river bank.

#### IMPLEMENTATION OF VARIOUS SCHEMES AND ACHIEVEMENTS

During the year 2014-15, the Department has undertaken total 97 numbers of Flood Management schemes (comprising both new and ongoing schemes) at different districts of Assam. Out of these, 57 nos. are Protection / Anti-erosion works, 26 nos. are construction of new embankments / raising and strengthening schemes and 14 nos. are drainage schemes.

A brief description on financial and physical achievement under different scheme is presented below

#### ADDITIONAL CENTRAL ASSISTANCE (ACA) /SPA SCHEMES

During the year 2011-12, a scheme under ACA to protect Dikhow bund left bank from Upper Nazira to AT Road (Approx. 13 Km. at Achalapathar) was taken with an estimated amount of TRs.6.8 crore. The cumulative expenditure incurred upto 31<sup>st</sup> March 2015 was 6.60 crore.

During the year 2012-13, a scheme under SPA to protect Simaluguri town and its adjoining areas from the erosion of river Dikhow was taken up with an estimated amount of Rs.7.4 crore. The cumulative expenditure on the Scheme upto March 2015 is Rs.6.66 crore. Where financial achievement has been found to be 90 percent against target Rs.7.40 crore.

#### SCHEME UNDER SPA (2013-14)

During the year 2013-14, two schemes under SPA were taken up to protect Dikhow bund from erosion of river Dikhow and anti erosion measure to protect Desung bund were taken up with an estimated amount of Rs.14.93 crore. In respect of these two scheme only 35 percent and 36 percent Financial achievement have been received against the targets Rs.7.48 crore and 7.45 crore respectively.

#### SCHEMES UNDER FLOOD MANAGEMENT PROGRAMME (FMP)

During the year 2010-11 three schemes were taken up under FMP with an estimated amount of Rs.109.11 crore. Out of which emergent measures for protection of Rohmorja area in Dibrugarh District has been fulfilled with 100 percent achievement.

During the year 2011-12 Seventeen (17) numbers of schemes were taken up under FMP, for various flood control measures.

During the year 2013-14, forty one (41) nos. of schemes under FMP were taken up with an estimated amount of Rs.1386.96 crore. Where 13 nos. of schemes achieved 100 percent achievement as on 31<sup>st</sup> March 2015. Work of remaining schemes are in progress.

**SCHEMES UNDER NABARD (RIDF-XVII) (2012-13)**

Under RIDF- XVII, seven numbers of schemes were taken up during 2012-13 with an estimated amount of Rs.37.55 crore. The Annual Plan outlay for the year 2014-15 was Rs.28.79 crore for the seven schemes. Out of which works on five schemes were taken up and an amount of Rs.13.47 crore was utilised upto March 2015.

**SCHEMES UNDER NABARD (RIDF-XVIII) (2013-14)**

Under RIDF-XVIII, 17 numbers of schemes with an estimated amount of Rs.78.53 crore was proposed during the year 2013-14. Out of these seventeen schemes, three schemes have been achieved 100 percent achievements. Works of remaining schemes are in progress.

**NABARD (RIDF-xix) (2014-15)**

To take various flood control measures, 24 numbers of schemes under RIDF-XIX has been proposed with an estimate amount of Rs.107.64 crore. The schemes are expected to be completed during the year 2015-16.

**STATE PLAN**

During 2011-12, three numbers of schemes were taken up under the State Plan with an estimated amount of Rs.16.74 crore. Upto March 2015 a satisfactory achievement has been seen against Anti Erosion measures to protect Kachudola and Thuribari Village area from the erosion of river Champabati. Works of two remaining schemes are in progress.

During the year 2014-15, thirteen schemes were taken up under State Plan with an estimated amount of Rs.55.19 crore. Upto March 2015, an amount of Rs.38.88 crore has been utilised. In respect of 5 nos. of schemes 90 percent work has been completed and work of remaining schemes are in progress.

**NORTH-EAST COUNCIL (NEC)**

During the year 2011-12, a scheme under NEC to protect Raimona Village and its adjoining area from erosion of river Janali in Kokrajhar District was taken up with an estimated amount of Rs.3.74 crore. The cumulative expenditure on the schemes upto March 2015 is 2.83 crore.

Under NEC, a scheme of anti erosion measures to protect Ranipur and its adjoining areas from the river Pekua was taken up during 2012-13 with an estimated amount of Rs.3.43 crore. Works for the scheme is going on and upto March 2015 an amount of Rs.2.34 crore has been utilised.

**NON-LAPSABLE CENTRAL POOL OF RESOURCES (NLCPR) 2012-13**

Two numbers of schemes to take anti erosion measures to protect Naharkatia town and Dihingporia village near Margherita town from the river Burhidihing were taken up under NLCPR in 2012-13 with an estimated amount of Rs.12.71 crore. Upto March 2015, an amount of Rs.11.27 crore has been utilised.

**SCHEMES UNDER CM'S SPECIAL PACKAGE (2013-14)**

During the year 2013-14, eight schemes were taken up under CM's special package with an estimated amount of Rs.41.99 crore. Upto March 2015, an amount of Rs.16.83 crore has been utilised. Among these packages protection of erosion from river Borak at Bagmara area at Katakhal has been completed.

**SCHEMES UNDER CM'S SPECIAL PACKAGE (2014-15)**

During the year 2014-15, ten schemes were taken up under CM's special package with an estimated amount of Rs. 23.79 crore.

During the year 2015-16, another four schemes were taken up under CM's special package with an estimated amount Rs.22.96 crore.

TABLE-7.2

**BUDGET ALLOCATION, EXPENDITURE/UTILIZATION OF FUND FOR 2014-15**

The Annual allocation of fund from various sources to Water Resource Department and utilization thereof are shown below

(Rs. in Lakh)

| Plan /Non plan fund       | Budget allocation of the Department. (Works only) | Amount received by the Department (Works only) | Amount of expenditure/utilization by the department (Works only) |
|---------------------------|---|--|--|
| Non-Plan                  | 5995.06   | 5871.143                                       | 5871.143   |
| State-Plan                | 5900.00   | 4381.89  | 4381.89  |
| A.C.A                     | 336.00  | 333.52   | 333.52   |
| NABARD                    | 6500.00   | 5527.95  | 5527.95  |
| N.E.C.                    | 1501.42   | 631.07   | 631.07   |
| J.R.C.                    | -   | -  | -  |
| N.L.C.P.R.                | 1517.69   | 659.95   | 659.95   |
| FMP                       | 123100.00   | 679.86   | 679.86   |
| Projected State Share     | 32209.15  | 29111.70                                       | 29111.70   |
| EAP                       | 8377.00   | 7230.00  | 7230.00  |
| C.M. Package Barak Valley | 1194.00   | 1135.15  | 1135.15  |
| S.P.A.                    | 2012.40   | 1296.00  | 1296.00  |
| State Share of RIDF       | 800.00  | 387.11   | 387.11   |

**NEW INITIATIVES TAKEN BY THE DEPARTMENT**

For proper planning, design and execution as well as functioning of different flood management/ erosion control works the department has taken up new ideas from time to time.

## i) Establishment of Assam Water Research &amp; Management Institute (AWRMI)

The existing River Research Station of the Water Resources Department has been upgraded to "Assam Water Research and Management Institute" (AWRMI), with a view to modernise all the instruments, laboratories and to facilitate the Institution to a Training and Capacity building Institution. Moreover, AWRMI will act as a Data Centre for all water related subjects in ASSAM.

It will be made a 'State of the Art' institute to facilitate planning, design and implementation of river erosion and flood protection works in Assam. The institute will co-relate with all state departments as well as Central Govt. departments in collecting hydro-metrological, river hydraulic, sediments transport and morphological data to make it an active Data Centre.



The management of flood and erosion based on a long term perspective plan is yet to be achieved. The Institute will induce scientific study on behaviour of the Brahmaputra and other major rivers of the State with experts groups within and outside India to achieve a long term solution for flood and erosion protection along the Brahmaputra and Barak valley.

Initiative has already been taken to enroll the Institute under Assam Society Act as per decision of the Government of Assam.

#### ii) Setting up Brahmaputra Gallery

Process has been started for setting up Brahmaputra Gallery in Assam. For this purpose, MOU has been signed between Assam Water Research and Management Institute (AWRMI) and National Academy of Sciences, India (NASI). The purpose for setting up the Gallery is to expose the different aspects of mighty Brahmaputra to the nation and abroad in a documented pictographic manner. The different aspect means the point of origin and its historic value, journey through the seven sisters and its geographical distribution, culture and heritage, its environmental and ecological aspects and biodiversity and finally its scientific and educational importance. The NASI has developed the gallery within AWRMI premises at Basistha, Guwahati.

#### iii) Convening Assam water Conference

The Water Resources Department, Assam has taken up the holistic approach for inviting national and international expertise in reaching a sustainable and feasible scientific solution for mitigating flood and erosion problem in Assam by convening the Assam Water Conference. In this regard, two conferences have already been organised during February' 2013 and February' 2014 with focal theme of "Management of Water Resources in North East Region with special reference to Flood and Erosion Management" and "Sustainable Development of Water Resources in Northeast Region" respectively. A galaxy of experts in the field of watershed management from the country as well as abroad took active part in the conference and several important aspects were thoroughly discussed. The conference is itself a major milestone in the field of flood management within the flood ravaged state of Assam.

#### iv) Taking up the project – 'Guwahati Field Trial'

Based on the results presented to NGOs and Government Organisations in Assam, the BRAHMATWINN coordinator, Prof. Dr. Wolfgang-Albert Flugel from Friedrich Schiller University of Jena, Germany and his project partner, Prof. Dr. Nayan Sharma from IIT Roorkee were requested by the Chief Minister of Assam to prepare a RECLAIM project concept note.

The overall objective of the RECLAIM project is to implement the basic constituents and components for a Brahmaputra River Master Plan (BRMP) for the North-East Region (NER) of India.

As a pilot initiative for the RECLAIM Project, the Field Trial Project was proposed by Prof. Flugel with the following basic objectives:

Integrated System Analysis (ISA) comprising remote sensing analysis of erosion dynamics and river bed development.

Implementation of a web based River Basin Information System (RBIS) and its enhancement towards a comprehensive Decision Information Knowledge System (DIKS) for Assam.

Modelling of the Brahmaputra River tributary runoff and sediment input contribution from the landscape to the main river stretch.

Quantification of the impacts of enhanced river training measures with respect to bank erosion dynamics and land reclamation.

Development of a Decision Support System (DSS) for the development of holistic river training strategies and integrated monitoring concepts.

The selected test site for the experimental field trial study is at the southern bank of the Brahmaputra River about 2.5 km west of the Saraighat bridge. Satellite imageries from 2003 to



2013 were analysed and the river braiding pattern has been observed. Further study on hydrological and hydraulic modelling is being carried out by Prof. Flugel and his team.

#### SCHEMES UNDER THE AEIGES OF ADB

The North-East region is prone to natural disaster creating an environment uncertainty and as a consequence experiences regular set back to systematic developments. Major uncertainty is associated with the Brahmaputra, which is characterized by recurrent large-scale unpredictable floods and riverbank erosion affecting especially the rural development of Assam Valley.

A multidisciplinary Special Purpose Vehicle (SPV) in the name and form of Flood and Riverbank Erosion Management Agency, Assam (FREMAA) is established under the State Government of Assam (SGOA).

The project includes comprehensive riverbank protection at Dibrugarh, Palasbari-Gumi. Beside the project includes up gradation and construction of embankment at Dibrugarh and Palasbari. The project incorporates some new technology of international standard such as use of sand filled Geo-textile bags at apron of the riverbank revetment.

A project proposal was also prepared by FREMAA for protection of Kaziranga National Park and its adjoining areas from flood and erosion but due to non-receipts of clearance from the Forest & Environment Ministry, Govt. of India, the project could not be commenced yet.

Dibrugarh sub-project :

Estimated Cost :- Rs 80.235Crore

Objectives :- Securing the Dibrugarh Town and Preventing the flood and Community based support program for flood.

Benefited area -32,614 ha.

Population Benefited- 500000 Nos.

B.C Ratio-2.5:1

Palasbari sub-project :

Estimated Cost:- 172.3559 Crore

Objectives: - Securing the suburban and productive agriculture area of Palashbari-Gumi from Brahmaputra floods and preventing major river erosion and avulsion

Benefited area -62152 hectare.

Population Benefited- 200000 Nos.

B.C Ratio-2.5:1

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## CHAPTER – VIII

## LIVESTOCK, ANIMAL HUSBANDRY AND DAIRY DEVELOPMENT

Animal Husbandry is potentially one of the most important sectors for rapid socio-economic development of the State. Livestock is basically a component of production system and is contributing to sustainable agricultural system. Fast growth is essential not only to achieve higher productivity levels in livestock products but also for income generation of rural households of the State. Livestock in the State is thus highly livelihood oriented and is generally owned by small and marginal farmers and landless agricultural labourers.

Assam economy continues to be an agrarian economy as more than 85 percent of the population is living in the rural areas and about 52 percent of the total labour force is found to be engaged in agriculture and allied activities. Animal Husbandry sector has significant impact on employment generation in the State and plays a vital role in income generation of both the rural and semi-urban economy. The Animal Husbandry and Veterinary Department of the State has been implementing various developmental programmes to create gainful employment/income opportunities in the rural areas with the objectives to boost up the socio-economic condition of the rural economy and act to enhance the volume of livestock and poultry products in the State so as to reduce the gap between demand and supply of these products.

TABLE: 8.1

CONTRIBUTION OF ANIMAL HUSBANDRY TO GROSS STATE DOMESTIC PRODUCT  
[AT CONSTANT 2011-12 PRICES]

| Year                                      | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---------|---------|---------|---------|
| Contribution to Agril & Allied Sector (%) | 5.99    | 6.13    | 5.58    | 5.38    |
| Contribution to GSDP (%)                  | 1.20    | 1.31    | 1.13    | 1.09    |

P: Provisional. Source: Directorate of Economics and Statistics, Assam

To achieve the goal, the Animal Husbandry and Veterinary Department of the State has been providing animal health care service and breed improvement facilities by setting up different type of veterinary infrastructures which are spread around the State. According to the Animal Husbandry and Veterinary department there are 22 Nos. Of Veterinary Hospitals, 337 nos. of Dispensaries, 684 nos. of Sub centres/ First Aid centres/ SMC and 30 nos. of Key Village Centres as on 2014.

LIVESTOCK POPULATION AS PER 19<sup>TH</sup> LIVESTOCK CENSUS

According to the 19th Livestock Census 2012, the cattle population constitutes the largest group with more than one crore but the cattle population is (-) 0.56 percent less compared to 2007 Livestock Census. In respect of Cross breed cattle this decrease is about 43.0 percent. Buffalo, Pig and Elephant also counted 17.22 percent, 23.31 percent and 57.0 percent decrease during the 19<sup>th</sup> Livestock census, 2012 as against the previous Livestock Census. On the other hand, the population of Horse & Ponies, Sheep and Goat population counted increase during the Livestock Census, 2012 compared to the previous Livestock Census. The total goat population is counted at 61.69 lakh and Sheep 5.18 lakh during the Livestock Census, 2012.

The poultry population in the State, as revealed from the Livestock Census 2012, has registered decrease of 33.5 percent over the previous census 2007. The category-wise decrease of population of these species during Livestock Census, 2012 was fowls 28.0 percent and duck 45.0 percent. The table 8.2 provides the species-wise livestock population of Assam as per Livestock Censuses 2012.

TABLE: 8.2

| LIVESTOCK AND POULTRY POPULATION IN ASSAM |                      |          |
|---|----------------------|----------|
| SI No.                                    | Livestock species    | 2012     |
| 1   | a. Crossbreed cattle | 395902   |
|   | b. Indigenous Cattle | 9911702  |
| 2   | Buffaloes            | 435265   |
| 3   | Sheep                | 518067   |
| 4   | Goat                 | 6169193  |
| 5   | Horses & Ponies      | 14153    |
| 6   | Pigs                 | 1636022  |
| 7   | Dogs                 | 527521   |
| 8   | Elephant             | 445      |
| 9   | Rabbit               | 6170     |
| 10  | Fowls                | 18718209 |
| 11  | Ducks                | 7300402  |

Source: Directorate of Animal Husbandry & Veterinary, Assam.

The livestock products which are also known as availability of livestock items are presented for some years as follows:

TABLE – 8.3  
TREND OF LIVE STOCK PRODUCTS IN ASSAM

| Item                  | 2006- 07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|-----------------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Milk (million litres) | 823      | 824     | 827     | 830     | 832     | 838     | 845     | 857     | 873     |
| Egg (million nos)     | 535      | 490     | 466     | 468     | 470     | 471     | 471     | 472     | 473     |
| Meat ('000 tonnes)    | 28.8     | 29.9    | 30.7    | 32.0    | 34.0    | 34.19   | 36.63   | 38.34   | 42.0    |

Source: Directorate of Animal Husbandry & Veterinary Department, Assam.

## SOME IMPORTANT ACTIVITIES

### BREED UP-GRADATION THROUGH ARTIFICIAL INSEMINATION PROGRAMME

Despite having sizeable number of cattle, milk production in the State is not upto the satisfactory level as the major percentage of the cattle population in the State are of none-descript type. Implementation of World Bank funded scheme as well as the Scheme under National Project on Cattle-Buffalo Breeding [NPCBB] although assisted increase of milk production to a considerable extent in the State, achievements in case of production of cross breed animal was not very satisfactory. At present, breed up-gradation programme is carried out under AACP, RKVY and NPCBB Schemes.

The State Animal Husbandry & Veterinary Department has proposed to incorporate the following activities to enhance milk production:

- The State of the ART Frozen Semen production centre which is already set up in Barpeta will be strengthened to enhance semen production;
- Out sourcing of A.I. Services to boost artificial insemination activities;
- Improvement of Animal Health Services through holding of training and awareness campaign, organizing Health Camps;
- Induction of High Yielding indigenous breed of cattle like Sahiwal, Red Sindhi, etc in addition to routine A.I. activities;
- The number of frozen semen banks would be increased to improve the network of A.I. activities;
- Stall feeding practices and quality animal rearing would be promoted on cluster basis for better milk production.

### POULTRY DEVELOPMENT

The Animal Husbandry & Veterinary Department, Assam is encouraging backyard poultry rearing in the State for enhancing meat and egg production. As this sector generates employment and enhance rural income, a large number of people are directly or indirectly engaged in poultry sector in the state. The broiler raising programme under Chief Minister's Special Employment Generation Programme implemented in the State by the Department created direct employment to 824 people and indirect employment to more than 10 thousand people in the State. In addition, production of chicken achieved more than double of the targeted production.

Considering the achievement the State Animal Husbandry & Veterinary Department proposed to implement several schemes under the Assam Livestock & Poultry Development Corporation(ALPCO), strengthen the existing feed mill at Sonapur, rejuvenate the existing Poultry farm at Golaghat and Pork Processing Plant at Nazira, broiler raising programme through entrepreneurship development and distribution of poultry units to beneficiaries.

### GOATERY AND PIGGERY DEVELOPMENT

The State of Assam produces highest quantity of pork in the country. But the production is found to be too little to meet the demand of the State and the region. The importance of piggery sector in poverty alleviation cannot be ignored including its role in inclusiveness of agricultural growth. In order to meet the demand of improved germplasm and breeding animals, the National Research Centre on Pig(ICAR) has been established in the State and Artificial Insemination(AI) technology on pig is adopted by the centre need to be replicated in the potential area. Moreover, with the growing demand of pork in the State the growth of this sector is essential. To boost production of pork, the Animal Husbandry & Veterinary Department, Assam has planned to upgrade all the departmental Pig Farms to produce pure breed high yielding piglets for sale to the rural pig farmers. Steps have also been taken for breed upgradation of local pig through natural breeding by distributing quality Boar to meet the gap of meat production. The Department also took steps to encourage pig rearing through individual farmers, SHGs, CIGs etc., and establish "Pig Villages" to create organized network for more production of meat and to create gainful employment. Moreover, focused attention is also proposed to be given to encourage the people of rural areas to rear goat in a systematic manner and the scheme is planned to be implemented through individual farmers and through SHGs. The Animal Husbandry & Veterinary Department, Assam commissioned two establishments of NUCLEUS pig breeding farm at Kothiatoli, Nagaon under RKVY-NMPS scheme and goat breeding farm at Howly, Borpeta for development of piggery and goatery service sector.

## FODDER DEVELOPMENT

Though feed and fodder is one of the most important contributing factors for the growth of livestock sector, development of this sector is necessary. It is estimated that 60-70 percent of the total cost of livestock production is due to feed and fodder. Due to heavy rainfall in the region and for availability of wild grass in the monsoon season; farmers are not habituated with fodder cultivation. The Department has planned to popularize fodder cultivation at institutional waste land, strengthen and revamp the Regional Feed Testing Laboratory, located at Khanapara and establish Silage making unit in each Government Livestock Farm for demonstration purpose.

The Animal Husbandry and Veterinary department, Assam has also proposed establishment of 6(six) numbers of feed mill and fodder block making units in PPP mode to provide available source of fodder for cattle to enhance milk production.

## FROZEN SEMEN AND ASSAM LIVESTOCK DEVELOPMENT AGENCY (ALDA)

The semen station at Khanapara was initiated at 1968-69 under Intensive Cattle Development Project (ICDP). Later the station was updated in the year 1975-76 under the Indo-Australian cattle Breeding Project (IACBP) for production of chilled semen till the beginning of 1995-96. In the year 1995-96 under the ARIASP, Khanapara semen station was strengthened with new Bulls and equipments for production of frozen Semen.

The production of Frozen Semen was temporarily suspended due to transaction of old semen station of Khanapara to the new one located at Borpeta which was commissioned from March'2015. Till date 200,000 Frozen semen doses of pure Jersey and H.F. has been produced. The Semen produced will be distributed in the field after CMU evaluation.

ALDA was constituted under the society Act as per guidelines of national Project on Cattle and Buffalo Breeding (NPCBB) and it started functioning from 2004. The main objective of ALDA is to produce good quality semen, to improve training facilities for extending breeding network. All the objectives are targeted for improving milk production in the State.

TABLE – 8.4  
COMPARATIVE ANNUAL REPORT OF A.I. DONE AND CALF BORN FOR IN ASSAM

| 2012-13                       |                       | 2013-14                          |                          | 2014-15                      |                       |
|-------------------------------|-----------------------|----------------------------------|--------------------------|------------------------------|-----------------------|
| A.I DONE<br>(No. Of<br>DOSES) | CALF BORN<br>(In No.) | A.I DONE (In<br>No. Of<br>DOSES) | CALF<br>BORN( In<br>No.) | A.I DONE( In<br>No. Of DOES) | CALF BORN(<br>In.No.) |
| 260778                        | 104212                | 330049                           | 115764                   | 322065                       | 135899                |

A.I.: ARTIFICIAL INSEMINATION SOURCE :: ALDA

TABLE—8.5  
YEAR WISE INCOME FROM SEMEN SALE PROCEEDS

| YEAR    | INCOME FROM SEMEN SALE<br>PROCEEDS (Rs.) | BANK INTEREST (Rs.) | TOTAL AMOUNT<br>(Rs.) |
|---------|--|---------------------|-----------------------|
| 2012-13 | 70,82,859.00                             | 12,43,611.00        | 83,26,470.00          |
| 2013-14 | 1,04,31,048.00                           | 14,09,739.00        | 1,18,40,787.00        |
| 2014-15 | 92,67,740.00                             | 21,30,266.00        | 1,13,98,006.00        |
| TOTAL:  | 5,15,50,323.00                           | 64,36,807.00        | 5,79,87,130.00        |

A.I.: ARTIFICIAL INSEMINATION SOURCE :: ALDA

## COORDINATED CATTLE BREEDING PROJECT (S.E)

C.C.B.P (S.E) was launched in the year 1980-81 with the objective to select Proven Bulls having high genetic merit by Sire evaluation through their field progeny testing which has great importance in extensive breed improvement programme of the state cattle breeding policy. Here selective breeding in elite herd is done to get the progeny with higher milk production ability, draught ability and adaptability to meet the local requirements and thus to generate rural self-employment as well as to boost up the rural economy.

Rearing of Cows for milk is still a tradition for most of the livestock farmer in Assam but most of them own only one or two cows that too indigenous type. The milk production in Assam is mainly from these indigenous non-descript type cattle with very low milk production. Therefore, the CCBP was launched to infuse superior germplasm into the non-descript low producing stock by artificial insemination with the sole aim to increase productivity.

## LIVESTOCK PRODUCTS: REQUIREMENT AND AVAILABILITY OF MILK, EGG AND MEAT

According to the Sample survey results for the year 2014-15 published by the Directorate of Animal Husbandry & Veterinary, Assam reveal that there exists large gap between the requirement and availability of livestock products in the State. It is seen that quantity of milk, egg and meat is available in the State is 35.6 percent, 9.9 percent and 11.8 percent to total requirement of milk, egg and meat respectively during the year 2014-15. Although the Department does not carry survey about requirement of livestock products but prepares a departmental estimate of it on the basis of requirement norms of milk, egg and meat fixed by the ICMR.

Following table below shows the requirement and availability of livestock products during the last six years:

TABLE – 8.6  
REQUIREMENT AND AVAILABILITY LIVESTOCK PRODUCTS IN ASSAM

| Year    | Milk(million ltrs) |                | Egg (in million nos.) |               | Meat(in'000tones) |                |
|---------|--------------------|----------------|-----------------------|---------------|-------------------|----------------|
|         | Requirement        | Availability   | Requirement           | Availability  | Requirement       | Availability   |
| 2009-10 | 2286               | 830<br>(36.3)  | 5414                  | 486<br>(9.0)  | 330               | 33<br>(10.0)   |
| 2010-11 | 2308               | 833<br>(36.1)  | 5474                  | 470<br>(8.6)  | 334               | 34<br>(10.2)   |
| 2011-12 | 2338               | 838<br>(37.1)  | 5542                  | 471<br>(8.5)  | 336               | 35<br>(10.4)   |
| 2012-13 | 2395               | 845<br>(35.3)  | 5677                  | 471<br>(8.3)  | 347               | 37<br>(10.7)   |
| 2013-14 | 2423               | 857<br>(35.4)  | 5744                  | 472<br>(8.2)  | 351               | 38.3<br>(10.9) |
| 2014-15 | 2452               | 873<br>(35.60) | 5812                  | 573<br>(9.88) | 355               | 42 (11.8)      |

Figure in bracket shows the 'Availability" to "Total Requirement"

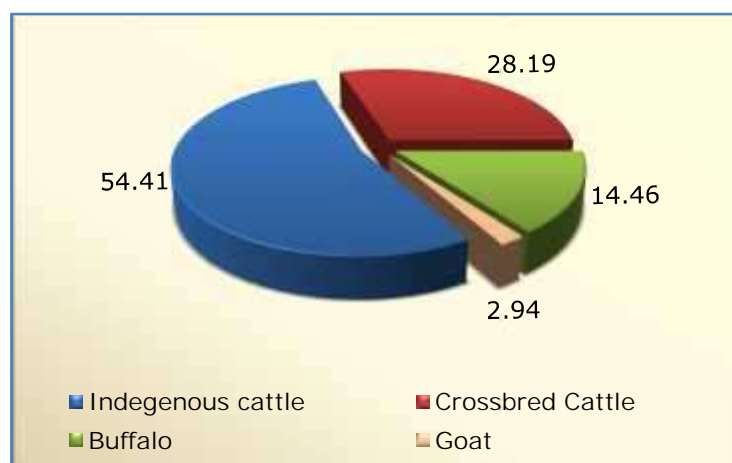
Source: Directorate of Animal Husbandry and Veterinary, Assam

## MILK PRODUCTION

The total milk production of the State for the year 2014-15 was estimated at 872.98 million litres as against 857.39 million liters of the previous year showing a growth of about 1.9 percent during the current year.

Further during the year indigenous cattle milk is observed to have constituted 54.41 percent of the total milk production of the State while the contribution of crossbred cattle milk is 28.18 percent and thus the cattle milk together contributes 82.61 percent to the total milk. Buffalo and goat milk contributes 14.46 percent and 2.94 percent respectively to the total milk production. It means that about 17.4 percent of the total milk production is shared by buffalo and goat milk.

From the utilization data of milk published by the State Animal Husbandry and Veterinary Department, Assam it revealed that approximately 41.28 percent of the total milk produced in the State is consumed by the households as fluid milk. Out of the remaining quantity 59.7 percent sold as fluid milk and 29.43 percent used as milk product.



Despite the increase in milk production in the State over the years, the estimated per capita/availability of milk has remained more or less at the same level due to increase in population. The estimated per capita/per day milk availability of milk was 74 ml during the year 2014-15 which was at the same level when compared with the per capita/per day availability of milk during the previous year. The availability of milk per capita/per day in the State during the year, however, was far below the ICMR recommended milk requirement norms of 208 ml per head per day.

TABLE – 8.7  
TREND OF TOTAL MILK PRODUCTION IN ASSAM  
(in million litres)

| YEAR                                  | Cattle            |                   | Buffalo | Goat    | Total milk |
|---------------------------------------|-------------------|-------------------|---------|---------|------------|
|                                       | Crossbreed Cattle | Indigenous Cattle |         |         |            |
| 2014-15                               | 246.06            | 475.03            | 126.25  | 25.64   | 872.98     |
| 2013-14                               | 247.17            | 465.61            | 128.56  | 16.15   | 857.39     |
| 2012-13                               | 247.07            | 450.42            | 128.72  | 18.68   | 844.90     |
| 2011-12                               | 236.53            | 455.49            | 123.41  | 22.94   | 838.37     |
| 2010-11                               | 230.79            | 471.14            | 106.19  | 24.60   | 832.72     |
| 2009-10                               | 202.15            | 495.55            | 107.52  | 24.64   | 829.86     |
| 2008-09                               | 183.60            | 507.36            | 109.89  | 26.14   | 827.01     |
| 2007-08                               | 181.33            | 506.42            | 109.26  | 27.38   | 824.39     |
| Variation (%)<br>2014-15 over 2013-14 | (-)0.04           | (+)2.0            | (-)1.8  | (+)58.7 | (+)1.8     |

Source: Directorate of Animal Husbandry and Veterinary, Assam

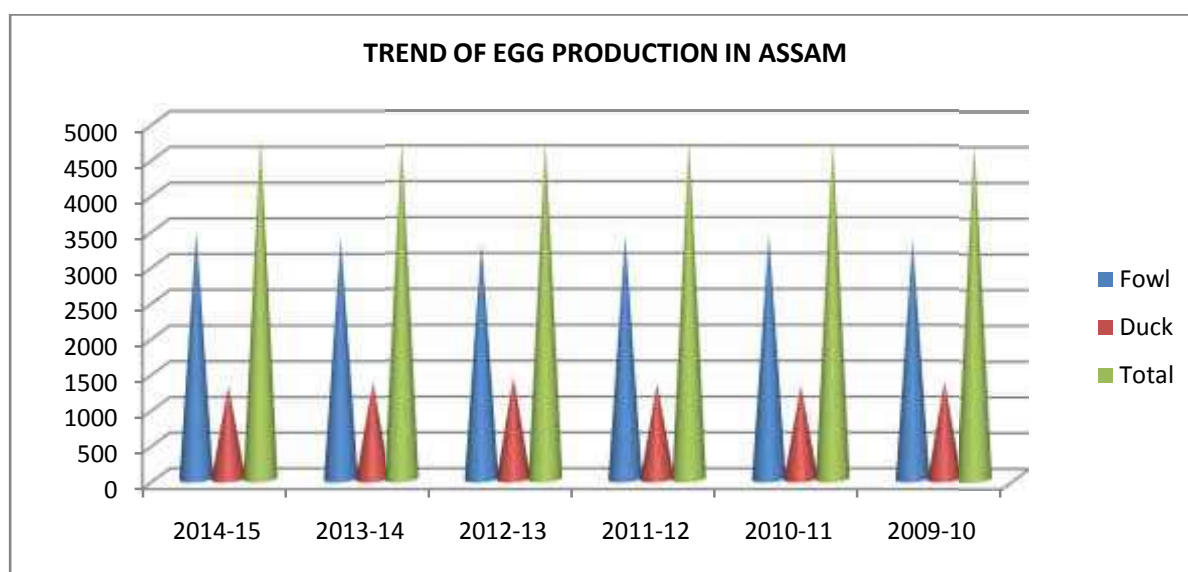
## EGG PRODUCTION

Total egg production in the State was estimated at 4774 lakh numbers compared to estimated 4717 lakh numbers during the previous year. Annual average yield rate of Fowl egg was 105 and 171 numbers per layer/ year for local and improved fowl respectively during the year. In respect of duck egg, the yield rate of per layer/ year was 105 and 169 for local and improved duck respectively during the year under reference. The Table below shows season wise total egg production in the State based on the estimated average egg yield per layer/year for the last six years. In the context of average yield rate per layer, the contribution of improved layer birds constituting both fowl and duck is high. But slow growth of improved category layer birds affected production of egg in the State. Moreover, the birds rearing in the State are mostly used for meat purposes and not for egg production.

TABLE – 8.8  
TREND OF EGG PRODUCTION AND AVERAGE YIELD PER LAYER IN ASSAM

| YEAR    | Total egg production (in lakh nos.) |          |         |          |         | Average yield per layer (in nos.) |          |      |          |
|---------|-------------------------------------|----------|---------|----------|---------|-----------------------------------|----------|------|----------|
|         | Fowl                                |          | Duck    |          | Total   | Fowl                              |          | Duck |          |
|         | Desi                                | Improved | Desi    | Improved |         | Desi                              | Improved | Desi | Improved |
| 2014-15 | 3305.90                             | 160.93   | 1131.08 | 176.01   | 4773.92 | 105                               | 171      | 105  | 169      |
| 2013-14 | 3200.25                             | 160.88   | 1168.58 | 187.63   | 4717.35 | 110                               | 181      | 108  | 169      |
| 2012-13 | 3093.13                             | 197.78   | 1230.10 | 191.14   | 4712.15 | 108                               | 184      | 109  | 177      |

Source: Directorate of Animal Husbandry and Veterinary, Assam.



## MEAT PRODUCTION

The total meat production in the state is estimated based on the number of animals /birds of different types slaughtered per season / per year and average meat yield. The total meat production during 2014-15 was estimated at 42,60 thousand tons as against estimated 38.34 thousand tons meat production in 2013-14 showing about 11.11 percent increase in meat production over the previous year. The number of animals/birds slaughtered, average meat yield and total meat production during the year is shown in the table below.

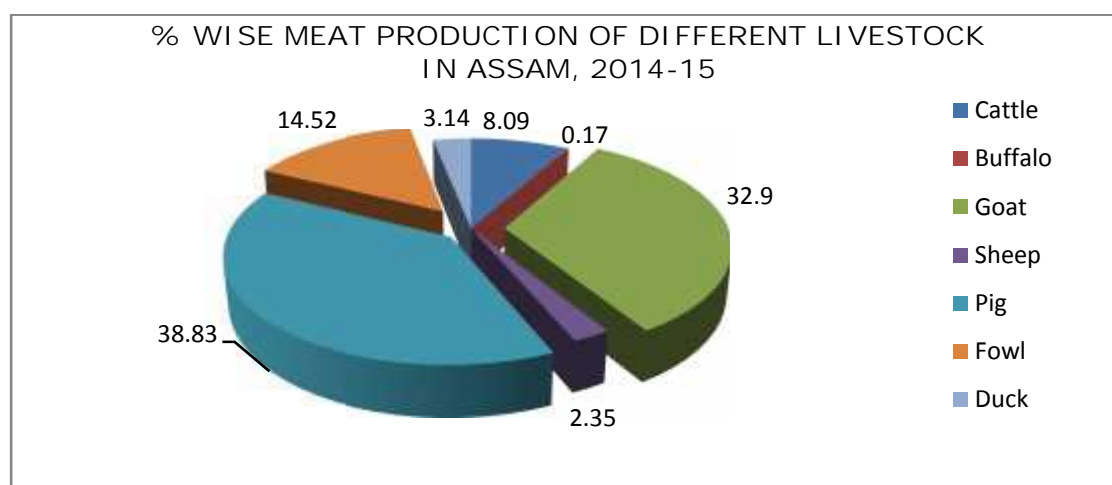
It reveals from the table that pig meat contributes 38.83 percent of the total meat production in the State followed by goat & sheep meat (35.26 percent). The poultry meat, on the other hand, shares 17.7 percent of the total estimated meat production in the State during the year under reference.



TABLE – 8.9  
MEAT PRODUCTION IN ASSAM DURING THE YEAR 2014-15

| Item    | Animals/Birds Slaughtered (in No.) | Average meat yield per animal / bird (in kg) | Meat production ( in kg ) |
|---------|------------------------------------|--|---------------------------|
| Cattle  | 58847                              | 58.6   | 3448829                   |
| Buffalo | 1037                               | 61.5   | 63757                     |
| Goat    | 1969481                            | 7.1  | 14018990                  |
| Sheep   | 137941                             | 7.3  | 1003278                   |
| Pig     | 558640                             | 30   | 16543715                  |
| Fowl    | 6356468                            | 0.96   | 6186718                   |
| Duck    | 1283018                            | 1.04   | 1339324                   |

Source: Directorate of Animal Husbandry and Veterinary, Assam



### INSTITUTE OF VETERINARY BIOLOGICALS [IVB]

INSTITUTE OF VETERINARY BIOLOGICALS (IVB) IS A VACCINE PRODUCTION CENTRE OF A. H. & VETY. DEPTT., GOVT. OF ASSAM. IVB Plays major role in Livestock Health coverage for growth and development of A.H & Veterinary sector. The institution associates with mainly medicinal preparation made from living organisms and their products widely used in the field of immunization and disease diagnosis of animals and birds. These immunizing agents may be classified as vaccine, immunoglobulin, antiserum, antitoxin or antigen, which play a vital role in immune-prophylaxis and diagnosis of diseases

The IVB has been producing vaccine since its inception in 1950. The quantity of production, procurement & distribution w.e.f. 2005-06 to 2014-15 has been represented as follows: -

|                      |             |
|----------------------|-------------|
| Vaccine production   | 66,58,611   |
| Vaccine procurement  | 1,76,50,370 |
| Vaccine distribution | 2,24,64,300 |

(a) No. of disease to be taken up during 2015-16:

The geo-climatic condition of Assam is most favourable for growth and development of livestock sector, but simultaneously it is also a paradise of various microbes and parasites, many of which create problems for development activities of livestock sector causing serious economic losses. The major infectious diseases that occur in Assam are Haemorrhagic Septicemia, Foot and Mouth Disease, Black Quarter, Anthrax, Tuberculosis, Brucellosis, Swine fever, Ranikhet disease, Duck Cholera, Duck Plague, Enterotoxaemia, Rabies, PPR, Parasitic infestation etc. (i) One identified disease –

(b) Disease status in the state of Assam:

Among the diseases of National importance, the most dreaded disease of cattle- the Rinderpest (RP) is declared free from the state by Government of India.

At present, HS and FMD are the two most pre-dominating animal diseases of the state in relation to the economy of the people. Foot and Mouth Disease are enzootic and in every year the disease occurs in various parts of the state.

Among all the livestock species pigs share unique feed conversion efficiency, with shortest generation interval, prolific breeding capacity, which are all positively correlated with the overall economy in production. The North Eastern states of India have 3.01 million pigs and this constitute about one third of total pig population of India. But on the contrary this industry often experience severe economic setback owing to the prevalence of many bacterial and viral diseases of which Swine fever is one of the most devastating killer disease. Although the disease occurs in enzootic form it has become the main threat to the pig husbandry particularly in the areas of dense pig population.

(c) Areas / districts to be covered during 2015-16:

All together 219 blocks and 26395 villages of 27 districts of the state have been brought under the umbrella of ASCAD programme.

(d) Infrastructure facilities available and requirement in terms of delivery of vaccine:

The existing vaccine storage facility of Institute of Veterinary Biologicals has been renovated to workable condition by the aid of ASCAD. To maintain the cold chain up to the executing site refrigerator, bottle coolers, gel pack, cold box etc are also developing at different district and sub-divisional Head Quarters, dispensaries, sub centers etc in phase manner. To maintain the cold chain effectively atleast every district should have one Cold storage and other relevant facilities. For smooth delivery of vaccines from production centre to the area of operation / inoculation, atleast two refrigerated delivery van is unavoidable.

**ASSAM AGRICULTURAL COMPETITIVENESS PROJECT (AAP)**

The Additional Financing of AAP is a continued programme, from the year 2012-13 and ended in 31st March 2015. AAP-AF has been initiated in Kamrup and Nagaon district on pilot basis. It was considered imperative to sustain the momentum of the project and also to broad and deep coverage which will enhance the development of livestock sector. The women participation in livestock component ( Pig and goat) was 99.5% .

**Project Interventions**

1. Small Animal and Duck Development
  - a. Pig development
  - b. Goat development
2. Animal Health Support
3. Capacity Building and Awareness

## SMALL ANIMAL AND DUCK DEVELOPMENT

### a) Pig Development Programme:

Pilot Pig SHG: Total 150 Pig Rearers' Groups (PRG) from Kamrup district were supported. All the beneficiaries were woman from economically backward families. Each PRG, having 5 members, was supported with 5 boars plus 10 Sows of improved breed besides feed, medicines and insurance coverage.

### b) Goat Development: The Goat development programme is for implementation among women beneficiaries in Kamrup district only. total 150 Goat Keepers' Societies (GKS) in Kamrup district, comprising woman beneficiaries from economically backward families were supported. Each GKS having 5 members was supported with 1 Beetal buck and 10 indigenous Doe besides feed, medicines and insurance coverage.

### c) Duck Development: Ducks are reared both for meat and eggs. Duck meat and eggs fetches higher price. The Govt. Duck Farm at Hajo was strengthened with support from AACP and continued in AACP-AF with feed component. The ducks were culled as the production of eggs have been decreased. Further, subsequent support to the farm has been taken up under RKVY scheme

#### 1. Animal Health Support: Free treatment , vaccination and other health support has been provided through Departmental support.

#### 2. Capacity building & Awareness: Farmers were trained in scientific Management, rearing and feeding of Livestock, pig, goat.

- Rs. 8.91 lakh released to DVO Kamrup for farmers meeting for PPA, PPF and GKA, GKF formation and 100nos farmers trained on Goat and Pig management.
- Four officers went to Nepal and Rajasthan for exposure visit.
- ToT organised for officers at Byrnihat and AHC, Khanapara
- State level interactive session organised on Livestock and Poultry activities for successor project to AACP.
- Pig and Goat beneficiaries were trained.

## DAIRY DEVELOPMENT

The Dairy Development in Assam was initiated in the latter part of the Second Five Year Plan period with the basic concept to develop the Dairy industry in the State through establishment of Town Milk supply scheme almost in all important towns of Assam to feed the consumers hygienic, clean milk at reasonable price. Till February 1982 the Dairy Development activities were carried out by the Director of A.H. & Veterinary Department. To expand the role of Dairy activities in the state economy, the Govt. of Assam created a separate Directorate of Dairy Development bifurcating it from the Animal Husbandry and Veterinary Department during the year 1982. The primary focus areas of Dairy Development, Assam are:

- i) Procurement, processing and distribution of milk aiming at economic upliftment of rural milk producers and help urban consumers to get quality milk at a reasonable price.
- ii) Developing adequate infrastructure to ensure procurement and processing of milk produced in the State.
- iii) Organizing milk producers for efficient procurement, processing and marketing
- iv) Awareness among milk producers, traders and consumers regarding clean milk production and consumption.
- v) To modernize the supply of inputs like A.I., Feed, Fodder, Animal Health coverage and Training etc. to the Dairy farmers in the milk shed areas linked with Milk Supply Schemes and Milk Plants.
- vi) To help the villagers in marketing their produce by setting up of suitable transport and marketing organization.

## PRESENT STATUS

- The milk production in Assam has been increased from 824 million litres in 2006-07 to 873 million litres in the year 2014-15.
- The milk processing capacity has been increased from 15,000 litres per day in 2006-07 to 216,000 litres per day in 2014-15.
- Delivery of clean milk to the consumers, concept of Any Time Milk through Milk Vending machine has been started from 2008-09.
- Comprehensive network of Bulk Milk Coolers has been initiated in the state to facilitate processing of milk from the year 2009-10.
- Automatic Milk Collection units in 65 locations in the state are being setup since 2008-09.
- Organised 312 Dairy Cooperative Societies.
- Organised 300 Milk Producer Institutions.
- For efficient maintenance of cold chain from producer level to consumers level following steps have been taken:
  - a) Upgraded 2 numbers of Milk Processing Plants i.e. Nagaon and Bokakhat Milk Processing Plants from 2000 ltrs to 5000 ltrs.
  - b) Revived 10 defunct Chilling Plants.
  - c) Established 59 numbers of bulk coolers in the State.
  - d) Established 53 Milk Collection Centre with Automatic Milk Collection Units.
  - e) Procured 17 numbers of Road Milk Tanker.
  - f) Established a Central Milk Testing Laboratory at Khanapara for checking quality of milk for the consumers.

TABLE – 8.10  
TRENDS OF MILK PRODUCTION IN ASSAM AND INDIA

(In'000 Tonne)

| Year      | 2006-07       | 2007-08       | 2008-09       | 2009-10       | 2010-11       | 2011-12       | 2012-13       | 2013-14       | 2014-15       |
|-----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Assam     | 751<br>(0.74) | 752<br>(0.72) | 753<br>(0.69) | 756<br>(0.67) | 791<br>(0.69) | 796<br>(0.62) | 800<br>(0.60) | 815<br>(0.59) | 829<br>(0.57) |
| All India | 100869        | 104842        | 108587        | 112540        | 114305        | 127904        | 132431        | 13766         | 146314        |

\*Figure in bracket shows the percentage share of Milk production in Assam to All India.

Sources: Directorate of Animal Husbandry and Veterinary, Assam and Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, GOI

## STRATEGIES DURING TWELFTH FIVE YEAR PLAN

- ❖ To give thrust on the programmes to enhance the milk production of the state and programme benefitting the rural dairy farmers for economic upliftment through self employment scope.
- ❖ To continue all projects/schemes existing at the end of the eleventh five year plan with rational proposition for further strengthening wherever it feels to be necessary.
- ❖ To create one milk surplus district per year in convergence with Veterinary department.
- ❖ To avail more benefit out of centrally sponsored schemes under NEC, schemes under World Bank and schemes funded by other related agencies.

To achieve the objectives following ongoing schemes/projects under State Plan, Centrally Sponsored Scheme, World Bank Aided Projects and other schemes are proposed to be taken up during the twelfth Five Year Plan:

### ENHANCEMENT OF MILK PRODUCTION

Thrust has been given upon the projects to enhance milk production of the State through integrated dairy activities. The Dairy Development Department proposed to create opportunities for self employment for economic up-liftment of both the rural as well as urban/peri-urban dairy farmers during the twelfth Five Year Plan period. Accordingly the following steps have been taken:

- Integrated Support Services Scheme for creation of milk surplus district.
- Establishment of Commercial Dairy Unit.
- Milk Marketing.
- Support inputs to dairy farmers.

### MILK PROCESSING FACILITY

To achieve the minimum per capita availability of 208 ml per day as recommended by ICMR, the Dairy Development Department has given thrust in increasing milk production as well as to increase milk processing facility to maintain cold chain covering the entire State for economic upliftment of rural dairy farmers. To achieve the goal following steps have been proposed to be taken:

- To re-establish and develop processing infrastructures of Dairy Development to assist milk producers in enhancing milk production and to establish market linkages.
- Renovation/upgradation of existing milk processing plants and setting up of new Central Dairy/Milk processing plants in potential milk shed areas.
- Establishment of Bulk Milk Coolers in milk potential areas.
- Incorporation of INSULTED Milk Tankers for maintaining cold chain with Bulk Milk Coolers, Milk Processing Plants and Central Dairy.
- Establishment of Milk Vending machines in strategic locations ensuring Any Time Milk to the consumers.
- Establishment of milk booths in major milk consuming areas.
- Establishment of Milk Parlor in each district to ensure availability of quality of quality milk and milk product for the urban consumers.

The Dairy Development Department also planned to organize 20000 rural farmers into Dairy Cooperative Societies (DCSs), SHGs and Milk Producer Institutions (MPIs) so that opportunities can be availed by the groups including training on clean milk production and management practices.

### IMPLEMENTATION OF VARIOUS PROJECTS

The State Dairy Development Department have been implementing various schemes/projects to increase milk production in the State.

#### ASSAM AGRICULTURAL COMPETITIVENESS PROJECT (AACP)

(Externally aided project)

The objective of the project in respect of Dairy Development is to organize the dispersed dairy farmers into Dairy Cooperative Society (DCS) and Self Help Group (SHG) and Milk Producers Institutions (MPIs) to provide both forward and backward linkage to them in order to strengthen their capacity, make them more competitive and economically sustainable and to make them able to take advantage of emerging commercial opportunities. A substantial number of dispersed dairy farmers have been organized in viable groups with assured linkages under the Assam Agricultural Competitiveness Project (AACP).

### CHIEF MINISTER'S SPECIAL PACKAGE FOR DHEMAJI DISTRICT

The Dairy Development department has proposed to establish 13 nos. of Commercial Dairy farms in the District as well as to complete ongoing project of 5000 LPD Dairy Plant. In addition, the Department has planned for upgradation of existing Lahowal Milk Processing Plant.

### INTEGRATED SUPPORT SERVICES FOR CREATION OF MILK SURPLUS DISTRICT

The scheme envisages providing support services to identify dairy clusters of Barpeta District and Sadiya Sub-Division for enhancement of milk production and livelihood avenues to the poor dairy farmers and to create the district as milk surplus district.

### SUPPORT INPUTS TO DAIRY CO-OPERATIVE SOCIETIES (DCSS)

The Dairy Co-operative Societies organized under AACP and IDDP are doing well in milk production. To provide input support for clean milk production as well as enhance milk production, the State Dairy Development Department proposed to give cattle feeds, Green fodder, Milk procurement inputs, feed supplements etc., to the members of DCSSs .

### EMPLOYMENT GENERATION

- All the existing or new Schemes/projects under the Dairy Development, Assam will be carried out in synchronization with each other irrespective of source of fund to achieve the common objective: to increase overall milk production in the state, thereby giving livelihood avenues to the poor dairy farmers.
- The proposed acquisition of Bulk Milk Cooler which will be installed under different Dairy Cooperatives to create employment avenues in the State.
- The Department proposed to provide financial assistance to prospective dairy entrepreneurs to establish Commercial Dairy Farm in Periurban/rural areas for which 66.66 percent of the total unit costs will be provided through bank finance and remaining 33.33 percent will be as Government as subsidy. The department proposed to implement the scheme by setting up 5 numbers of such units to generate employment.

### SCHEMES FOR WOMEN

Though women play an important role in livestock management, their control over income from livestock products and its product is negligible. To empower and economic upliftment of the womenfolk involved in dairy farming, the Dairy Development department has taken special initiative since 2013-14 by forming women groups like Dairy Cooperative Societies, Self Help Groups so that they can avail easy credit, inputs and marketing facilities under the Milk Village scheme. The department also initiated training to give updated exposure and skill development on the animal rearing front and other management activities including marketing of their produce.

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## CHAPTER -IX

## FISHERIES

Assam is endowed with vast fishery resources not only suitable for pisciculture, but also having great potential and prospects for the development of the fisheries sector. The state has vast water resources, with its two major river systems- the mighty Brahmaputra and the Barak, besides wetlands, low-lying areas and derelict water bodies, which all add up, to its vast potential for fish production covering an area of 4.77 lakh hectares, of which beels, tanks and ponds, cover about 2.85 lakh hectares. The state is considered a bio-diversified hotspot, for its diversified aquatic flora and fauna. The state has, so far a record of a total of 217 fish species, out of which 150 species have ornamental importance and 50 species have overseas ornamental value. However, though the state has abundance water resources, it has yet to tap the potential area for inland fish production. Among the fish farming environments prevalent in the state, the most dominant system practiced is semi-intensive polyculture. Basically aquaculture in the state is carp-oriented and the contribution of other species is marginal.

The contribution of the fishery sector to State Domestic Product (at constant 2011-12 prices) was Rs. 499623.00 lakh (with a growth rate of 6.7 percent as per provisional estimates 2013-14 (P) and Rs. 523675 lakh (with a growth rate of 10.26 percent) as per quick estimates 2014-15 (Q).

Moreover, fish not only forms an integral part of the cuisine and culture of the people of Assam, it is also highly preferred and consumed, as fresh fish is an important part of the daily meal. Fisheries development is also very important for the State's economic development, as a livelihood issue for the provision of the required nutrition, employment and income to its people and being traditionally interwoven in their everyday life.

Since the last two decades, fisheries sector has not only achieved remarkable growth. It has also been taken up as a commercial activity and has ushered in a silent revolution throughout the length and breath of the state.

Fisheries department has put in various efforts to further develop this sector by its interventions, encouragement of taking up scientific fish farming methods and adoption of related technologies, quality seed production and establishment of various marketing infrastructures. During the period 2014-15, total fish production in the state has reached the level 282.7 thousand tonnes, which is about 6% higher than its previous year production. However, as per calculations done, the current nutritional requirement of fish is 325 thousand metric tonnes, and the minimum requirement being 11 kgs per capita, per annum. The present per capita availability of fish is about 9 kgs. With the availability and an abundance of 2.85 lakh hectares of the potential area for inland fish production, still better management and fish cultivation to be done on a pure scientific basis. This way, the sector can further enhance and largely contribute towards uplift of its rural livelihood patterns, contribute to its nutritional security and economic prosperity.

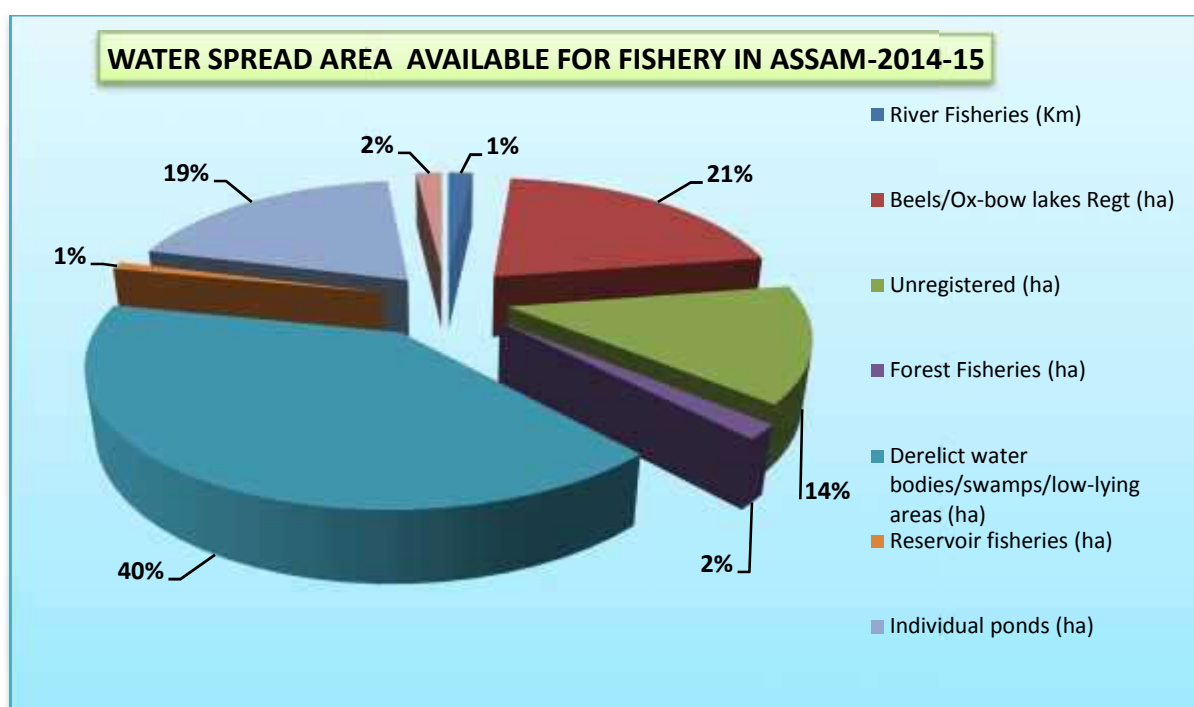
The present major fishery infrastructure, as available in the Fishery Sector are :

- IMC hatcheries (Departmental) : 15 Nos.
- IMC hatcheries (Private) : 373 Nos.
- Prawn hatcheries (Departmental) : 3 Nos.
- Hapa Breeders (Pvt.) : 400 Nos.
- Departmental Farm : 141 Nos.
- Departmental Training Centres : 9 Nos.
- Fish Feed Mills : 8 Nos.
- State Fish Laboratory : 1 No.



TABLE – 9.1  
FISHERY WATER RESOURCES AS PER WATER SPREAD AREA AVAILABLE FOR  
FISHERY IN ASSAM 2014-15

| Sl. No. | Resources                                    | Number                               | Water Spread Area    |
|---------|--|--------------------------------------|----------------------|
| 1       | River Fisheries                              | Main River 2,<br>Tributaries-53      | 4820 Km.             |
| 2.      | Beels/Ox-bow lakes                           | Registered -430<br>Unregistered -767 | 60215 Ha<br>40600 Ha |
| 3.      | Forest Fisheries                             | 71                                   | 5017 Ha              |
| 4.      | Derelict water bodies/swamps/low-lying areas | 3887                                 | 116444 Ha            |
| 5.      | Reservoir fisheries                          | 2                                    | 2553 Ha              |
| 6.      | Individual Ponds                             | 361912                               | 55418 Ha             |
| 7.      | Community Tanks                              | 6308                                 | 5152 Ha              |



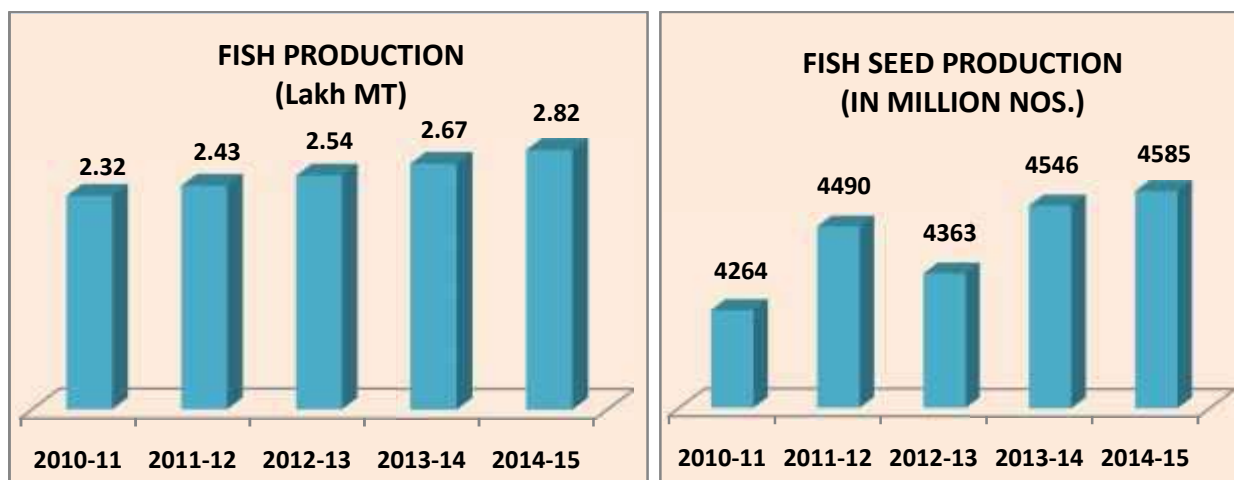
Taking into consideration the vast potential and development prospects of the fisheries sector, the Central as well as the State Government have come up with various schemes. It is hoped that these schemes will go a long way to help the cause of the farmers and see to their well-being, prosperity and development. A system of horizontal expansion has been adopted and followed, by creation of new ponds, reclamation and renovation of existing areas, practice of fish culture through Community/Self Help Groups. Thrust has also been given on vertical expansion through adoption of methods like productivity enhancement, use of improved and advanced

TABLE-9.2  
FISH AND FISH SEED PRODUCTION FOR  
THE LAST FIVE YEARS

| Years   | Fish Production (Lakh MT) | Fish Seed Production (Million nos.) |
|---------|---------------------------|-------------------------------------|
| 2010-11 | 2.32                      | 4264                                |
| 2011-12 | 2.43                      | 4490                                |
| 2012-13 | 2.54                      | 4363                                |
| 2013-14 | 2.67                      | 4546                                |
| 2014-15 | 2.82                      | 4585                                |



culture techniques and better sustainable management practices. Emphasis is also been given and laid on making fish, the best animal protein source in the form of fish available to all and also for the creation of self-employment opportunities.



## BRIEF DESCRIPTION OF THE MAJOR DEVELOPMENT SCHEMES/PROGRAMMES IMPLEMENTED DURING THE YEAR 2014-15

### A. STATE PLAN SCHEMES

#### 1. FISH AND FISH SEED FARMING

It is one of the major schemes implemented by the Department of Fisheries for enhancing fish and fish seed production along with other related activities and infrastructure development. Under this scheme, various programmes has been taken up for fish seed production, namely construction of hatcheries, production and raising of seed in departmental as well as in private farms, assistance given to progressive farmers for production of fingerlings etc. Strategies have also been adopted to narrow down the gap between demand and supply of fish by vertical expansion through productivity enhancement from existing culture areas and by horizontal expansion, through creation of new areas for fish culture. Along with this strategy, programmes have also been implemented, during the last five years, namely construction of new ponds through groups/SHGs/Community/individuals, scientific fish culture, air breathing fish culture like magur and kuchia etc.

During the year 2014-15, the following beneficiary oriented programme has been implemented under the scheme 'Fish and Fish Seed Farming'

#### Construction of New Ponds (Mukhya Mantri Amar Pukhuri Asoni (General and SCSP)

Under this programme selected beneficiaries have been assisted for construction of new ponds and for undertaking scientific fish culture, where the management is vested with the concerned communities and Self Help Groups.

### B. CONSTRUCTION OF NEW PONDS THROUGH WOMEN SHG (MUKHYA MANTRIR MAHILA SAMBRI DDHI ASONI-LAKHIMI) - GENERAL

1. Empowerment of women, being a very important aspect, in the present world scenario, specially for the society as they form the supporting pillars. In the last few years, women in the form of Self Help Groups, has reported to play a very important role in agriculture and allied sectors and to contribute significantly for the upliftment of the rural economy. There is also, the presence of vast scope for the development of women in the fisheries sector, to strengthen themselves both socially and economically, besides being self-employed. With this present scenario, Fisheries Department has taken up programmes for provision of support not only to increase fish production but also to empower themselves through 'Lakhimi' targeting women SHGs.

## 2. RECLAMATION/DEVELOPMENT OF DERELICT WATER BODIES (MUKHY MANTRIR SWANIYOJAN ASONI)

The state of Assam is gifted with about 1,16,000 hectares of derelict water bodies, which are either lying in a unutilized or under-utilized state. These areas are very potential for fish production as they can be reclaimed at comparatively less capital expenditure. After being developed these areas can yield over 3 MT hectares/yearly through the practice of scientific pisciculture, besides providing employment opportunities to the local unemployed youths. With such a strategy, the scheme is been implemented through the involvement of concerned communities by forming SHGs.

## 3. DEVELOPMENT OF INSTITUTIONAL PONDS FOR FISH HARVEST DURING LEAN PERIOD UNDER TANK RESERVOIR FISHERIES

Various institutes and organizations in the State like mandirs, majids, schools, colleges, satras, clubs etc. have ponds or water bodies potential for fish production. With the help of an initial assistance, along with a capacity building programme, a significant quantity of fish can be produced from these ponds. Moreover, during the last few years, there has been an observation and an implication that during the fishing restriction period, from April to July, availability of local fish in the market, comes down considerably and is also at its minimum. This leads to the existence of a large gap in the demand and supply situation of fish, thereby increasing its prices considerably. Thus, to deal with the issue of temporary scarcity of fishes, during the fishing lean period, it is proposed to adopt the culture programme under this scheme in such a way that harvesting is done during the lean period also.

## 4. DISTRICT ADMINISTRATION

Under this particular scheme, construction of departmental infrastructures like the offices of the District and Sub-divisional Fishery Development Officers, along with provision of training halls are taken up. District Meen Bhawans have been constructed under this scheme in Nagaon, Sonitpur, Darrang, Lakhimpur, Cachar, Goalpara, Dibrugarh, Barpeta, Morigaon, Kamrup, Jorhat, Dhemaji, Golaghat and Nalbari. Sub-divisional Meen Bhawans has also been constructed under this scheme at Hojai, Biswanath Chariali, Sadiya, North Salmara, South Salmara and Rangia.

## 5. FISHERY EXTENSION SERVICE

This is a one time assistance to fisherman during the fishing lean period known as the Mukhya Mantrir Matsya Mitra Asoni, under the scheme.

Weather and climatic condition during the monsoon months make it very difficult for the fisherman to go for fishing activities. Additionally, for conservation of indigenous fishes in the natural water bodies in Assam, a fishing ban period has been imposed from 1<sup>st</sup> April to 15<sup>th</sup> July as per Assam Fishery Rules 1953 and Assam Fishery Rules (Amendment) 2005. Thus, the poor fisherman has to pass through a distress situation during the lean season and practically is left with no income or means of livelihood, during this period. With a view to partially relieve them from this situation and for sustenance, during the lean period, the Department has implemented the programme to provide one-time financial assistance @ Rs. 10,000/- to each fisherman family.

## 6. CONSTRUCTION OF HYGIENIC FISH MARKETS

Proper marketing of fish is not only an important aspect for a consumer's safety but as well as to encourage more and more people to take up fisheries as a source of livelihood. Although Assamese people prefer fresh fish, for transportation and marketing shelf life of fish has to be increased by different methods out of which use of ice is the most prevailing one. Whether fish is marketed fresh or iced, hygienic handling and clean market environment is a very essential, to maintain a healthy standards for the consumers, as fish is perishable by nature. In Assam, fish trade is mainly organized by the private sector with the involvement of importers, whole sellers, retailers, vendors at different levels. Existing wholesale, as well as retail fish markets, both in urban and rural areas, is very poor in infrastructure status and sanitary, hygienic conditions are lacking, which is posing a threat to human health. In the rural areas, fish is sold in rural huts, without shed facilities, along with marketing of other commodities like vegetables. Majority of fish markets also face the

problem of very congested area. The state requires and is in dire need of new hygienic fish markets. Hence, it is proposed to construct, as well as remodel existing fish markets with modern amenities for maintaining the minimum of hygienic conditions possible. Construction of hygienic Fish Markets has been taken up by the Department of Fisheries, Assam with this possible background. Construction of such fish Markets have already been completed at Nagaon (Colony), Nalbari (Adabari), Nalbari Municipality area, Karimganj and Silchar.

## 7. RURAL INFRASTRUCTURE DEVELOPMENT FUND (RIDF):

Department of Fisheries, Assam has been implementing different fishery related infrastructure development programmes under NABARD instituted Rural Infrastructure Development Fund (RIDF), contributing towards agriculture growth, rural connectivity and other social sector development. Under this programme 17 beel fisheries has already been developed till date through Assam Fisheries Development Corporation Ltd. Further, upgradation of J. B. Garh Departmental Fish Farm at Raha and development of Low-lying area of Chilabandha beel and Joysagar doloni in Nagaon district are taken up during 2014-15.

### CENTRAL SECTOR SCHEMES

#### 1. FRESH WATER AQUACULTURE UNDER FISH FARMERS DEVELOPMENT AGENCIES

It is a Centrally sponsored subsidy oriented schemes, under which there is provision of new pond construction and development of existing ponds for fish culture activities. The scheme aims at development of individual ponds through involvement of fish farmers by providing them with financial assistance in the form of subsidies and bank loans. The funding pattern of the scheme is 75:25 as Central and State share respectively.

#### 2. DEVELOPMENT OF WATER LOGGED AREAS INTO AQUACULTURE ESTATE

The objective of this scheme is the utilization of water logged areas and derelict water bodies of the State and turn them into Aquaculture Estates for the enhancement of fish production and for the benefit of the local communities. The funding pattern of this scheme is 75:25 as Central and State share respectively.

#### 3. NATIONAL WELFARE FUND FOR FISHERMAN

The main objectives of the scheme are the provision of basis amenities like housing, drinking water, community halls etc. for fishers, to facilitate better living standards for fishers and their families, for upliftment, social and economic securities for active fishers and their dependents and to update knowledge. The following components are being implemented in the State, with fund sharing pattern of 75:25, between the Government of India and State Government.

##### I. HOUSING

Under this scheme, low cost house with plinth area of 35 sq. m. are provided to poor traditional Scheduled Caste fishermen in selected villages, along with construction of community halls and tube wells.

##### II. SAVING-CUM-RELIEF

During the restricted or or lean fishing period, financial assistance is provided to fisherman. Here the contribution by the fisher folk is Rs. 600.00 which is collected over a period of nine months with a matching Govt. of India contribution of Rs. 900.00 and a State Government contribution of Rs. 300.00. The accumulated amount is distributed among the fisherman in three equal installments at the rate of Rs. 600.00 per month.

##### III. FISHERMAN INSURANCE

Under this component, fisher folk which have license are identified or registered with the State Government, could be insured for Rs. 1.00 lakh, against death or permanent disability, Rs. 0.50 lakhs for partial disability. The insurance cover is for a period of 12 months, and the policy would be taken out by FISHCOPFED, in respect of all States.

## F. EXTERNALLY AIDED PROJECT (EAP) ASSAM AGRICULTURAL COMPETITIVENESS PROJECT (AACP)

The Assam Agricultural Competitiveness Project-Additional Financing (AACP-AF) has been formulated with the same project design and objectives of AACP, with scope of making improvements in management and implementation, during a period of three years of the project. The programme proposed, expands the on-going activities and scales up the project's impact and development.

In order to ensure inclusive development, the following beneficiary oriented major components, are targeted at, under this project:

- |                                   |   |        |
|-----------------------------------|---|--------|
| 1. Development of Farmer's Ponds  | : | 800 ha |
| 2. Development of Community Tanks | : | 300 ha |
| 3. Integrated Fish Farming        |   |        |
| a. Pig cum Fish culture           | : | 200 ha |
| b. Paddy cum Fish culture         | : | 100 ha |
| 4. Development of Beel Fisheries  | : | 700 ha |

Unlike AACP which covered the entire state, except the two hill districts AACP-AF has targeted only 12 nos. of districts, selected on the basis of availability of comparatively more water area under ponds and tank fisheries and achieving of more annual fish production than other districts.

### 2. RASTRIYA KRISHI VIKASH YOJANA (RKVY)

A flagship programme of Government of India, introduced in the State by the Fishery Department during the year 2008-09, which is supported by 50% subsidy to fish farmers against schematic cost. The list of beneficiaries under RKVY is recommended by Zila Parishads. The major schemes implemented under RKVY are development of existing ponds, low-lying areas converted to communities tanks, construction of new ponds, creation of nursery and rearing tanks.

One of the remarkable programmes with considerable success under RKVY, is Fresh Water Prawn seed production in artificial sea water in the Freshwater Prawn Hatchery established at Meen Bhawan Complex, Guwahati.

### 3. EXTERNALLY AIDED PROJECT (EAP) ASSAM AGRICULTURAL COMPETITIVENESS PROJECT (AACP AND AACP-ADDITIONAL FINANCING)

This project has an objective to improve Assam's fish industry in an integrated and systematic manner to increase competitiveness among poor and marginal communities, farmers dependent on fish for primary or secondary income, as an effort to alleviate poverty with thrust on production. Various development components under AACP has been implemented in the state since 2004-2005. From 2012, AACP-AF is being implemented with activities aimed at expanding the area, coverage through taking up the programmes in those areas which was not covered under the on-going project to make impact on sustainable livelihood.

### 4. AQUACULTURE DEVELOPMENT UNDER NATIONAL FISHERIES DEVELOPMENT BOARD (NFDB)

Schemes are implemented in the State with financial support from National Fisheries Development Board (NFDB) namely construction of new ponds, Eco-hatcheries, Fish feed mills, renovation of existing ponds, development of departmental fish farms, Training & Demonstration and Awareness Programmes. Significant infrastructure established with NFDB's support are three nos. of Hygienic Wholesale Fish Markets at Nagaon, Cachar and Nalbari. More such markets are in the pipeline for construction in the near future.

During the 11<sup>th</sup> Five year plan period an amount of Rs. 19431.50 lakh was allocated, against which an amount of Rs. 12342.67 lakh was received and utilized for adoption of resources based technology to produce fish to the extent possible, to meet existing demand of fish and to create employment

opportunities. Major achievements during the 11<sup>th</sup> plan period as follows:

- Development of 4800 ha of water area for scientific fish farming.
- Productivity level of Ponds and Tanks has increased from 1000 kgs to 3000 kgs per ha.
- Productivity has increased from 150 kgs to 2500 per ha in derelict water bodies after reclamation.
- Under women specific schemes, 6530 women have received training for rearing of quality fish seed and have been immensely benefited thereby.
- Generation of employment through Self Help Groups (SHGs). Already 701 nos. of SHGs has got benefitted by reclamation of derelict water bodies.

Moreover, a long felt need has been fulfilled during the 11<sup>th</sup> plan period by the construction of District Meen Bhawans, along with farmers training centers and Sub-Divisional Meen Bhawans at District and Sub-Divisional Headquarters. These buildings are the permanent assets for the Department as a whole.

For the 12<sup>th</sup> Five year Plan Period an amount of Rs. 44522.44 lakhs has been allocated. Under the Annual Plan 2012-13, 2013-14 and 2014-15, an amount of Rs. 6115.00 lakhs, Rs. 7688.96 lakhs and Rs. 5825.49 lakhs respectively was allocated, out of which Rs. 4874.01 lakhs, Rs. 4383.57 lakhs and Rs. 4252.50 lakhs have been utilized. Allocation for the Annual Plan 2015-16 is Rs.6103.39 lakh.

In the year 2013-14, total fish production of 2.67 lakh tonnes has been achieved, which is subsequently increased to 2.82 lakh tonnes in 2014-15. During the last three years of the 12<sup>th</sup> Five year plan period, 5702 ha of water area has been developed, covering 31780 individual beneficiaries and 2540 SHGs/communities under different schemes implemented by the department.

Over the period, from 11<sup>th</sup> Five year plan to the current year of the 12<sup>th</sup> Five year plan, significant changes has been brought about, in the fisheries sector, in term of growth and production. During this period, the sector has been growing at an average annual growth rate of 5% in terms of fish production (1.90 lakh tonnes during 2007-08 to 2.82 lakh tonnes during 2014-15)

Besides fish production, major achievement of the department are development of related infrastructure such as development of beel fisheries, hygienic fish markets, fish seed hatcheries, fish feed mills, capacity building programmes, conducted for fish farmers through training, exposure visits, and mass awareness programmes. Considering the vast potentiality and natural resources, there is still ample scope for development of this sector in the state, to usher in further improvement, progress and development initiatives, in the future years to follow.

Important Achievements, and Growth in Fishery Sector, Government of Assam, under the leadership of Shri Tarun Gogoi :

- (1) Around 1,02,180 individuals benefited through different Government schemes in the fishery sector, out of which more than 7,260 are women beneficiaries.
- (2) Fish production has increased from 1.61 lakh tonnes in 2001 to 2.82 lakh tonnes in 2015
- (3) 2,420, Self Help Groups and Communities supported for fish production and related activities.
- (4) State Fishery Department, has been recognized and declared as the best performing fishery department in the country for the year 2008, by the Indian Fisheries Association and the Central Institute of Fisheries Education.
- (5) Training has been imparted to more than 1.25 lakh farmers on fisheries and related activities.

Source : The Assam Tribune, Guwahati, Growth in Fishery Sector, Wednesday, 10<sup>th</sup> February, 2016.

**NEW INITIATIVES:****1. HOLISTIC DEVELOPMENT OF HIGH DENSITY CLUSTER**

In order to develop a self sustained fish production pockets on commercial scale, it is proposed to take up high density cluster villages, for holistic development comprising of production facilities for both fish and fish seed with support for marketing, transport and other allied services. Moreover, there is a proposal for market information to producers for getting better remunerative prices. This development programme is proposed at an amount of Rs. 600.00 lakhs.

**2. JAYANTI RAHU' BROOD FISH MANAGEMENT AT DEPARTMENTAL FARMS**

Jayanti Rahu, is genetically improved strain developed, through selective breeding by Central Institute of Freshwater Aquaculture (CIFA), Bhubaneswar which is capable of growing 40% faster than the normal rohu, due to better food conversion ratio. During 2014-15, it is proposed to procure brood fish and fish seed of this strain, to be raised in the Departmental Fish Farm for distribution to the farmers in the state. An amount of Rs. 10.00 lakhs, has been proposed for this purpose.

Both these two initiatives are proposals under the Scheme Fish and Fish Seed Farming (Draft Annual Plan 2014-15, Planning and Development Department, Assam).

**SECTORAL ALLOCATION FOR ANNUAL PLAN 2015-16:**

**THE SECTORAL ALLOCATION FOR FISHERIES SECTOR, UNDER ANNUAL PLAN 2015-16 ARE AS FOLLOWS**

|   |   | Rs. In lakh    |
|---|---|----------------|
| 1.  | Grants-in Aid                             | 170.00         |
| 2.  | Normal Works                              | 1800.00        |
| 3.  | Scheme Announced in Budget speech 2013-14 | 1000.00        |
| 4.  | CM's Barak Valley package                 | 125.00         |
| 5.  | RIDF/TFC                                  | 988.00         |
| 6.  | State Specific Allocation                 | 1200.00        |
| 7.  | Untide SCA                                | 110.39         |
| <b>TOTAL ALLOCATION FOR ANNUAL PLAN 2015-16</b> |   | <b>5393.39</b> |

**I. SCHEME ANNOUNCED IN BUDGET SPEECH (2013-14): PLAN ALLOCATION 2015-16**

In Fisheries sector. Particular of scheme relate to the Construction of 'Hygienic Fish Markets', and amount of Rs. 1000.00 lakhs, has been allocated.

**II. CM'S SPECIAL PACKAGE FOR BARAK VALLEY: PLAN ALLOCATION FOR 2015-16**

Construction of new group Fishery land minimum 5 bighas per Fishery under Badarpur LAC will be selected by MLA in time of execution 30 nos. of Fisheries @ Rs. 5.00 lakhs under CM's special Package for Barak Valley Phase II for 2014-15, a total of Rs. 125.00 lakhs.

**III. STATE SPECIFIC SCHEMES: PLAN ALLOCATION, 2015-16.**

|    |  | Rs. In lakh |
|----|--|-------------|
|    | Fishery Sector                                 | Allocation  |
| a. | Assistance to Fisherman during lean period     | 50.00       |
| b. | Development of Derelict Water Bodies           | 200.00      |
| c. | Mukhya Mantrir Matsya Bikash Asoni             | 800.00      |
| d. | Construction of new Pond/department farm input | 150.00      |

**IV. UNTIDE SPECIAL CENTRAL ASSISTANCE (SCA) PLAN ALLOCATION 2015-16**

Under this scheme the Borkakota Beel Development at Biahogauri, against the Establishment Cost of Rs. 505.65 lakh and Rs. 110.39 lakh was allocated during the year 2015-16.

## APENDIX-9.1

## DISTRICTWISE NUMBER AND AREA UNDER FISHERIES IN ASSAM, 2014-15

(Area in hect.)

| Sl. No. | Districts     | Reservoir Fisheries |      | Forest Fisheries |      | Beel Fisheries |        | Ponds and Tanks |       | Derelict Water Bodies Swamps |        |
|---------|---------------|---------------------|------|------------------|------|----------------|--------|-----------------|-------|------------------------------|--------|
|         |               | Nos.                | Area | Nos.             | Area | Nos.           | Area   | Nos.            | Area  | Nos.                         | Area   |
| 1       | 2             | 3                   | 4    | 5                | 6    | 7              | 8      | 9               | 10    | 11                           | 12     |
| 1.      | Kokrajhar     | -                   | -    | 2                | 35   | 14             | 955    | 7548            | 1033  | 163                          | 1029   |
| 2.      | Dhubri        | -                   | -    | -                | -    | 156            | 7000   | 21636           | 2833  | 283                          | 8280   |
| 3.      | Goalpara      | -                   | -    | -                | -    | 57             | 6820   | 8865            | 1584  | 70                           | 677    |
| 4.      | Barpeta       | -                   | -    | 11               | 131  | 23             | 6299   | 24084           | 3874  | 160                          | 6119   |
| 5.      | Morigaon      | -                   | -    | 9                | 955  | 84             | 8300   | 10818           | 1703  | 163                          | 1583   |
| 6.      | Nagaon        | -                   | -    | 8                | 410  | 134            | 9919   | 41002           | 6308  | 143                          | 23578  |
| 7.      | Sonitpur      | -                   | -    | 6                | 270  | 60             | 7032   | 14410           | 1713  | 132                          | 461    |
| 8.      | Lakhimpur     | 1                   | 840  | -                | -    | 20             | 6499   | 10612           | 1758  | 68                           | 4273   |
| 9.      | Dhemaji       | -                   | -    | 8                | 900  | 16             | 4575   | 3912            | 442   | 160                          | 731    |
| 10.     | Tinsukia      | -                   | -    | 5                | 240  | 36             | 2957   | 7958            | 1530  | 126                          | 394    |
| 11.     | Dibrugarh     | -                   | -    | 3                | 46   | 38             | 5289   | 6419            | 779   | 115                          | 310    |
| 12.     | Sivasagar     | -                   | -    | 3                | 92   | 66             | 3878   | 9084            | 1180  | 216                          | 7129   |
| 13.     | Jorhat        | -                   | -    | -                | -    | 124            | 6298   | 6371            | 1017  | 245                          | 7592   |
| 14.     | Golaghat      | -                   | -    | 12               | 1720 | 15             | 2600   | 7325            | 980   | 102                          | 557    |
| 15.     | Karbi-Anglong | -                   | -    | -                | -    | 19             | 60     | 7954            | 1431  | 106                          | 332    |
| 16.     | Dima-Hasao    | 1                   | 1713 | -                | -    | 1              | 3      | 630             | 118   | 13                           | 5      |
| 17.     | Cachar        | -                   | -    | -                | -    | 75             | 3359   | 36742           | 6408  | 437                          | 10049  |
| 18.     | Karimganj     | -                   | -    | -                | -    | 37             | 3459   | 21627           | 3855  | 52                           | 31240  |
| 19.     | Hailakandi    | -                   | -    | -                | -    | 35             | 1241   | 34462           | 6657  | 225                          | 2343   |
| 20.     | Bongaigaon    | -                   | -    | 2                | 51   | 47             | 4348   | 6800            | 998   | 70                           | 1606   |
| 21.     | Chirang       | -                   | -    | -                | -    | 16             | 145    | 2995            | 355   | 16                           | 60     |
| 22.     | Kamrup        | -                   | -    | 2                | 167  | 59             | 1418   | 21709           | 3043  | 116                          | 322    |
| 23.     | Kamrup (M)    | -                   | -    |                  |      |                |        |                 |       |                              |        |
| 24.     | Nalbari       | -                   | -    | -                | -    | 19             | 2248   | 22568           | 2695  | 515                          | 3645   |
| 25.     | Baksa         | -                   | -    | -                | -    | 18             | 151    | 8905            | 1800  | 93                           | 326    |
| 26.     | Darrang       | -                   | -    | -                | -    | 27             | 5959   | 23541           | 6323  | 78                           | 3713   |
| 27.     | Udalguri      | -                   | -    | -                | -    | 1              | 5      | 273             | 153   | 20                           | 90     |
|         | ASSAM         | 2                   | 2553 | 71               | 5017 | 1197           | 100817 | 368250          | 60570 | 3887                         | 116444 |

Source: Directorate of Fisheries



## APPENDIX- 9.2

## DISTRICT-WISE NUMBER OF HATCHERIES, FISH SEED AND PRODUCTION IN ASSAM, 2014-15

| Sl. No. | District      | No. of Hatcheries |      | Production of Fish Seed (in Million Nos.) |         | Production of Fish (in tonne) |
|---------|---------------|-------------------|------|---|---------|-------------------------------|
|         |               | Govt.             | Pvt. | Govt.                                     | Pvt.    |                               |
| 1       | 2             | 3                 | 4    | 5   | 6       | 7                             |
| 1.      | Kokrajhar     | 1                 | 3    | -   | 45.70   | 4100                          |
| 2.      | Dhubri        | 0                 | 10   | -   | 9.51    | 15130                         |
| 3.      | Goalpara      | 0                 | 9    | -   | 117.50  | 7660                          |
| 4.      | Barpeta       | 0                 | 43   | 0.50                                      | 2328.33 | 17230                         |
| 5.      | Morigaon      | 0                 | 31   | -   | 63.77   | 13950                         |
| 6.      | Nagaon        | 1                 | 125  | 1.67                                      | 1172.83 | 29610                         |
| 7.      | Sonitpur      | 1                 | 7    | 0.12                                      | 19.36   | 8160                          |
| 8.      | Lakhimpur     | 1                 | 9    | 0.28                                      | 29.90   | 12350                         |
| 9.      | Dhemaji       | 0                 | 8    | -   | 17.00   | 5510                          |
| 10.     | Tinsukia      | 0                 | 12   | -   | 15.75   | 72289                         |
| 11.     | Dibrugarh     | 1                 | 8    | 0.06                                      | 22.70   | 10660                         |
| 12.     | Sivasagar     | 1                 | 3    | 0.31                                      | 29.50   | 11260                         |
| 13.     | Jorhat        | 1                 | 6    | -   | 8.00    | 13720                         |
| 14.     | Golaghat      | 0                 | 9    | -   | 30.05   | 8510                          |
| 15.     | Karbi-Anglong | 5                 | 1    | -   | 0.00    | 2220                          |
| 16.     | Dima-Hasao    | 0                 | 0    | -   | 0.00    | 790                           |
| 17.     | Cachar        | 1                 | 12   | -   | 10.00   | 21050                         |
| 18.     | Karimganj     | 0                 | 25   | -   | 90.00   | 17750                         |
| 19.     | Hailakandi    | 0                 | 4    | -   | 212.92  | 10180                         |
| 20.     | Bongaigaon    | 1                 | 5    | -   | 18.50   | 7210                          |
| 21.     | Chirang       | 0                 | 1    | -   | 109.15  | 2010                          |
| 22.     | Kamrup        | 1                 | 12   | 0.06                                      | 127.59  | 22150                         |
| 23.     | Kamrup (M)    | -                 | -    | -   | -       |                               |
| 24.     | Nalbari       | 0                 | 12   | -   | 8.60    | 11340                         |
| 25.     | Baksa         | 1                 | 5    | -   | 47.02   | 5561                          |
| 26.     | Darrang       | 2                 | 11   | 0.20                                      | 24.07   | 10050                         |
| 27.     | Udalguri      | 0                 | 2    | -   | 25.00   | 7250                          |
|         | ASSAM         | 18                | 373  | 3.20                                      | 4582.75 | 282700                        |

Source: Directorate of Fisheries



## APPENDIX- 9.3

## DISTRICT-WISE FISH PRODUCTION, FISH IMPORTED AND REGISTERED FISH MARKET IN ASSAM 2014-15

| Sl. No. | District      | Production of Fish | Fish imported from other State | Nos. Of Registered Fish Market |          |
|---------|---------------|--------------------|--------------------------------|--------------------------------|----------|
|         |               | (in tonne)         | (In tonne)                     | Raw Fish                       | Dry Fish |
| 1       | 2             | 3                  | 4                              | 5                              | 6        |
| 1.      | Kokrajhar     | 4100               | 450                            | 7                              | -        |
| 2.      | Dhubri        | 15130              | 480                            | 8                              | -        |
| 3.      | Goalpara      | 7660               | 430                            | 4                              | -        |
| 4.      | Barpeta       | 17230              | 340                            | 8                              | -        |
| 5.      | Morigaon      | 13950              | 290                            | 2                              | 1        |
| 6.      | Nagaon        | 29610              | 475                            | 11                             | -        |
| 7.      | Sonitpur      | 8160               | 495                            | 5                              | -        |
| 8.      | Lakhimpur     | 12350              | 240                            | 3                              | -        |
| 9.      | Dhemaji       | 5510               | 200                            | 3                              | -        |
| 10.     | Tinsukia      | 7289               | 515                            | 4                              | -        |
| 11.     | Dibrugarh     | 10660              | 410                            | 3                              | -        |
| 12.     | Sivasagar     | 11260              | 495                            | 3                              | -        |
| 13.     | Jorhat        | 13720              | 530                            | 2                              | -        |
| 14.     | Golaghat      | 8510               | 450                            | 4                              | -        |
| 15.     | Karbi-Anglong | 2220               | 260                            | 3                              | -        |
| 16.     | Dima-Hasao    | 790                | 105                            | 2                              | -        |
| 17.     | Cachar        | 21050              | 695                            | 2                              | -        |
| 18.     | Karimganj     | 17750              | 470                            | 4                              | -        |
| 19.     | Hailakandi    | 10180              | 510                            | 2                              | -        |
| 20.     | Bongaigaon    | 7210               | 460                            | 4                              | -        |
| 21.     | Chirang       | 2010               | 230                            | 1                              | -        |
| 22.     | Kamrup        | 22150              | 2720                           | 16                             | 1        |
| 23.     | Kamrup (M)    |                    |                                |                                |          |
| 24.     | Nalbari       | 11340              | 425                            | 5                              | -        |
| 25.     | Baksa         | 5561               | 225                            | 6                              | -        |
| 26.     | Darrang       | 10050              | 470                            | 7                              | -        |
| 27.     | Udalguri      | 7250               | 270                            | 2                              | -        |
|         | ASSAM         | 282700             | 12640                          | 121                            | 2        |

Source: Directorate of Fisheries

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## CHAPTER -X

### FORESTRY

Forestry is a very vital sector of the state. The State Forest Department has been entrusted the maintenance of Forest, its produce and the Wild Life in the State. In the recent past, the issue of environment protection, conservation of natural resources has not only been given wide attention and gained importance, both in the state and national level. As a result of the same, various N.G.Os, along with the Forest Department has come forward to see to the protection and maintenance of the Forestry Sector of the State, with added responsibilities thereby.

The State of Assam is enriched with an intensive forest area and huge wealth of valuable forest products, enriched with different species, variety of flora and fauna. Since times immemorial, people of Assam have also been dependent upon its forest, to meet to their daily needs and requirements. As per the National Forest Policy, the minimum desired area considered safe for a tropical country like India is about 33 percent. As per broad policy recommendations, forest area in the Himalayas & the Peninsular hills should be about 60 percent, and about 20 percent in the Great Plain.

#### RECORDED FOREST AREA

In Assam, the recorded forest area is about 26,832 sq. kms, accounting for 34.21 percent of the total geographical area of the State, with a share of 3.48 percent of the total forest area of the country, as a whole, as per India State Forest Report 2013. Out of the total recorded forest area, Reserve forest area constitutes 17864 sq kms. i.e., 66.58 percent of the total area, and un-classed forest constitutes 8968 sq kms i.e, 33.42 percent of the total area.

#### FOREST COVER

There has been an increase of 5871 sq kms in the country's forest area, since 2011 according to the biennial "India State Forest Report 2013." As per the report, moderately dense forest areas has decreased and depleted due to the increase in population, grazing and encroachments. Of the country's total forest cover, the North Eastern States, account for one-fourth of the same, though there is a net decline of 627 sq km in the forest cover, as compared to forest cover assessment made in the year 2011.

The forest cover in the state of Assam was 27,673 sq kms as per state Forest Report 2011. There is a decrease of 2 sq. kms, in the total forest cover in the state, as per India State Forest Report 2013 to 27671 sq. kms, which is 35.28 percent of the total geographical area of the State. This decrease is due to encroachment in the forest land, biotic pressure and shifting cultivation. Forest Cover in different Forest types are as follows:

|    |                                 |         |
|----|---------------------------------|---------|
| a) | Tropical Wet Evergreen Forest   | 12.04 % |
| b) | Tropical Semi Evergreen Forest  | 51.71 % |
| c) | Tropical Moist Deciduous Forest | 25.64 % |
| d) | Tropical Dry Deciduous Forest   | 0.09 %  |
| e) | Subtropical Pine Forest         | 0.45 %  |
| g) | Plantation/TOF                  | 10.07 % |

#### FOREST CANOPY

In terms of forest canopy density classes as per India State Forest Report 2013, the state has very dense forests of 1444 sq kms. Moderately dense forest of 11345 sq kms, and open forest of 14,825 sq kms.

TABLE -10.1  
TRENDS IN THE COVER IN ASSAM

Area in sq. kms.

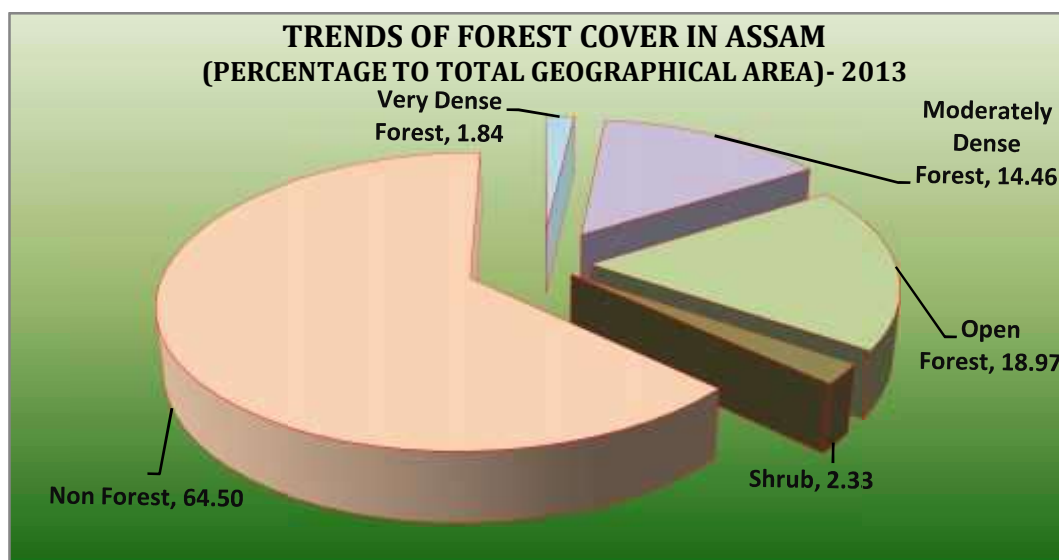
| Item                                 | Very Dense Forest | Moderately Dense Forest | Open Forest       | Shrub         | Non Forest       | Geographical Area |
|--------------------------------------|-------------------|-------------------------|-------------------|---------------|------------------|-------------------|
| As per Assessment in 2009            | 1481<br>(1.89)    | 11558<br>(14.73)        | 14673<br>(18.71)  | 179<br>(0.23) | 50567<br>(64.47) | 78,438            |
| As per Assessment in 2011            | 1,444<br>(1.84)   | 11,404<br>(14.53)       | 14825<br>(18.90)  | 182<br>(2.33) | 50583<br>(64.49) | 78,438            |
| As per Assessment in 2013            | 1,444<br>(1.84)   | 11,345<br>(14.46)       | 14,882<br>(18.97) | 182<br>(2.33) | 50585<br>(64.50) | 78,438            |
| Net Change in 2013 over 2011 (-)/(+) | 0                 | -59                     | +57               | 0             | +2               |                   |

Note: Figures in brackets indicate percentages to the total geographical area.

Source : Forest Survey of India, 2011 and 2013

The Table-10.1, above shows the trends of Forest Cover and its details, as per Assessments made in 2009, 2011 and 2013. It reveals, there is a depletion of 59.0 sq kms of Moderately dense forest cover in the state and an addition of 57.0 sq. kms of Open Forest cover, as per assessment made in the period 2011 and 2013. Besides forest cover, there is 1582 sq. kms of Tree Cover in the State, as per report. Thus, the total of forest cover and tree cover is calculated as 37.29 percent of the total geographical area of the state and 3.70 percent of total forest and tree cover of the country as a whole. The per capita forest cover and tree cover in the state is calculated as 0.094 hectares.

Table-10.1 also reveals, that there is a decrease of 17 sq kms, in respect of very dense forest and 154 sq. kms in Moderately dense forest and an increase 152 sq kms in Open forest area in the state. The National Forest Policies 1952 and 1988, aims at having one third of the country's land area under forest and tree cover.



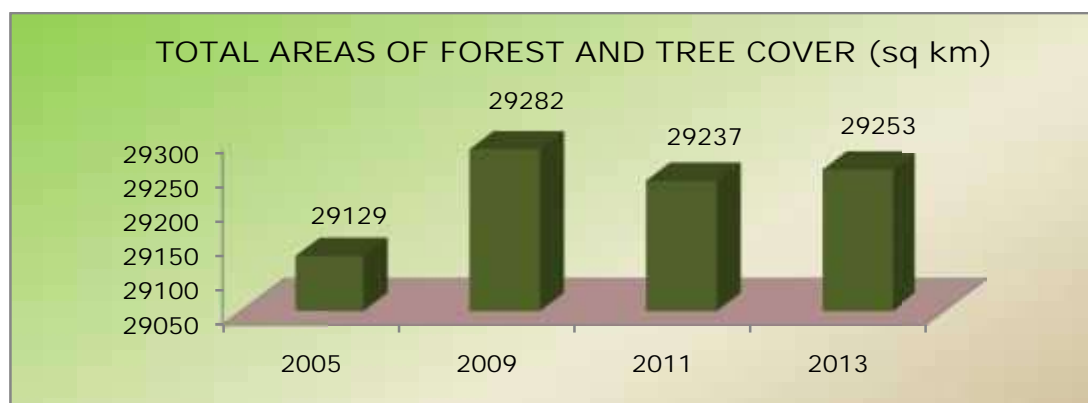
### TREE COVER

The Forest Survey Assessment Report, published by the Ministry of Forest and Environment, Govt. of India, estimates, the tree cover in the state as 1582 sq kms in the year 2013 i.e., 2.0 percent of the geographical area of the state. In the assessment made in 2011, the estimated tree cover in the state was 1564 sq. kms i.e., 1.99 percent of the total geographical area of the state.

TABLE-10.2  
FOREST AND TREE COVER IN THE STATE

| Forest and Tree cover   | Units      | 2005  | 2009  | 2011  | 2013  |
|---|------------|-------|-------|-------|-------|
| Area of Forest Cover  | Sq. kms    | 27645 | 27692 | 27673 | 27671 |
| Area of Tree cover  | Sq. kms    | 1484  | 1590  | 1564  | 1582  |
| Total areas of Forest and Tree cover                              | Sq. kms    | 29129 | 29282 | 29237 | 29253 |
| Forest and Tree cover to the Total Geographical area of the state | Percentage | 37.13 | 37.33 | 37.27 | 37.29 |

Source: Forest Survey of India Reports, 2005, 2009, 2011 and 2013



### URBAN TREE COVER

Trees which are grown outside the forest area, in urban areas also significantly contribute not only in clearing the urban environment but also in supplying and meeting the timber and fuel wood requirements of poor people living in the urban areas of the country. According to the State Forest Report 2013, the total urban tree cover in the state, is estimated to be 128.0 sq. kms. i.e., 13.27 percent of total urban area of the state. The total volume in urban tree cover is estimated as 1.2 million cubic metres.

### BAMBOO RESOURCES IN THE FOREST

The North East Region, of the country has the highest concentration of Bamboo, which accounts for 60 percent of the total bamboo of the country, as a whole. As a State, Assam has an extensive growth of bamboo, with ample scope for the provision of raw materials to support and flourish the growth of bamboo based industries in the state. In the forest areas of the state, the extent of bamboo bearing area is 7238 sq. kms. The density wise details of bamboo bearing area in the Recorded forest area of the state is presented in Table-10.3 below:

TABLE – 10.3  
BAMBOO BEARING AREA BY DENSITY IN RECORDED FOREST AREA

| Recorded Forest Area | Area in sq. kms. |              |                  |               |                     |                     |
|----------------------|------------------|--------------|------------------|---------------|---------------------|---------------------|
|                      | Pure Bamboo      | Dense Bamboo | Scattered Bamboo | Clumps hacked | Bamboo regeneration | Area without Bamboo |
| 26,832               | 105              | 4,049        | 2,878            | 166           | 40                  | 19,594              |

Source : Forest Survey of India Report, 2011.

### STATE FOREST PROFILE

As per, Forest profile of the State, the Reserved Forest area and proposed Reserve Forest area is 13973 sq kms. and 1757 sq kms respectively in 2014-15, as reported by the State Forest Department. The total Forest area excluding unclassified State Forest is 19352 sq. kms and the area under Protected Area Network is 3621 sq. kms in 2014-15, as reported. The reserved forest area constitutes around 18 percent and the total forest area excluding unclassified forest constitutes 25

percent of the total geographical area of the state. However, the scenario within the notified area in the state, a gloomy picture is depicted in terms of degradation as noticed during the last 20 years, due to various biotic factors, encroachment of forest land and shifting cultivation. As a result, considerable rich bio-diversity has been lost, and this needs to be dealt with, stopped and re-build once again, to arrest further degradation to the environment.

The thrust areas identified by the State Forest Department are as follows:

- (1) Preservation of the existing biodiversities
- (2) Arresting the trend of existing degradation, reverting the process of re-afforestation, and extension of forestry with multiple stake holders.
- (3) Preservation and development of the existing Protected Area Network (PAN) and their expansion in suitable areas.
- (4) Improvement of research and development activities in Forestry and Wildlife
- (5) Bridging the gaps in infrastructural and Logistical front.

### FOREST ROADS

For patrolling inside the Forest Area and to harvest the forest produces, improvement and development of the creation of infrastructure is very essential from the point of view of forest management context. Accordingly, the State Forest Department has given special emphasis on the matter and propose to improve 150 kms of forest roads with 50 nos. of culverts during the 12<sup>th</sup> five year plan period. Statistics of forest roads in Assam is shown in Table-10.4 below:

TABLE – 10.4  
FOREST ROADS IN ASSAM (CUMULATIVE)

| Category of Roads | Length in Kms |            |           |               |
|-------------------|---------------|------------|-----------|---------------|
|                   | Surfaced      | Unsurfaced | Motorable | Non-Motorable |
| 2012              | 635.84        | 8631.03    | 5060.26   | 3570.77       |
| 2013              | 640.635       | 10672.647  | 6235.357  | 4437.29       |
| 2014              | 723.435       | 12729.627  | 7628.177  | 5101.45       |

Source : Office of the Principal Chief Conservator of Forest & Head of Forest Force, Assam.

### OUT-TURN OF FOREST PRODUCE AND REVENUE

The various forest products of the State, mainly comprises of Major forest produce includes Industrial Wood or Timber namely Teak, Shisan, Sal, Deodar, Chir, Kait and in others, Pulp & Match wood, Round wood and Fuel Wood. Minor forest products includes Bamboo, Sand, Gravel, Stone, Silt, Clay, Thatch, Others etc. The production of various forest produce and out turn in the state is shown in Table-10.5 below:

TABLE – 10.5  
PRODUCTION AND OUTTURN OF FOREST PRODUCTS IN ASSAM

| Forest Produces        | Units             | 2009     | 2010    | 2011    | 2012    | 2013    | 2014    |
|------------------------|-------------------|----------|---------|---------|---------|---------|---------|
| Industrial Wood/Timber | Cubic metres      | 9839     | 34142   | 19782   | 10804   | 47021   | 78629   |
| Fuel Wood              | Stack Cubic metre | 16063    | 1289    | 807     | 461     | 1969    | 3469    |
| Sand                   | Cubic metre       | 2905333  | 2470587 | 3153610 | 1009242 | 7411950 | 4775406 |
| Gravel/Stone           | Cubic metre       | 34269919 | 1979815 | 1801173 | 1193385 | 3498174 | 8587090 |
| Silt/Clay              | Cubic metre       | 2243569  | 1730252 | 771577  | 248126  | 375480  | 1186372 |
| Others                 | Cubic metre       |          |         |         |         | 2133    | 128988  |
| TOTAL                  |                   | 4192455  | 6579400 | 3164926 | 1051568 | 8015506 | 2651610 |

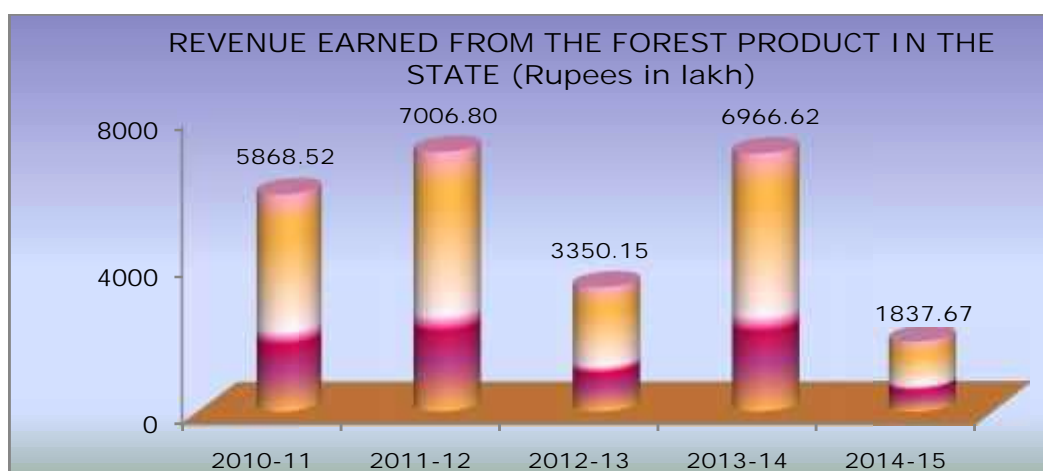
Source: Office of the Principal Chief Conservator of Forest, Assam

The State Government earns a good amount of revenue from its various forest produces. The revenue earned from the various forest products, during the last few years are shown in Table-10.6 below:

TABLE – 10.6  
REVENUE EARNED FROM VARIOUS FOREST PRODUCTS IN THE STATE

| Items        | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|--------------|---------|---------|---------|---------|---------|
| Timber       | 815.17  | 713.80  | 405.40  | 275.75  | 2351.63 |
| Fuel Wood    | 1.17    | 1.35    | 1.39    | 1.51    | 2.96    |
| Sands        | 2720.78 | 3153.60 | 1034.27 | 8045.03 | 6509.23 |
| Gravel/Stone | 1360.39 | 2431.58 | 1551.40 | 4947.68 | 9356.67 |
| Silt/Clay    | 257.19  | 115.73  | 65.97   | 120.06  | 173.79  |
| Others       | 713.82  | 590.74  | 291.72  | 137.67  | 772.86  |
| Total        | 5868.52 | 7006.80 | 3350.15 | 6966.62 | 1837.67 |

Source: Office of the Principal Conservator of Forest & Head of the Forest Force, Assam.



## PROTECTED AREA-WILDLIFE, NATIONAL PARKS & SANCTUARIES

Wild and Magnificent, describes the state of Assam, in true sense, a place of enviable natural beauty not only in terms of her mystic charm but also in the qualities of its wildlife. The mystic nature and the precious natural wealth have combined together to make this land as one of the most cherished tourist destination in the country. This goes for its wild habitats, warm hospitable people, who all make the discerning travellers spellbound.

Assam, has as many as five national parks, two of which are designated as World Heritage Sites by UNESCO in 1985. There are also twenty wildlife sanctuaries, numerous reserved forests and many perennial water bodies. These national parks, and wildlife reserves are the safe haven for a wide range of rare and endangered animals, birds, and rich floral diversity. Here the wild side of Assam is as mysterious and magnificent as the natural beauty of the state.

The wildlife Act, provided for setting up national parks and sanctuaries for wildlife. In the State of Assam, the total wildlife Protected Areas is 3925 sq kms. This protected area network in Assam includes five (5 nos.) of National Parks, and eighteen (18 nos) of wildlife Sanctuaries covering an area of 3592.94 sq. kms., constituting 4.6 percent of the geographical area. As per Sectoral Allocation for Annual plan 2015-16, an amount of Rs. 13653.00 lakhs was allocated for Environment & Forest out of which Rs. 1510.00 lakhs was allocated for normal works, Rs. 700.00 lakhs was allocated for Chief Minister's Special Package & ABY, Rs. 30.00 lakhs was allocated for CM's Dhakuakhana Package, Rs. 8818.00 lakhs was allocated for RJDF/TFC, Rs. 50.00 lakhs was allocated for State Specific Schemes, Rs. 200.00 lakhs was allocated for scheme announced by CM on 01.01.2015, Rs. 145.00 lakhs was allocated as State share, Rs. 2200.00 lakhs was allocated as Central Assistance to State Plan (Block Grant & CS).

For Environment & Forest, Chief Minister's Special Package including ABY, Allocation 2015-16, out of a total of Rs. 700.00 lakhs, Rs. 400.00 lakhs was allocated for the Scheme Reduction of man-

elephant conflict and to adequately compensate the victims and Rs. 300.00 lakhs was allocated for the Scheme Plantation in Community Places.

For Social Forestry, under CM's Special Package for Dhakuakhana Plan Allocation 2015-16, Rs.30.00 lakhs was given for the scheme Plantation of Subansiri Abandon River near Alimur Baligaon along with Boundary Fencing works.

Under State Specific Schemes: Plan Allocation 2015-16, an amount of Rs. 50.00 lakhs was allocated for Bio-diversity Board for Environment Forests Sector.

Under Block Grant & Central Assistance to State, Plan Allocation 2015-16, an amount of Rs.800.00 lakhs (100%) was allocated for the scheme National Afforestation Programme (National Mission for a Green India), Rs. 400.00 lakhs (100%) was allocated for Integrated Development of Wild Life Habitats and Rs. 1145.00 lakhs (90%:10%) Central-State share was allocated for Project Tiger, Rs. 1000.00 lakhs and Rs. 145.00 lakh, as Central and State share respectively and as a part of Schemes Announced by the Hon'ble Chief Minister on 1<sup>st</sup> January 2015, an amount of Rs.200.00 lakhs was allocated for State Environment Management Authority as Allocation for Environment & Forests, 2015-16.

The Category wise Wildlife Protected area is shown in Table-10.7 below as follows:

TABLE-10.7  
AREA OF THE NATIONAL PARKS AND WILDLIFE SANCTUARIES  
IN ASSAM, 2014-15

| Name of the National Park    | Location (District)         | Area in Sq. Km. |
|------------------------------|-----------------------------|-----------------|
| Kaziranga National Park      | Golaghat, Nagaon & Sonitpur | 858.98          |
| Manas National Park          | Chirang and Baksa           | 500.00          |
| Orang National Park          | Udalguri and Sonitpur       | 78.88           |
| Nameri National Park         | Sonitpur                    | 212.00          |
| Dibru-Saikhowa National Park | Dibrugarh and Tinsukia      | 425.00          |

WILDLIFE SANCTUARIES (WLS)

| Name of the Wildlife Sanctuaries | Location (District)    | Area in Sq. Km. |
|----------------------------------|------------------------|-----------------|
| Bhejan-Borajan-Padumoni WLS      | Tinsukia               | 7.22            |
| Panidehing WLS                   | Sivasagar              | 33.93           |
| Gibbon WLS                       | Jorhat                 | 20.98           |
| Nambor-Doigurung WLS             | Golaghat               | 97.15           |
| Garampani WLS                    | Karbi Anglong          | 6.05            |
| Nambor WLS                       | Karbi Anglong          | 37.00           |
| East Karbi Anlong WLS            | Karbi Anglong          | 221.81          |
| Marat Longri WLS                 | Karbi Anglong          | 451.00          |
| Burhachapori WLS                 | Sonitpur               | 44.06           |
| Laokhowa WLS                     | Nagaon                 | 70.13           |
| Pabitora WLS                     | Morigaon               | 38.80           |
| Sonai-Rupai WLS                  | Sonitpur               | 220.00          |
| Barnadi WLS                      | Udalguri               | 26.22           |
| Chakrasila WLS                   | Kokrajhar              | 45.56           |
| Dihing-Patkai WLS                | Dibrugarh and Tinsukia | 111.19          |
| Barail WLS                       | Cachar                 | 326.25          |
| Amchang WLS                      | Kamrup (Metro)         | 78.64           |
| Deepor Beel Wildlife Sanctuary   | Kamrup (Metro)         | 4.14            |

PROPOSED WILDLIFE SANCTUARIES

| Name of the Proposed Wildlife Sanctuaries | Location (District) | Area in Sq. Km. |
|---|---------------------|-----------------|
| North Karbi Anglong WLS                   | Karbi Anglong       | 96.00           |
| Bardoibam Beelmukh WLS                    | Lakhimpur           | 11.25           |

Source: Chief Conservator of Forest (WL), Assam.



## WILDLIFE PRESERVES

Assam, has more than 70 percent of the world's population of one-horned rhinos, is the herbivore's ultimate abode. The bulk of these rhinos-2,329 as per 2013 Census are in Kaziranga National Park, the epicenter of two biodiversity hotspots straddling Northeast India.

The other wildlife preserves in the Northeast cater to a set of rare animals, birds, reptiles and amphibians, besides harboring 50% of India's butterfly species. Together, they occupy 36.67 percent of Assam's landmass.

### KAZIRANGA NATIONAL PARK

Established in 1905, Kaziranga, is a remarkable biodiversity hotspot, unlike any other in the world. It is also a home to rare and endangered mammals, birds, aquatic fauna and a considerable amount of flora.

It is the most popular abode of the one horned rhinoceros, has the highest concentration of the world's Royal Bengal tigers. It is also home to nine of 14 primate species found across South Asia, the purest breed of Asiatic water buffalo and one of the largest herds of Asian elephants Kaziranga National Park has the following.

- 80% of the worlds population of one horned rhinoceroses
- Highest ecological density of Royal Bengal Tiger
- Worlds largest population of Asiatic wild Buffalo
- Nearly 500 species of birds
- Significant population of Asiatic elephant
- Last surviving population of Eastern Swamp Deer

The other wildlife found here are Leopards, fishing cat, other known cats, large Indian civet, sambar, barking deer, hog deer, gaur, hog badger, hoolock, gibbon, caped langur, pangolin, Assamese macaque, rhesus macaque, sloth bear, other Gangetic dolphin and birds like Greater Adjutant stork, lesser Adjutant stork, hornbill, fishing eagle, king fisher, green pigeon, myna, Bengal florican, osprey etc.

Kaziranga is a unique mix of grasslands, wetlands, forestlands, and sandwiched between Brahmaputra in the north and National Highway 37 to the south. It is a UNESCO World Heritage Site, a birdwatcher's paradise, offering a range of quality accommodation and add on activities like elephant ride, jeep safaris, Tea Garden visit, hill trekking and visit to a nearly Archaeological site at Numaligarh, 35 kms away from the National Park.

### 2. MANAS NATIONAL PARK

Pristine in its beauty, and forming one of the most stunning geographical locations in the world. The 500 sq kms Manas wears many hats, Declared World Heritage Site by UNESCO in 1985. Tiger Reserve, Elephant Reserve and Biosphere Reserve- it extends miles into adjoining Bhutan. Sited 176 kms. Northwest of Guwahati, it derives its name from river Manas flowing through it. Vegetation varying from river-nurture grasslands, swamps, sub- Himalayan mountain forests, makes it home to a large number of wild animals and more than 20 endangered species. It is also famous, as an important Bird area.

- Mammals 55 rare and endangered species
- Reptiles : 50 species
- Birds : 500 species

### OTHER WILDLIFE PRESENT ARE

Royal Bengal Tiger, Leopard, clouded leopard, wild water buffalo, Asiatic elephant, Asiatic Water buffalo, Rhinos, red panda, Golden languar, Swamp deer, Barking deer, Hog Deer, Gaur, Sambar, Sloth bear, Himalayan Black bear, Golden cat, Fishing cat, Toddy cat, Binturung, large Indian Civet, highly endangered roofed turtle, hispid hare, Pygmy hog and a wide variety of birds reptiles, especially the Burmese Rock Python etc.



### (3) ORANG RAJIV GANDHI NATIONAL PARK

The smallest of Assam's five national parks, 78.8 sq. kms, but is no less significant from the ecological points of view. Its landscape, flora and fauna are similar to Kaziranga national Park. It is a microcosm of Kaziranga across river Brahmaputra, and is often called Miniature Kaziranga.

Orang is rich in vegetation is also a birdwatcher's paradise with a variety of resident and migratory birds such as green pigeon, Bengal florican, spot-billed pelican, black necked stork, Greater Adjutant stork, etc.

Orang Rajiv Gandhi National Park, can be best enjoyed an elephant back ride, an exploration of its local villages and tea estates for an ethnic flavour.

### (4) NAMERI NATIONAL PARK

A sub-Himalayan expanse of semi-evergreen and moist deciduous forests, Nameri is home to one of the largest and endangered groups of Asian elephants and Royal Bengal Tigers. The 212 sq. kms park adjoins the 800 sq km Pakhui Tiger Reserve in Arunachal Pradesh, making it an important elephant corridor. Nameri is also known for more than 600 varieties of trees and plants many with medicinal properties. It was declared a Tiger Reserve for being the striped cat's favourite haunt in the Himalayan foothills. Under the elephant and tiger's shadow are leopards, Gaur (Indian Bison), Dhole (Asiatic Wild dog), Himalayan Black Bear, Capped Langur, Wild Bear, Giant Indian Squirrel, Asiatic Giant Moth, Clouded Leopard, Hornbill and other animals.

Nameri and adjoining protected areas such as Sonai-Rupai Wildlife Sanctuary are crucial for the reintroduction of the highly endangered pygmy hog in the wild and its survival. The park is also a birdwatcher's paradise with more than 300 avian species such as white-winged wood duck, great pied hornbill, wreathed hornbill, rufous-necked hornbill, black stork, black bearded bee-eater and plover.

### (5) DIBRU-SAIKHOWA NATIONAL PARK

Assam's easternmost national park, the 425 sq km. Dibru-Saikhowa, is essentially an island formed by rivers Brahmaputra and Diboru. Located 40 kms from eastern Assam's Dibrugarh town, it boasts of a sizable number of tigers, leopards, elephants, Asiatic water buffaloes, but feral horses are its prime attraction. These horses with a World War –II connection, number more than 80.

Among the most vibrant of India's wildlife preserves with serenely scenic beauty. It has the biogeographical properties of both Indian and Malayan sub-regions. Its topography ensures a safe haven for extremely rare species of wildlife, herbivores and carnivores, besides Gangetic river dolphins, eight species of turtles and 382 species of birds.

The park comprises of semi-evergreen, deciduous, littoral, swamps and patches of wet evergreen forests. It facilitate a wide varieties of trees, plants, massive grasses, providing refuge to mammals like clouded leopards, Jungle Cat, Sloth bear, Dhole, Small Indian Civet, Malayan giant Squirrel, Chinese pangolin Pig-tailed macaque, Assamese macaque, Capped langur besides Swamp, Barking and Hog deer.

### PROJECT TIGER

Assam has three Tiger Reserves, namely Kaziranga, Manas and Nameri. To ensure the conservation of Tiger, the State Government has further notified the Tiger Conservation Rules, 2010. Government of India, has also been requested to directly fund these Tiger Conservation Foundations. Kaziranga and Manas National parks, are been declared as World Heritage Sites by UNESCO.

During the 12<sup>th</sup> Five Year Plan, a sum of Rs. 2200.00 lakhs was proposed for preservation of Tiger Population under the component of 3 nos. of Tiger Reserve on 50:50 Central and State share basis. During 2014-15, a sum of Rs. 300.00 lakhs was proposed for implementation of schemes to preserve the Tiger population, by the provision of all round protective measures.

Emphasis has also been given for the conservation of the one-horned Rhinos, which is the pride of the state. The elephant, rhino, Tiger and Swamp Deer population is increasing, as per Census reports. The National Parks & Wildlife Sanctuaries of the State, a total of 25 in numbers, are managed with the assistance under Development of National Parks & Sanctuaries. The expenditure on ex-gratia relief for loss of life and for the scheme Reduction of Man Elephant conflict out of a total of Rs. 700 lakhs, Rs. 400 lakhs was allocated in 2014-15, under Chief Minister's special package. The table viii, below shows the Rhino, Elephant, Tiger, Swamp Deer and other animals population during different census periods.

TABLE-10.8  
POPULATION OF RHINOS, ELEPHANTS, TIGERS AND SWAMP DEER & OTHERS IN THE STATE.

| Year of Census | Rhino Population      | Area  |
|----------------|-----------------------|---|
| 2006           | 2006                  | In all National Park (Kaziranga NP, Manas NP, Nameri Orang NP), Wild Life Sanctuary (Pobitora WLS) and all Protected Areas. |
| 2009           | 2201                  |   |
| 2012           | 2505                  |   |
| 2013           | 2329 (only in KNP)    |   |
|                | Elephant Population   |   |
| 2002           | 5246                  | All the Protected Areas, Elephant Reserves, Reserved Forests and Unclassified State Forests in Assam.                       |
| 2007           | 5281                  |   |
| 2009           | 5620                  |   |
| 2011           | 5620                  |   |
|                | Tiger Population      |   |
| 2006           | 70                    | All Protected Areas, Reserved Forests and Unclassified State Forests in Assam.  |
| 2009           | 143                   |   |
| 2014           | 167                   |   |
|                | Swamp Deer Population |   |
| 1998           | 526                   | All Protected Areas, Reserved Forests, Unclassified State Forests in Assam  |
| 2007           | 681                   |   |
| 2011           | 1169                  |   |

| Others Primate Census During 2009     |       |
|---------------------------------------|-------|
| Rhesus Macaque                        | 72674 |
| Assamese Macaque                      | 30866 |
| Slow Loris                            | 431   |
| Pig tailed macaque                    | 649   |
| Capped Langur                         | 17813 |
| Golden Langur                         | 2772  |
| Hoolock Gibbon                        | 1517  |
| Stump tailed macaque                  | 648   |
| Phayres leaf Monkey/Spectacled langur | 132   |

Source : Department of Forest & Environment, Assam.

## SCHEME FOR MAN-ELEPHANT CONFLICT RESOLUTION

The Hon'ble Chief Minister, Assam has given emphasis to reduce "Man-Elephant Conflict" The following activities are proposed under 12<sup>th</sup> Five Year Plans (2012-17), which comprises of:

- Erecting Solar Power Tensing in 25 kms long stretch of vulnerable areas in effected districts.
- Enhancement of 100 hectares Plantation of species like outenga, kathal, sam, gamari, koroi, odal, cane and bamboo etc palatable to the elephant shall be taken up in Assam. For this, the total expenses for the five year period of 12<sup>th</sup> Plan comes up to Rs. 3439.00 lakhs, against which a provision of Rs. 400.00 lakhs was allocated during 2014-15.

## ASSAM PROJECT ON FOREST AND BIODIVERSITY CONSERVATION

This is a Externally Aided Project (EAP), funded by the French Development Agency under Indo-French Development Co-operation. The State of Assam being a part of eastern Himalayan region, a Bio-diversity hot spot, so the issues of Conservation of Forests and Biodiversity in the state assumes significant importance in the face of mounting anthropogenic pressure and anticipated impacts of climate change on forest ecosystems. Moreover, forest in Assam provide important source of livelihood to a marginal sections of tribal people, as well as ecological services in terms of soil and water conservation issues which are of great importance. Since more than 50 percent of notified forest area in the state falls under the category "Open Forests", restoration of such forest areas, enhancing of human and infrastructural capacity of the State Forest Department, along with the need to provide livelihood opportunities and alternatives to forest dependent communities, requires infusion of various funds, at a very large scale and enhanced forms:

The project has four technical components. They are :

- (1) Institutional Strengthening of the Forest Department
- (2) Multi-level Strategic Planning
- (3) Sustainable Forest management
- (4) Addition of value and the opening of market opportunities for forest and bio-diversity goods and services and Project management of non technical components.

## WILDLIFE MANAGEMENT

**Project Elephant :** This scheme is prepared for payment of ex-gratia for loss of life and property due to man-elephant conflict, procurement of Arms & Ammunition, Setting up of anti depredation squads of villagers to scare away wild elephants, establishment of squads with temporary camps, mobile power fencing for the protection of villagers under logistic circumstance etc. A sum of Rs.600.00 lakhs was earmarked for the year 2014-15.

**Integrated Development of wildlife Habitat Area:**

The scheme includes preparation of management plans, Surveys, Demarcation of boundaries for protection of wildlife habitat areas, prevent anti poaching activities etc. Besides these, some community development activities are also taken up, like the supply of furniture and education implements to schools under eco-development activities are also covered under this scheme. A sum of Rs. 700.00 lakhs was earmarked for the scheme during 2014-15.

**Project Tiger:**

The scheme has the objective to preserve the tiger population by the provision of all round protected measures. The scheme is for strengthening the infrastructural, habitat restoration/improvement, eco-tourism, anti poaching activities etc, in the three nos of Tiger Projects namely the Kaziranga Project Tiger, Manas Project Tiger and Nameri Project Tiger. A sum of Rs. 300.00 lakhs has been proposed for the year 2014-15.

Raising of plant of non Timber Forest Produce including Medicinal Plant, Bamboo, Plantation Scheme and ACA for Accelerated Programme Restoration & Re-generation of Forest cover. A sum of Rs. 650.00 lakhs was earmarked for implementation of these programmes.

## Financial Assistance to Conservation and Management of Deepar Bill Wetland:

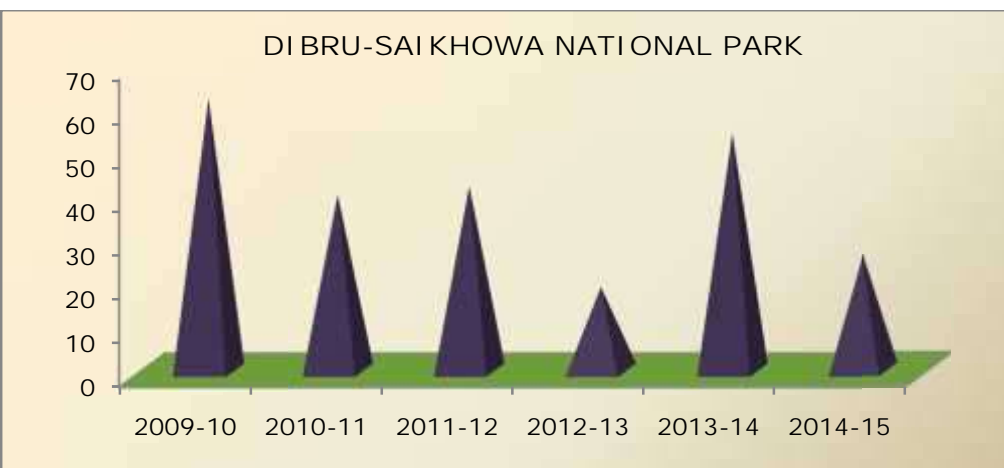
The Deepar Bill Wetland, located in the southwest at a distance 10 kms away from Guwahati city, is considered as one of the large riverine wetland in lower Assam. Originally the beel had its natural linkage with river Brahmaputra through the Sola Beel and the swampy area of Pandu to the Northeast. Due to construction of residential buildings, NH-37 and Railway line, the main link has already been disrupted, and it remains as a small secondary channel. A sum Rs. 1500.00 lakhs was proposed for Twelfth Five Year plan, against which a provision of Rs. 200.00 lakhs was earmarked for 2013-14, for setting up of a Deepar Beel Authority in implementing the conservation and management initiative for restoration of Deepar Beel.

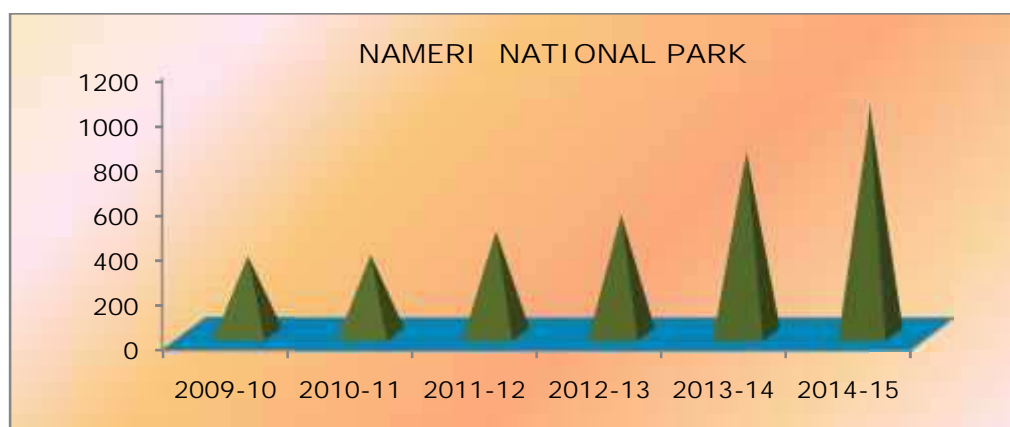
For the famous one horn Rhino of Assam and various species of unique flora and fauna, a large number of Domestic and Foreign Tourists visits the state every year. However, except in Kaziranga and Nameri National Parks, the visit of numbers of tourists (both Indian and Foreign) in other national parks of Assam, has marginally come down during the period 2014-15 in comparison with 2013-14. But the numbers of foreign tourists have increased during 2014-15, both in Manas and Orang National Parks, in comparison to 2013-14.

Numbers of Tourists Arrivals in National Parks and Revenue Collection out of the Tourists Visits during the last few years is presented below in Table -10.9

TABLE – 10.9

| Names of National Parks          | Years   | No. of visitors |         | Revenue Collected (Rs. in lakh) |
|----------------------------------|---------|-----------------|---------|---------------------------------|
|                                  |         | Indian          | Foreign |                                 |
| Kaziranga National Park          | 2009-10 | 1,05,264        | 7,580   | 121.68                          |
|                                  | 2010-11 | 1,12,392        | 7,447   | 136.73                          |
|                                  | 2011-12 | 1,17,308        | 7,521   | 149.46                          |
|                                  | 2012-13 | 93,747          | 7,418   | 205.76                          |
|                                  | 2013-14 | 1,19,289        | 6,922   | 268.66                          |
|                                  | 2014-15 | 1,23,360        | 7,994   | 294.59                          |
| Manas National Park              | 2009-10 | 8,030           | 139     | 16.96                           |
|                                  | 2010-11 | 10,843          | 503     | 14.67                           |
|                                  | 2011-12 | 19,705          | 237     | 21.17                           |
|                                  | 2012-13 | 15,890          | 218     | 25.48                           |
|                                  | 2013-14 | 20,527          | 211     | 30.93                           |
|                                  | 2014-15 | 9,786           | 475     | 33.48                           |
| Rajib Gandhi Orang National Park | 2009-10 | 1,628           | 325     | 3.11                            |
|                                  | 2010-11 | 1,702           | 180     | 1.82                            |
|                                  | 2011-12 | 2,678           | 159     | 2.44                            |
|                                  | 2012-13 | 1,847           | 70      | 2.76                            |
|                                  | 2013-14 | 2,329           | 16      | 2.43                            |
|                                  | 2014-15 | 1,946           | 45      | 2.31                            |
| Nameri National Park             | 2009-10 | 4,342           | 346     | 2.79                            |
|                                  | 2010-11 | 4,460           | 352     | 2.72                            |
|                                  | 2011-12 | 5,601           | 457     | 3.50                            |
|                                  | 2012-13 | 4,370           | 528     | 4.54                            |
|                                  | 2013-14 | 5,866           | 806     | 11.26                           |
|                                  | 2014-15 | 8,448           | 1035    | 14.13                           |
| Dibru-Soikhowa National Park     | 2009-10 | 2,613           | 62      | 0.61                            |
|                                  | 2010-11 | 2,351           | 40      | 0.55                            |
|                                  | 2011-12 | 3,970           | 42      | 0.89                            |
|                                  | 2012-13 | 2,656           | 19      | 1.08                            |
|                                  | 2013-14 | 4,230           | 54      | 2.09                            |
|                                  | 2014-15 | 4,249           | 27      | 2.10                            |





## REVIEW OF ELEVENTH FIVE YEAR PLAN (2007-08 TO 2011-12)

### FINANCIAL PROGRESS

The total allocation for 11<sup>th</sup> Five Year Plan period for Forestry Sector was Rs. 26514.79 lakhs, against which an expenditure of Rs. 16165.18 lakhs, has been made.

Physical Achievements made During 11<sup>th</sup> Five Year Plan Period:

- Plantation area raised to a total of 46080.56 hectares
- World Bank Project (NaRMIL) was implemented to support the livelihood of forest fringe communities, at a cost of Rs. 28.10 crores through the improvement of natural resources management with communities participation.
- Under Chief Minister's special package for the forest sector, a new scheme "Assam, Bikash Yojona" – Plantations – Plantation in community places has been launched since 2008 onwards, and on the first phase of the scheme extensive plantations have been done in 1163 nos. of schools and 1566 nos. have been benefited by the same.
- Kaziranga National Park has been included in the Tiger Project
- Assam State Zoo cum Botanical Garden has been modernized and night safari rides facility has been launched.
- For the protection of wildlife, 2<sup>nd</sup> AFPP Battalion has been raised exclusively for reforestation of extensive degraded of area in Reserve Forest Ecological Task forces have been raised.

[Rupees in lakhs]

| YEAR    | ALLOCATION | EXPENDITURE |
|---------|------------|-------------|
| 2007-08 | 1881.79    | 1312.52     |
| 2008-09 | 4225.00    | 3419.92     |
| 2009-10 | 6915.00    | 6019.56     |
| 2010-11 | 6546.00    | 1894.54     |
| 2011-12 | 6947.00    | 3518.64     |
| Total   | 26514.79   | 16165.18    |

### STRATEGY FOR TWELFTH FIVE YEAR PLAN (2012-17)

- Strengthening of forest protection machinery by the development of necessary infrastructure and Logistic support namely roads, buildings, barracks, Watch Towers, camp huts, demarcation of forest boundaries, procurement of vehicles and motor boats for patrolling, procurement of wireless sets and ammunition and anti poaching equipments etc.
- Increasing the productivity of forest through coverage of more and more degraded forest areas, coverage of forest areas with crown density less than 40% and available revenue land under plantations of Indigenous, fast growing, economically important species of timber, as well as Raising plant of Non Timber forest produces including Medicine plant & Bamboo plantation etc. The natural regeneration existing in forests needs to be assisted by silvi culture works and aided plantations.
- To strengthen research wing of departments to create seed orchards, progeny trails for quality seed production. As afforestation proceeds at current pace no guarantees can be given that area once afforested would not relapse to their old status given the high biotic factors responsible for degradation and the inadequate funding.
- Expand forest coverage of the state through private plantations by motivating people through awareness programmes, distribution of seedlings to people from forest nurseries. In this regard, the strategy is to associate various communities, groups, associations,

NGO's & FDA's in such activities of the department, by providing them some financial assistance.

- Strengthen resources survey, planning, monitoring and evolution of organization for the development of building infrastructure for speedy collection of monitoring data, extension of computer facilities upto division level; and advance training of officers and staff.
- Strengthening wildlife conservation through intensive patrolling, deployment of adequate man power along with provision of requisite patrolling gears including arms and wireless equipments etc.
- Developing both short term and long term measures for the reduction depredation of elephants and other wildlife.
- Enlisting support of local people through Awareness Programmes and Eco- development activities.

Other important schemes are continuing and also been taken up newly and they are as follows:

The Hon'ble Chief Minister, Assam has announced the following Schemes to be included under "Mukhya Mantrir Assam Bikash Yojana" for the year 2011-12.

- i. Seuji Dhora Achoni for School children
- ii. Outside Forest area plantations
- iii. Guwahati Hills area plantations

During the 12<sup>TH</sup> Five year plan a sum of Rs. 3200.00 lakhs was proposed for the creation of School plantations-500 numbers of community plantations / Hills area plantations-1800 hectares and creation of nurseries-10 numbers under the above component.

A sum of Rs. 300.00 lakh was proposed for the year 2013-14 for creation of school plantations-500 numbers, Plantations of 300 hectares & Creation of Nurseries-10 nos. under the component.

#### SCOPE OF WOMEN EMPOWERMENT

The Schemes implemented for Development of Forests & Wildlife are mostly labour oriented & these labours are engaged from forest fringe dwellers. The Nursery, Plantation works, Maintenance of plantations by weeding, climber cutting etc. are done by engaging labours & in these works mostly women labours take active participation while male members keep busy in other Agricultural works. Thereby, women folk from the forest fringe villages get the opportunity for their employment & their Livelihood.

#### SCOPE OF GENERATION OF EMPLOYMENT

Schemes/Projects proposed to be implemented during the 12<sup>th</sup> Five year Plan Period are labour intensive activities providing people employment, living in and around Forest areas. The total nos. of persondays to be generated annually is estimated at 13,53,704.

#### LINKING OF SCHEMES/PROJECT WITH DISASTER MANAGEMENT

Forests plays a pivotal role in preventing natural disasters, a role in amelioration of flood waters dynamics, erosion control, soil and water conservation, carbon sequestration etc. According, forest schemes proposed for Annual Plan 2011-12, comprise of activities like Afforestation, Rehabilitation of Degraded Forest etc. by creating plantations. These schemes plays positive role in the preventing & mitigation of calamities threatening human existence. Thus, these schemes need to be placed at the top of the preference ladder.

#### PARTICIPATION OF NGOS AND PEOPLES WITH THE SCHEMES/PROJECT ETC.

The involvement of NGOs and civil players is integrated in project implementation and monitoring. There are quite a few NGOs who is playing very proactive role in the forestry sector, along with academicians, prominent citizens are taken on board in these matters.

"NGOs" running environmental awareness generation Programmes in different Villages of the district is keen to implementing the project in support of NAEB. The National Afforestation & Eco-Development Board (NAEB) is implementing the National Afforestation Programmes (NAP) through Forest Development Agency (FDA) and Joint Forest Management Committee (JFMC) etc.

In the field of Wildlife, the role of NGOs in the State is quite appreciable. They are playing an active part in awareness programmes amongst people and Eco-Development Committees are formed in fringe villages of NAP.



APPENDIX-10.1  
AREA UNDER FOREST IN ASSAM (As on 30.01.2015)

(Area in hectare)

| Sl. No. | Forest Division        | Reserved Forest | Proposed Reserved Forest | Protected Area Network | Total Forest (Excluding Un-classed State Forest) |
|---------|------------------------|-----------------|--------------------------|------------------------|--|
| 1.      | Goalpara               | 22946.563       | 11387.510                | -                      | 34334.073  |
| 2.      | Kamrup East            | 37052.356       | 11596.460                | -                      | 48648.816  |
| 3.      | Kamrup West            | 75549.276       | 568.850                  | -                      | 76118.126  |
| 4.      | North Kamrup           | 4412.197        | 1141.400                 | -                      | 5553.597   |
| 5.      | Dibrugarh              | 20728.678       | -                        | 11119.420              | 31848.098  |
| 6.      | Digboi                 | 49598.074       | 5479.150                 | 8712.000               | 63789.224  |
| 7.      | Doomdooma              | 29404.176       | 4252.750                 | -                      | 33656.926  |
| 8.      | Golaghat               | 80154.089       | 133.450                  | 9715.000               | 90002.539  |
| 9.      | Jorhat                 | 26096.841       | -                        | 2098.621               | 28195.462  |
| 10.     | Sivasagar              | 24092.903       | -                        | 3393.000               | 27485.903  |
| 11.     | Hamren                 | 27454.539       | -                        | -                      | 27454.539  |
| 12.     | Karbi Anglong East     | 61995.937       | 84089.600                | 34042.000              | 180127.537                                       |
| 13.     | Karbi Anglong West     | 109282.007      | 3525.000                 | 451.000                | 113258.007                                       |
| 14.     | Dima-Hasao             | 63776.154       | -                        | -                      | 63776.154  |
| 15.     | Baska                  | 13542.551       | -                        | -                      | 13542.551  |
| 16.     | Lakhimpur              | 31097.441       | -                        | -                      | 31097.441  |
| 17.     | Dhemaji                | 42468.430       | 9400.000                 | 1121.800               | 52990.230  |
| 18.     | Nagaon                 | 35310.086       | 3573.000                 | -                      | 38883.086  |
| 19.     | Nagaon South           | 64873.521       | -                        | -                      | 64873.521  |
| 20.     | Sonitpur East          | 73927.302       | -                        | -                      | 73927.302  |
| 21.     | Sonitpur West          | 44129.201       | 910.000                  | -                      | 45039.201  |
| 22.     | Silchar (Cachar)       | 34199.791       | -                        | 7386.900               | 41586.691  |
| 23.     | Hailakandi             | 78145.833       | 170.000                  | -                      | 78315.833  |
| 24.     | Karimganj              | 48057.303       | 6489.090                 | 32625.000              | 87171.393  |
| 25.     | Aie Valley             | 6144.969        | 5901.730                 | -                      | 12046.699  |
| 26.     | Dhubri                 | 6082.060        | 865.770                  | -                      | 6947.830   |
| 27.     | Haltugaon              | 63806.919       | 2949.000                 | -                      | 66755.919  |
| 28.     | Kachugaon              | 82199.117       | 213.000                  | -                      | 82412.117  |
| 29.     | Dhansiri               | 17812.765       | 3963.000                 | 2822.000               | 24597.765  |
| 30.     | Parbotjhora            | 28041.484       | 17732.910                | -                      | 45774.394  |
| 31.     | Chirang                | 55957.550       | 1400.000                 | -                      | 57357.550  |
| 32.     | West Assam Wild life   | -               | -                        | 42000.000              | 42000.000  |
| 33.     | Tinsukia Wild life     | 32677.785       | -                        | 34722.000              | 67399.785  |
| 34.     | Nagaon Wild life       | 2155.000        | -                        | 11417.040              | 13572.040  |
| 35.     | Mangaldoi Wild life    | -               | -                        | 7881.000               | 7881.000   |
| 36.     | Assam State Zoo        | 175.000         | -                        | -                      | 175.000  |
| 37.     | Kokrajhar Wild life    | -               | -                        | 4556.000               | 4556.000   |
| 38.     | Manas Tiger Project    | 2837.120        | -                        | 50000.000              | 52837.120  |
| 39.     | East Assam WL Bokakhat | 1130.855        | -                        | 85898.000              | 87028.855  |
| 40.     | Guwahati Wild life     | -               | -                        | 12155.000              | 12155.000  |
|         | Total Area             | 1397315.873     | 175741.670               | 362115.781             | 1935173.324                                      |

Source : Office of the Principal Chief Conservator of Forest &amp; Head of Forest Force, Assam.



TABLE-10.2

## AREA THE NATIONAL PARKS AND WILDLIFE SANCUARIES IN ASSAM, 2014-15

| Sl. No.                 | Name of the National Parks/Wildlife Sanctuaries | Location (District)         | Area in Sq. Kms. |
|-------------------------|---|-----------------------------|------------------|
| 1                       | 2   | 3                           | 4                |
| <b>A. National Park</b> |   |                             |                  |
| 1.                      | Kaziranga National Park                         | Golaghat, Nagaon & Sonitpur | 858.98           |
| 2.                      | Manas National Park                             | Chirang & Baksa             | 500.00           |
| 3.                      | Orang National Park                             | Udalguri & Sonitpur         | 78.81            |
| 4.                      | Nameri National Park                            | Sonitpur                    | 200.00           |
| 5.                      | Dibru-Saikhowa National Park                    | Dibrugarh & Tinsukia        | 340.00           |

| Sl. No.                                    | Name of the Wildlife Sanctuaries | Location (District)  | Area in Sq. Kms. |
|--|----------------------------------|----------------------|------------------|
| 1  | 2                                | 3                    | 4                |
| <b>B. Name of the Wildlife Sanctuaries</b> |                                  |                      |                  |
| 1.   | Bherjan-Borajan-Padumoni WLS     | Tinsukia             | 07.22            |
| 2.   | Panidehing WLS                   | Sivasagar            | 33.93            |
| 3.   | Gibbon WLS                       | Jorhat               | 20.98            |
| 4.   | Nambor-Doigurung WLS             | Golaghat             | 97.15            |
| 5.   | Garampani WLS                    | Karbi Anglong        | 06.05            |
| 6.   | Nambor WLS                       | Karbi Anglong        | 37.00            |
| 7.   | East Karbi Anglong WLS           | Karbi Anglong        | 221.81           |
| 8.   | Marat Longri WLS                 | Karbi Anglong        | 451.00           |
| 9.   | Burhachapori WLS                 | Sonitpur             | 44.06            |
| 10.  | Laokhowa WLS                     | Nagaon               | 70.13            |
| 11.  | Pabitora WLS                     | Morigaon             | 38.80            |
| 12.  | Sonai-Rupai WLS                  | Sonitpur             | 220.00           |
| 13.  | Barnadi WLS                      | Udalguri             | 26.22            |
| 14.  | Chakrasila WLS                   | Kokrajhar            | 45.56            |
| 15.  | Dihing-Patkai WLS                | Dibrugarh & Tinsukia | 111.19           |
| 16.  | Barail WLS                       | Cachar, Karimganj    | 326.25           |
| 17.  | Amchang WLS                      | Kamrup (Metro)       | 78.64            |
| 18.  | Deepar Beel WLS                  | Kamrup (Metro)       | 4.14             |

| Sl. No.                                | Name of the Proposed WLS | Location           | Area in Sq. Kms. |
|--|--------------------------|--------------------|------------------|
| 1                                      | 2                        | 3                  | 4                |
| <b>C. Proposed Wildlife Sancuaries</b> |                          |                    |                  |
| 1                                      | North Karbi Anglong WLS  | Karbi Anglong      | 96.00            |
| 2.                                     | Bardoibam Beelmukh WLS   | Lakhimpur, Dhemaji | 11.25            |

\* \* \*

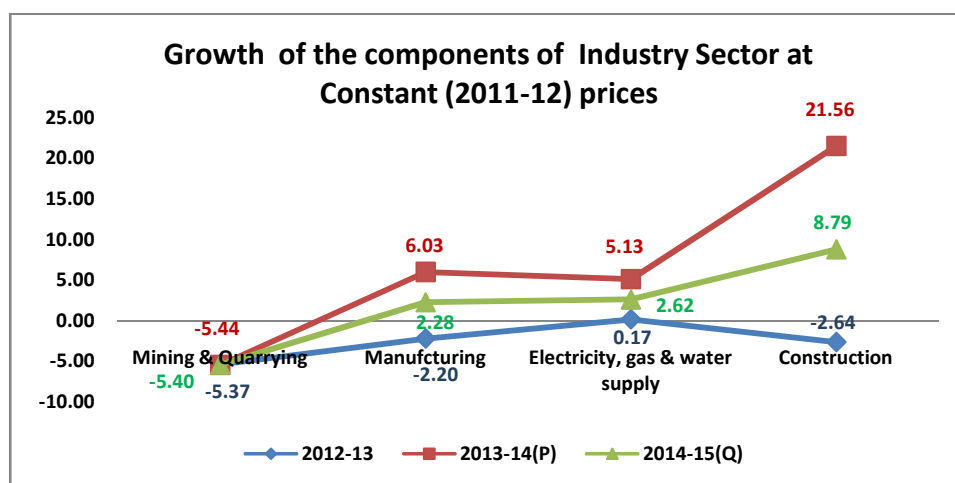
## CHAPTER – XI

## INDUSTRY, TRADE AND MINING

Assam is a house of natural and precious mineral resources. Assam though finds its place in the industrially developed map of the world during the pre- independence period but at present Assam is amongst the industrially under- developed States in the Country. The industrial scenario of the State is confined within the growth of employment oriented SSI Sector. Assam is still making efforts desperately for gearing up industrial activities by harnessing the un-tapped resources available in the State through various growth-inducing factors as well as by removing the infrastructure inadequacies primarily in the power sector. Despite existence of constraints, a favourable industrial climate is gradually being created in the State as discernible from the increasing interest shown by investors both from within the State as well as from outside the State. The communication and transport sector, on the other hand, has shown some improvement during the recent past. The declaration of the North East Industrial Investment Promotion Policy-2007, removal of notified area concept and introduction of neutrality of location clubbed with Excise duty exemption, Income Tax exemption, Capital Investment Subsidy, Interest Subsidy, Comprehensive Insurance Subsidy, Incentive to Bio-Technology Industry, Incentive on Power Generation Industry, Transport Subsidy etc., are the major steps towards industrialization of the state. The thrust has been given both by the State and Central Government to enhance benefits to those entrepreneurs' desirous to set up their units. The State Government in turn has to provide supplement effort by development of infrastructure and offers its participation in the form of Government share or partner in the PPP models of projects which are of prime importance considering the location of the State.

## GROWTH OF INDUSTRIAL SECTOR IN ASSAM

During the last three years (2012-2015), the Industry sector grew at an average growth of 1.86 percent calculated as per the new base 2011-12. The period started with a negative growth of 2.20 percent during 2012-13 followed by high growth of 6.03 percent during 2013-14 mainly contributed by a high growth of 21.56 percent in the construction sector and again slowed down in 2014-15 to an annual average growth of 2.28 percent. The low growth during the last three years is due to poor performance of Mining and Quarrying that grew with a negative annual average growth of 5.40 percent. The graph given below depicts the annual growth of sub-sectors of Industry at the new base 2011-12 prices.



Source: Directorate of Economics and Statistics, Assam

Although the manufacturing and processing industries have ruled the Industry Sector in the State, the contribution of these industries to the State economy was not as much impressive as was expected. The contribution of the Registered Manufacturing sector to the total State economy was 11.0 percent and accounted for 37.0 percent share of the total Industry Sector at constant (2011-12) prices during 2014-15 (Quick Estimates).

During 2014-15, the Index of Industrial Production (Base: 2004-15=100) in respect of manufacturing sector did not show much improvement over the previous year. IIP of Assam was

178.37 during 2014-15 and increased marginally by 0.13 percent over 178.13 in 2013-14. Production of some selected industries may be evident from the table-11.1

TABLE – 11.1  
PRODUCTION OF SOME SELECTED INDUSTRIES IN ASSAM

| Year    | Tea<br>(000<br>tonnes) | Wheat Flour<br>(000<br>tonnes) | Coal<br>(000<br>tonnes) | Jute<br>Textiles<br>(Tonnes) | Crude Oil<br>(000<br>tonnes) | Cement<br>(000<br>tonnes) | Fertilizer<br>(000 MT) |
|---------|------------------------|--------------------------------|-------------------------|------------------------------|------------------------------|---------------------------|------------------------|
| 2007-08 | 486                    | 837                            | 1101                    | 9494                         | 4361                         | 213                       | 346                    |
| 2008-09 | 484                    | 848                            | 1147                    | 11249                        | 4673                         | 446                       | 313                    |
| 2009-10 | 498                    | 1044                           | 1203                    | 12511                        | 4738                         | 644                       | 338                    |
| 2010-11 | 525                    | 1198                           | 1110                    | 12904                        | 4714                         | 736                       | 325                    |
| 2011-12 | 501                    | 866                            | 590                     | 19956                        | 5023                         | 984                       | 394                    |
| 2012-13 | 588                    | 898                            | 605                     | 22717                        | 4861                         | 1181                      | 514                    |
| 2013-14 | 629                    | 1003                           | 665                     | 25625                        | 4718                         | 1107                      | 515                    |
| 2014-15 | 607                    | 951                            | 797                     | 24275                        | 4447                         | 1277                      | 488                    |

Source: Tea: Tea Board of India; Minerals: Indian Bureau of Mines, Nagpur;  
Others: Individual Industrial Units.

### MINING SECTOR

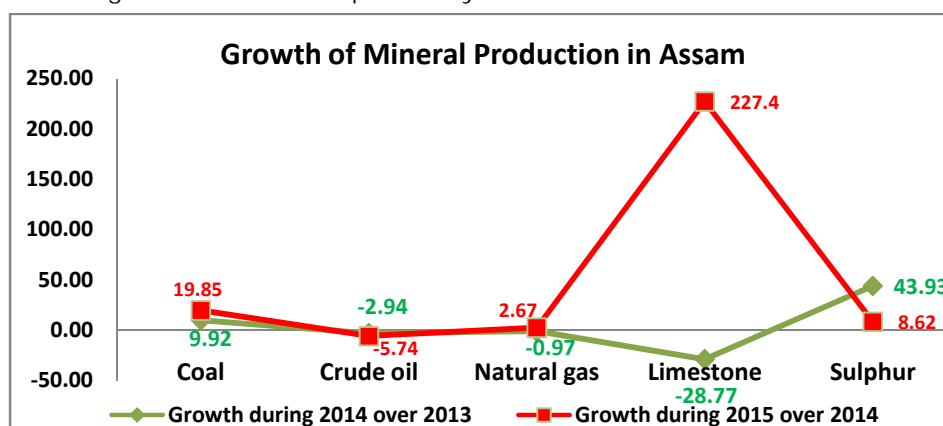
The State is richly endowed with mineral resources and is a major contributing factor for industrial performance. During the year 2013-14, mineral production in the State improved over the slowdown during 2013-14. The Table -11.2 shows the trend of some major minerals exploited in the State during the last seven years.

TABLE – 11.2  
MINERAL PRODUCTION IN ASSAM

| Year    | Coal<br>( 000MT) | Crude Oil<br>( 000MT) | Natural Gas<br>Utilised (MCM) | Limestone<br>( 000MT) | Sulphur<br>(‘000 MT) |
|---------|------------------|-----------------------|-------------------------------|-----------------------|----------------------|
| 2007-08 | 1151             | 4308                  | 2417                          | 367                   | 224                  |
| 2008-09 | 1147             | 4673                  | 2603                          | 363                   | 566                  |
| 2009-10 | 1203             | 4738                  | 2476                          | 402                   | 665                  |
| 2010-11 | 1110             | 4714                  | 2500                          | 334                   | 2991                 |
| 2011-12 | 590              | 5023                  | 2726                          | 245                   | 5457                 |
| 2012-13 | 605              | 4861                  | 2681                          | 292                   | 3706                 |
| 2013-14 | 665              | 4718                  | 2655                          | 208                   | 5334                 |
| 2014-15 | 797              | 4447                  | 2726                          | 681                   | 5794                 |

Source: Indian Bureau of Mines.

During the year 2014-15, production of Limestone increased substantially by 227 percent followed by Coal (19.85%), Sulphur (8.62%) and Natural gas (2.67%). Production of Crude oil decreased by (-) 5.74 percent during 2014-15 as against (-) 2.94 percent during 2013-14 over the previous year. The graph below depicts growth of mineral production in the State during 2014-15 over 2013-14 and during 2013-14 over the previous year.



## THRUST AREA DURING 12<sup>TH</sup> FIVE YEAR PLAN PERIOD

The State Industries and Commerce Department, besides employment generation has also focused in industrial growth in the State to ensure regionally balanced, socially equitable and economically inclusive growth. Therefore following strategies has been adopted for attainment of environmentally harmonious and sustainable industrial growth with social equity in the natural capital during the Twelfth Five Year Plan period:

- Up-gradation of skilled human resource;
- Development of Industrial Infrastructure;
- Capital investment;
- Identification of clusters with the competitive/comparative advantage;
- Up-gradation of technologies and adoption of best practices in tea gardens for higher production and productivity & MSME Sector;
- Expeditious mechanism for facilitating clearances;
- Re-orientation of administration for building up an investor friendly environment.

## INDUSTRIAL INFRASTRUCTURE FACILITIES IN ASSAM

### INDUSTRIAL ESTATE AND INDUSTRIAL GROWTH CENTRE

Creation of environment for industrialization by setting up Industrial infrastructure in the perspective of industrial development and attract investment through proper planning is the prime objective of the State Government. To achieve the goal the department is creating a good numbers of infrastructural facilities as well as upgrading the existing ones located in different districts of the state. Infrastructural facilities in the form of Export Processing Industrial Park (EPIP), Industrial Infrastructure Development Centre (IIDC), Growth Centers, Food Processing Industrial Park, Industrial Estates, Industrial Areas, and Commercial Estates etc are spreading throughout the State.

At present, there are 20 Industrial Estates, 8 Mini Industrial Estates, 17 Industrial Areas and 12 Growth Centres in the State where 722 numbers of Industrial units are functioning. One Export Promotion Industrial Park (EPIP) has also been established with world class infrastructure at Amingaon in Kamrup district where 47 numbers of industrial units are producing some export quality product of various kinds. In addition, 11 nos. of Industrial Infrastructure Development (IID) Centre in 11 different districts and 3 numbers of Industrial Growth Centre, one Food Park at Chaygaon in Kamrup District and one North East Mega Food Park at Nalbari District have been established.

The Department has established 3 (three) Industrial Growth centre, a centrally sponsored project at Balipara (Chariduar), Matia and Chaygaon.

#### Industrial Growth Centre, Chariduar

The Centre is being set up with a total project cost of Rs.2543.40 lakh of which Central share is Rs.1500.00 lakh and State share is Rs.1043.40 lakh. Up to 2014-15, Govt. of India has released Rs.1216.00 lakh while the State Govt. has released Rs.22.20 lakh. The first phase work of the project has been completed and an area of 20 bigha of land has been allotted for setting up a pharmaceutical unit. The Assam Industrial Development Corporation (AIDC) is the implementing agency of the project.

#### Industrial Growth Centre, Matia

The Centre in Goalpara District is being implemented by AIDC with a total project cost of Rs,2200.00 lakh of which Central share is Rs.1500.00 lakh and State share is Rs.700.00 lakh. Till the end of 2014-15, the Government of India has released Rs.1500.00 lakh while State Govt. has released Rs.217.14 lakh. The first phase work has been completed and plots to various industrial units have been allotted. Financial achievement up to 2014-15 is Rs.1717.14 lakh.

#### Industrial Growth Centre, Chaygaon-Patgaon-Jambari

The centre is located at split locations at Chaygaon-Patgaon-Jambari in Kamrup District and is being implemented by Assam Industrial Infrastructure Development Corporation (AIIDC) with a total project cost of Rs.1615.24 lakh of which the Central share of Rs.1500.00 lakh has been

released and the State share of Rs.115.24 lakh has been released by the Central and State Government respectively. The project at all the three locations have been completed and altogether 38 number of units at Chatabari, 37 number of units at Jambari and 6 units at Patgaon location have been allotted land for their proposed ventures.

#### EXPORT PROMOTION INDUSTRIAL PARK (EPIP)

The Department of Industries and Commerce, Assam has established an Export Promotion Industrial Park at Amingaon in Kamrup (Rural) District at a total project cost of Rs.1462.00 lakh. A total of 47 numbers of industrial units are functioning in the park.

#### BORDER TRADE CENTRES

Assam is sharing international border with Bangladesh, Bhutan and Myanmar and thus has ample scope to enhance trade with these countries. To facilitate foreign trade with various neighbouring Countries bordering North-East India, Government of India has taken a new initiative to create all infrastructure facilities for the exporter of the region for development of Trade & Commerce. The State Government has approved for setting up of five numbers of Border Trade Centres- one at Sutarkandi in Karimganj district, at Mankachar and Golokganj in Dhuburi district, Darranga in Baksa district and Jagun in Tinsukia district to facilitate border trade with neighbouring countries like Bangladesh, Bhutan etc.

##### a) Border Trade Centre, Sutarkandi

The Border Trade Centre, Sutarkandi project in Karimganj district was approved by Government of India in the year 2000 under Critical Infrastructure Balance (CIB) and ASIDE scheme. The total project cost (both 1<sup>st</sup> and 2<sup>nd</sup> phase) was Rs.2563.00 lakh, sharing between central and state govts as Rs.2400.00 lakh and Rs.163.00 lakh respectively. Till 2014-15 Government of India has released Rs.2358.17 lakh and the State Government has released Rs.163.00 lakh respectively against their share. Both the phase of the project has been completed. The project has been implemented through AIIDC and normal trade is going on.

##### b) Border Trade Centre, Mankachar

The Government of India has approved for setting up of a border trade centre at Mankachar town in Dhuburi district under ASIDE scheme. The centre also has a linkage with Tura of Maghalaya. The approved project cost of this project is Rs.466.00 lakh. The Central share is Rs.380.83 lakh and the State government share is Rs.85.17 lakh. Up to the year 2014-15 Government of India has released its full share of Rs.380.83 lakh and state government has released Rs.85.00 lakh for the project. The project has already been completed and trade is going on. The Project was implemented by AIDC.

##### c) Trade Facilitation Centre, Jagun, Tinsukia

A Trade Facilitation Centre (TFC) has been created at Jagun in Tinsukia district which is about 3 Km away from Jairampur (Assam-Arunachal Pradesh border point) and 20 Km from Panchu Pass (Indo-Myanmar Border on Stilwell Road). The Trade Centre has been constructed with a project cost of Rs.5.98 crore and completed. Facilities like warehouse, Parking Yard, loading & unloading platform etc., are created in this centre.

##### d) Border Trade Centre, Darranga, Baksa (Indo-Bhutan Border)

In view of growing Indo-Bhutan trade and to encourage formal trade, a Border Trade Centre is proposed to set up at Darranga, Baksa district of Assam. The estimated cost of the project is Rs.14.33 crore and construction is in progress. The infrastructure facilities will be available in the centre are: Cold storage, Parking yards, warehouse, weighbridge, loading & unloading platform etc. The project is under completion.

##### e) Border Trade Centre, Golokganj, Dhubri

This Border Trade Centre is under construction near the Gate no.24 of Sonahat in Dhubri district and the project is implemented by AIDC Ltd with a project cost of Rs.1938.00 lakh. This centre has a competitive advantage and may become a Hub of trade in the coming years. On 28<sup>th</sup> April, 2014, the first consignment of coal crossed this border point to Bangladesh and was inaugurated on 12<sup>th</sup> December, 2015.

### FOOD PROCESSING INDUSTRIAL PARK

The Ministry of Food Processing Industries, Government of India has approved for setting up of a Food processing Industrial Park at Chaygaon in Kamrup District with a project cost (revised) of Rs.496.00 lakh. The Central Govt. share is Rs.350.00 lakh and the State share is Rs.146.0 lakh. The Government of India has released Rs.262.50 lakh while the Government of Assam has released its full share of Rs.146.00 lakh against their respective share upto the year 2014-15. The Project is completed by ASIDC and plots to 13 units have been allotted.

### INTEGRATED INFRASTRUCTURE DEVELOPMENT CENTRES (IIDC)

The Ministry of MSME, Government of India has approved for setting up of 11 (eleven) numbers of Integrated Infrastructure Development Centre (IIDC) at different locations in 11 (eleven) districts of Assam. Government of India has released Rs.3726.45 lakh and the Government of Assam has released Rs.988.21 lakh out of the total central share of Rs.3872.30 lakh and state share of Rs.988.21 lakh up to the year 2014-15. All the projects have been completed and at present 52 units are functioning in different IID centres.

### NORTH EAST MEGA FOOD PARK, TIHU

With the objective of providing adequate infrastructure for the food processing industries of the region along with the value chain from farm to market, a Mega Food Park is under construction at Nathkuchi (Tihu) in Nalbari district. The park is being developed in PPP model with assistance from the Ministry of Food Processing Industries, GOI in an area of 50 acres. The total project cost is Rs.7598.00 lakh where central share is Rs. 5000.00 lakh and State share is Rs.402.72 lakh and promoters' contribution is Rs.2195.28. The park is located on NH-31 at a distance of 90 km from Guwahati and will accommodate 27 numbers of food processing units. The Mega Park was inaugurated on 28<sup>th</sup> May, 2015 and one unit is presently functioning.

### PLASTIC PARK

To facilitate the growth of downstream industries based on the Assam Gas Cracker Project (Brahmaputra Cracker and Polymer Ltd.), Government of Assam has proposed to set up a Plastic Park at Gelapukhuri in Tisukia District to facilitate polymer based downstream industries. The project site is located 3-4 kms from the Tinsukia town and about 60 kms from the Assam Gas Cracker Project site. It is proposed to provide the following facilities:

- Developed plots
- Internal roads
- Water supply system
- Captive power plant
- Internal drainage system
- Boundary wall
- Street lighting
- Medical/ recreation/ canteen
- Tool room
- Recycling plant, etc.

### BAMBOO PARK

A bamboo park at Chaygaon in Kamrup (Rural) is under construction. The proposed park is being developed in PPP model with the assistance from Ministry of Commerce & Industry, GOI; State Govt. and private promoters. The cost of the Project is Rs.62.28 crore out of which the Central Govt. contribution is Rs.52.63 crore. The objective of park is to create integrated infrastructure for promotion of bamboo based industries in the State.

### MAJOR SCHEMES IMPLEMENTED BY THE DEPARTMENT OF INDUSTRIES AND COMMERCE, ASSAM

#### PRIME MINISTER ROJGAR YOJANA (PMRY) /

#### PRIME MINISTER EMPLOYMENT GENERATION PROGRAMME (PMEGP)

Prime Minister Employment Generation Program (PMEGP) has been introduced by merging the PMRY and REGP with the same aims and objectives of Prime Minister Rojgar Yojana (PMRY). The KVIC is implementing the PMEGP scheme as the nodal agency at the national level and at the State level KVIC Directorate, State KVIB and the District Industries and Commerce Centres and Banks implement the scheme in Assam. The Government subsidy under the scheme is being routed by the KVIC through the identified Banks. The Government subsidy under the scheme is being routed by the KVIC through the identified Banks.

Table 11.3 shows achievements of implementation of PMEGP in Assam during the year 2008-09 and 2014-15.

TABLE – 11.3  
TARGET AND ACHIEVEMENTS OF PMEGP IN ASSAM

| Year    | Physical target (in nos.) | Financial Target (margin money) (Rs. in Lakh) | Total Cases sanctioned (Rs. in Lakh) | Physical achievement (in no.) | Financial achievement (Rs. in lakh) | Remarks                               |
|---------|---------------------------|---|--------------------------------------|-------------------------------|-------------------------------------|---------------------------------------|
| 2008-09 | 685                       | 820.22  | 861                                  | 617                           | 676.95                              | Information represents DICC part only |
| 2009-10 | 1292                      | 1550.00                                       | 2440                                 | 2440                          | 1899.71                             | For the State                         |
| 2010-11 | 3193                      | 4469.66                                       | 4756                                 | 4756                          | 4801.10                             | For the State                         |
| 2011-12 | 5047                      | 7065.80                                       | 5280                                 | 5280                          | 5544.99                             | For the State                         |
| 2012-13 | 4644                      | 6500.20                                       | 7336                                 | 7336                          | 5801.15                             | For the State                         |
| 2013-14 | 4588                      | 6210.97                                       | 8049                                 | 8049                          | 7219.90                             | For the State                         |
| 2014-15 | 5101                      | 7238.82                                       | 5584                                 | 5584                          | 5042.41                             | For the State                         |

Note: Physical and financial targets are subject to revision from time to time.

Source: Office of the Commissioner of Industries & Commerce, Assam.

### SMALL SCALE INDUSTRIAL UNITS (SSI)/

### MICRO, SMALL & MEDIUM ENTERPRISES AND HANDICRAFTS UNITS

The strategy for industrial growth in Assam must focus on generating jobs for unemployed youth to ensure regionally balanced, socially equitable and economically inclusive growth. The Small Scale Industries have played vital role in fulfilment of socio-economic development perspectives in Assam. Presently the small-scale industries have been sub- divided into Micro, Small and Medium Enterprise (MSME) under the Micro, Small and Medium Enterprises Development Act 2006. The categorization of enterprises is made based on their investment in plant and machineries in case of manufacturing sector or in equipments in case of service sector. In this context, special focus has been given by the State Government on development of the MSME sector for generation of economic activities and skill development in employable trades with a view to generate rural income and employment. For speedy growth of this sector, the Government of Assam has already brought some simplification in its procedures in respect of registration as well as declared incentives in its Industrial Policy – 2008.

There are 41434 SSI/MSME units in Assam and provided employment to 2.35 lakh persons till the end of March 2015. The Table – 11.4 shows some annual statistics in respect of setting up of SSI/MSME units upto 31-03-2015. It is evident from the table that average employment per unit of manufacturing enterprises in Assam is around 7(seven) person during the period 2005-06 to 2014-15 and average investment per unit is Rs.14.09 lakh. The table also depicts that the average investment per unit was on an increasing trend up to 2011-12 reaching Rs.21.58 lakh and thereafter went on a decreasing trend falling to Rs.10.24 lakh in 2014-15.

TABLE – 11.4  
GROWTH OF SSI /MSME UNITS, EMPLOYMENT,  
INVESTMENT AND PRODUCTION IN ASSAM  
(as on March)

| Year            | No. of SSI /MSME units | No. of Employment | Average no of Employment per unit | Investment on Plants & Machinery (Rs. in lakh) | Average investment per Unit (Rs in lakh) |
|-----------------|------------------------|-------------------|-----------------------------------|--|--|
| Upto 31.03.2005 | 23658                  | 108467            | 4.6                               | 46085.89                                       | 1.95                                     |
| 2005-06         | 2082                   | 10780             | 5.2                               | 23776.88                                       | 11.42                                    |
| 2006-07         | 2172                   | 11852             | 5.5                               | 9282.72  | 4.27                                     |
| 2007-08         | 1692                   | 10471             | 6.2                               | 26637.42                                       | 15.74                                    |
| 2008-09         | 1711                   | 12914             | 7.5                               | 26348.26                                       | 15.40                                    |
| 2009-10         | 1678                   | 12787             | 7.6                               | 29901.68                                       | 17.82                                    |
| 2010-11         | 1214                   | 9002              | 7.4                               | 25557.59                                       | 21.05                                    |
| 2011-12         | 1287                   | 13886             | 10.8                              | 27776.15                                       | 21.58                                    |
| 2012-13         | 1451                   | 11671             | 8.0                               | 27397.47                                       | 18.88                                    |
| 2013-14         | 1860                   | 12971             | 7.0                               | 31099.08                                       | 16.72                                    |
| 2014-15         | 2629                   | 20496             | 7.8                               | 26923.29                                       | 10.24                                    |

Source: Office of the Commissioner of Industries & Commerce, Assam.



## VOCATIONAL TRAINING

The Department of Industries and Commerce, Assam have been imparting 'Vocational Training' to the youth of the State interested in self employment. The youths are imparted six months industrial training within the State, the cost of which is fully borne by the State Govt. The programme is being discontinued since 2014-15. The following table shows some information on the achievement of vocational training for the year 2011-12 and 2013-14.

TABLE – 11.5  
IMPLEMENTATION OF VOCATIONAL TRAINING PROGRAMME

| Year     | Physical target |      |     | Financial target<br>(Rs. in lakh) |       |       | No of trainees<br>sponsored |      |     | No. of trainees<br>completed<br>training |      |     |
|----------|-----------------|------|-----|-----------------------------------|-------|-------|-----------------------------|------|-----|--|------|-----|
|          | Gen             | SCSP | TSP | Gen                               | SCSP  | TSP   | Gen                         | SCSP | TSP | Gen                                      | SCSP | TSP |
| 2011-12  | 520             | 520  | 135 | 50.00                             | 50.00 | 14.00 | 520                         | 520  | 135 | 520                                      | 520  | 135 |
| 2012-13* | 310             | Nil  | Nil | 30.00                             | Nil   | Nil   | 310                         | Nil  | Nil | 310                                      | Nil  | Nil |
| 2013-14  | 310             | 350  | 78  | 30.00                             | 34.00 | 8.00  | 310                         | 350  | 78  | Under<br>Implementation                  |      |     |

\* No sanction for TSP and SCSP

Source: Office of the Commissioner of Industries and Commerce, Assam.

## MUKHYAMANTRIR KARMAJYOTI AACHANI

The basic objective of the scheme is to supply machinery and equipments to trained individual beneficiaries as well as Self Help Groups to start self employment ventures. Traditional trade like manufacturing of decorative textile, blacksmithy, pottery, carpentry, toy making etc will cover under the scheme. Implementation of the scheme is continuing from the year 2005-06 under the sponsorship of the Government of Assam.

The following table shows some information on the implementation of Mukhyamantrir Karmajyoti Aachani during the year 2005-06 to 2014-15.

TABLE – 11.6  
ACHIEVEMENTS OF THE MUKHYAMANTRIR KARMAJYOTI AACHANI  
[PERIOD 2005-06 to 2013-14]

| Year                 | Target  |                               | Achievement                                    |                               | Remarks  |
|----------------------|---|-------------------------------|--|-------------------------------|--|
|                      | Physical<br>(In Nos.)                                 | Financial<br>(Rs. in<br>Lakh) | Physical<br>[No. of<br>Artisans<br>Benefitted] | Financial<br>(Rs. in<br>Lakh) |  |
| 2005-06              | 1,02,500  | 900.00                        | 1,19,145                                       | 895.74                        | -  |
| 2006-07<br>& 2007-08 | 54,000  | 195.00                        | 54,000   | 192.52                        | Implementation for both<br>years done together                           |
| 2008-09              | 40,000  | 145.00                        | 40,000   | 144.61                        | -  |
| 2009-10              | 2480 (SHG)  | 200.00                        | 24,800   | 200.00                        | -  |
|                      | 21,325<br>(Individual)                                | 75.00                         | 21,325   | 75.00                         | SCCP   |
| 2010-11              | 660 (SHG) and<br>1000 (Individual/<br>trained person) | 835.00                        | 640  | 113.82                        | Under process  |
| 2011-12              | 2560 nos. SHG/<br>individual trained<br>person        | 514.00                        | 2168   | 452.70                        | Machines/equipments<br>distributed/to be<br>distributed                  |
| 2012-13              | 4621 nos. SHG/<br>individual trained<br>person        | 595.00                        | 1903   | 178.62                        | Supply order issued/ to<br>be issued (remaining<br>target under process) |
| 2013-14              | 5027  | 900.00                        | 1257   | 704.96                        |  |
| 2014-15              | 508   | 85.00                         | 508  | 95.00                         |  |

Source: Office of the Commissioner of Industries and Commerce, Assam.



## MULTI DISCIPLINARY SKILL DEVELOPMENT PROGRAMME

The Multi Disciplinary Skill Development Programme is a flagship programme taken up by the State Industries and Commerce Department during the year 2011-12. It has been designed to effectively address the issue of skill development, enhance employability of rural youths as well as to take advantage of the growing demand for skilled manpower nationwide with the growth of the economy. The objective of the scheme is not only to train youths for acquiring skill but also plans to extend handholding support to these trained youths for placement by creating a Job Studio. The Scheme also has provision for training entrepreneurs to enhance their skills to compete internationally. Accordingly, sizeable number of entrepreneurs will be sent for training in reputed institutions within and outside the State so that they can acquire both hard and soft skills that are necessary to produce internationally standard Goods and Services and compete globally. The scheme will continue during the 12<sup>th</sup> five year plan.

The State Industries and Commerce Department has started construction of 4(four) numbers of Multi-Disciplinary Skill Development Training Centres at – Badarpurghat (Karimganj), Bilashipara (Dhubri), Bajiagaon (Nagaon) and Margherita (Tinsukia) along with up-gradation of existing training institute “Cottage Industries Training Institute” located at Kalapahar, Guwahati. In addition, construction of another 23 numbers of Multi-Disciplinary Skill Development Training Centres is going to provide one training centre in each district. Till completion of the training centres, the State Industries and Commerce Department has arranged training at few recognized national institutes of repute [as shown below] within and outside the State. In addition, The State Government has also decided to impart training at Block level under the ongoing scheme.

- (a) National Academy of Construction, Hyderabad.
- (b) MSME Tool Room Training Centre, Guwahati.
- (c) CIPET, Changsari, Guwahati.
- (d) Cottage Industries Training Institute, Kalapahar, Guwahati.
- (e) NSIC, Guwahati.
- (f) NEITCO, Guwahati.
- (g) Handicraft Design and Research Centre, Industrial Estate, Guwahati.
- (h) NEISBUD, New Delhi.
- (i) NI-MSME, Yousufguda, Hyderabad.
- (j) National Centre for Design and Product Development, Okhla Industrial Estates, New-Delhi.

Training expenses: The State Industries and Commerce Department bears the cost of training which includes:

- (a) Course fee.
- (b) Food and lodging.
- (c) To and fro expenditure from place to place of origin to the training institutes.
- (d) Insurance coverage of Rs.2.00 lakh per trainee under “Nagarik Suraksha Yojana” of Oriental Insurance Company for 4 months.

TABLE – 11.7  
ACHIEVEMENTS OF MDSK DURING THE YEAR 2011-12 TO 2014-15

| Year    | Physical target (in nos) | Financial target (Rs. in lakh) | No. of trainees sponsored | No. of trainees completed training |
|---------|--------------------------|--------------------------------|---------------------------|------------------------------------|
| 2011-12 | 1600                     | 200.00                         | 537                       | 537                                |
| 2012-13 | 1600                     | 200.00                         | 433                       | 433                                |
| 2013-14 | 1500                     | 450.00                         | 1390                      | 1390                               |
| 2014-15 | 1250                     | 400.00                         | 680                       | 100                                |

Source: Office of the Commissioner of Industries and Commerce, Assam

## ANGEL FUND SCHEME

The micro enterprises in manufacturing and service sector play a vital role in the State economy. In spite of effort by the State Govt., the growth of micro enterprises has been dismal. Entrepreneurs in Assam are facing shortage of start-up capital to establish or to expand their existing ventures. The purpose of the scheme is to provide easy loan to skilled as well as un-skilled entrepreneurs for starting or developing micro enterprises under Manufacturing, Service and Agriculture and Allied activities or any other sector for gainful employment.

The Department has selected Assam Gramin Vikash Bank (AGVB) as the financial institution to implement the innovative scheme.

Target Group:

- Prospective entrepreneurs who have undergone skill development training under Industries Department.
- Prospective entrepreneurs who have undergone skill development training under other Govt. Department/ organizations.
- Existing artisans having traditional skill.
- Preference will be given to women, physically handicapped and SC/ST entrepreneurs.
- Only individuals.

Selection of beneficiary and sanction process:

- ❖ Proposal to be forwarded by DI&CC to the respective branch office of AGVB after preliminary scrutiny and selection of beneficiary jointly by a committee constituting of GM, DI&CC, FM/EO of DI&CC office, Branch head of AGVB of the district concern.
- ❖ Concerned Branch office of AGVB will issue loan forms and do due diligence including inspection, CIBIL search etc, and sanction the proposal after detailed appraisal adhering the prevailing norms of the banks.

Limit of assistance and project cost:

The maximum project cost limit will be Rs.5.00 lakh out of which the term loan & Working Capital for assistance shall not exceed 85% for new unit and 80% for existing unit.

Achievement of Angel Fund Scheme for the year 2013-14 and 2014-15 as on 15<sup>th</sup> Sept./ 2015 is reflected in the following table:

TABLE – 11.8

| Year              | Financial Target<br>(Rs. in lakh) | Physical target<br>(in nos.) | Project cost<br>(Rs. in lakh) | Financial<br>achievement<br>(Rs. in lakh) |
|-------------------|-----------------------------------|------------------------------|-------------------------------|---|
| 1                 | 2                                 | 3                            | 4                             | 5   |
| 2013-14 & 2014-15 | 2200.00                           | 962                          | 2583.90                       | 2186.40                                   |

Source: Office of the Commissioner of Industries and Commerce, Assam

## EXIM DATA OF ASSAM, 2014-15

Total Export of Assam Origin products to various countries during 2014-15 were Rs. 2089.15 crore, according to data provided by the Directorate General of Commercial Intelligence & Statistics (DGCIS), Kolkata, Ministry of Commerce & Industry, Govt. of India. It appears that Assam Origin products were exported to 76 countries in the world through 54 numbers various ports, like Sea Ports, Airports, Land Custom Stations (LCS), Inland Container Depot (ICD), etc. Assam Origin Tea is exported to 68 countries in the world.

During 2014-15, total export that included State origin products like Tea, Petroleum, Cement, Stone, Cosmetics, Agro-food & Allied, Plastics, etc was Rs.2089.15 crore against Rs.2465.65 crore in 2013-14 showing a fall in Export by 15 percent. The table below shows sector-wise financial growth of export of Assam origin products.

TABLE – 11.9  
SECTOR-WISE GROWTH OF EXPORT OF ASSAM ORIGIN PRODUCTS

| Items  | 2013-14              |                   | 2014-15              |                   | Growth of export over 2013-14 |
|--|----------------------|-------------------|----------------------|-------------------|-------------------------------|
|  | Amount (Rs. in lakh) | % of total export | Amount (Rs. in lakh) | % of total export |                               |
| Agro-food products/fish/horticulture products/spices/process food/jute, etc. | 3765.61              | 1.53              | 3940.90              | 1.89              | 4.66                          |
| Tea  | 227081.54            | 92.10             | 173718.75            | 83.15             | (-)23.50                      |
| Building materials/cement/clinker/stone/plywood, etc.                        | 315.02               | 0.13              | 21700.72             | 10.39             | 6788.68                       |
| Petroleum/natural gas/petrochemicals   | 9847.17              | 3.99              | 4341.17              | 2.08              | (-)55.91                      |
| Pharmaceuticals  | 863.38               | 0.35              | 970.01               | 0.46              | 12.35                         |
| Cosmetics  | 981.76               | 0.40              | 1171.69              | 0.56              | 19.35                         |
| Plastics   | 412.95               | 0.17              | 1151.30              | 0.55              | 178.80                        |
| Paper & paper products   | 164.51               | 0.07              | 437.75               | 0.21              | 166.09                        |
| Textiles   | 386.68               | 0.16              | 256.55               | 0.12              | (-)33.65                      |
| Iron & steel/Machinery & machinery parts/Aluminium, etc.                     | 1313.27              | 0.53              | 815.76               | 0.39              | (-)37.88                      |
| Others   | 1433.54              | 0.58              | 410.66               | 0.20              | (-)71.35                      |
| Total  | 246565.43            |                   | 208915.27            |                   | (-)15.27                      |

Source: Office of the Commissioner of Industries and Commerce, Assam

The table shows that there is a decrease of export by 15.27 percent in 2014-15 over 2013-14. This fall is mainly due to decrease of export of tea and petroleum. However significant increase in export of building materials, paper & paper products, plastics, cosmetics and Pharmaceuticals is seen during the year 2014-15.

#### ASSAM GAS CRACKER PROJECT (BRAHMAPUTRA CRACKER AND POLYMER LTD)

The Brahmaputra Cracker and Polymer Limited (BCPL) Petrochemical Complex, a flagship project of Assam, was conceptualized to implement the Assam Gas Cracker project which is an outstanding outcome of the historic Assam Accord signed in 1985 aimed at the socio economic development of the entire North Eastern Region has been dedicated to the Nation by the Prime Minister of India on February 5, 2016. The project was approved by the Government of India on April 18, 2006. BCPL is a Central Public Sector Enterprise under the Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers, Government of India. GAIL (India) Limited is the main promoter having 70% equity participation and the rest 30% is equally shared by Oil India Limited (OIL), Numaligarh Refinery Limited (NRL) and Government of Assam.

Set up with an investment of approx. Rs. 10,000 crores, the BCPL plant will have the capacity to manufacture 2,80,000 tonnes per annum of polymer products which will result in the growth of new downstream plastic processing industries in the North Eastern region, besides reducing dependency on polymer supply from other parts of the country.

It has generated direct employment for 700 personnel and indirect employment for around 2,500 people in the project complex. Moreover, it will generate nearly one lakh indirect employment opportunities through setting up of various downstream plastic processing industries and ancillaries in the region.

The BCPL complex, situated at Lepetkata about 15 kms from Dibrugarh, is spread over 3,000 bighas of land which was acquired and handed over by the Government of Assam to BCPL.

The Feedstock for the project will be Natural Gas and Naphtha which will be supplied by Oil India Limited, Oil and Natural Gas Corporation and NRL.

#### Wax Plant of Numaligarh Refinery Limited

The 50,000 Metric Tonnes (MT) Wax Plant commissioned in March 2015 at a cost of Rs. 676 crores is the country's largest Wax producing unit with indigenous technology developed by IIP

Dehradun, EIL and NRL. Leveraging on the inherent properties of wax rich crude oil from the oil fields of Assam, the plant is designed to produce superior quality paraffin and semi-microcrystalline wax and is a worthy manifestation of the 'Make in India' campaign of the Govt. of India. At present, a major part of the country's annual demand for Paraffin Wax along with the entire demand for Microcrystalline Wax is being met through imports. NRL's Wax plant will minimize the supply deficit in the domestic market substantially, thus reducing imports. NRL is also exploring opportunities to export Wax to the neighbouring countries aligning with the 'Act East Policy' of the Govt. of India.

The Wax Plant will also open up opportunities for ancillary industries to thrive while creating avenues for large scale employment. The utility of Paraffin Wax lies in making candles, tarpaulin sheets, food grade wrappers and in PVC pipe manufacturing industries while Microcrystalline Wax finds widespread application in the manufacture of tyres, rubber products, paints and polishes, pharmaceuticals and cosmetics.

#### TEA INDUSTRY

The Tea industry occupies an important place in Assam and plays a very special role in the State economy. The first Indian tea produced in Assam was sent to United Kingdom for public sale in the year 1838. Although the tea cultivation was extended to other parts of the country between 50's and 60's of the last century, as of today, Assam Tea has maintained its international reputation and commands significant share in the World Tea Market. The total area under tea cultivation in Assam is accounting for more than half of the country's total area under tea. In addition to existing big & large tea gardens owned by reputed both Indian and multinational Companies, the profession of tea plantation in the State has been taken up by common people as business venture at present, especially by unemployed youths. The tea industry in Assam also provides average daily employment to more than 6.86 lakh persons in the State, which is around 50 percent of the total average daily number of labour employed [on an average 11.1 lakh labour employed per day] in the country.

Assam has witnessed a spurt in the growth of small holdings during the last three decades and there is more than 1.0 lakh small holdings accounting for 200 hundred million kgs of made tea. Most of the STGs are first generation young and educated entrepreneurs who have started contributing immensely towards transformation of socio-economic life of rural Assam. According to the Tea Board of India, there are about 68.5 thousand registered small tea growers [STG] in Assam producing about 106881 thousand KG in 88674 hectares of land in Assam.

Assam alone produces more than half of India's tea production. The estimated production of tea in Assam was 630.0 thousand tonnes in 2014-15 which is being produced in a 304.40 thousand hectare of land. Statistics of area and production of Tea in Assam are shown in the Table 11.10.

TABLE – 11.10

#### TEA STATISTICS OF ASSAM AND INDIA

| Year | No. of Tea Gardens |       | Area under Tea (in'000 hectare) |       | Total Tea Production (in 000 kg.) |         | Average yield (kg/ hectare) |       |
|------|--------------------|-------|---------------------------------|-------|-----------------------------------|---------|-----------------------------|-------|
|      | Assam              | India | Assam                           | India | Assam                             | India   | Assam                       | India |
| 2007 | 825                | NA    | 321.3                           | 578   | 511885                            | 986427  | 1593                        | 1705  |
| 2008 | 760                | 1385  | 321.4                           | 560   | 487497                            | 980818  | 1517                        | 1750  |
| 2009 | 760                | 1385  | 321.7                           | 561   | 499997                            | 978999  | 1554                        | 1746  |
| 2010 | 760                | 1385  | 322                             | 561   | 480286                            | 966403  | 1492                        | 1724  |
| 2011 | 765                | NA    | 322                             | 560   | 589110                            | 988323  | 1830                        | 1764  |
| 2012 | 78856              | NA    | 322                             | 579   | 590120                            | 1111760 | 1833                        | 1919  |
| 2013 | 69220              | NA    | 322                             | 564   | 629050                            | 1208780 | 1953                        | 2143  |
| 2014 | 77710              | NA    | 304                             | 564   | 610970                            | 1208780 | 2010                        | 2143  |

Note : 1. No. of Tea Gardens shown from 2007 to 2011 refers to only Tea Gardens having area above 10.12 Ha and excluding Small Growers.

2. Area, Production and Average yield estimated and subject to revision.

Source: Tea Board of India.

The Guwahati Tea Auction Centre is actively taking part in trading of the Tea produced mainly in the North-eastern States since its establishment. Statistics of quantity and average price of tea sold in the Guwahati Tea Auction Centre is shown in the Table 11.11.

TABLE – 11.11  
QUANTITY AND AVERAGE PRICE OF TEA SOLD  
IN THE GUWAHATI TEA AUCTION CENTRE

| Year                | Leaf                         |                                  |                              |                                  | Dust                         |                                  |                              |                                  |
|---------------------|------------------------------|----------------------------------|------------------------------|----------------------------------|------------------------------|----------------------------------|------------------------------|----------------------------------|
|                     | CTC                          |                                  | Orthodox                     |                                  | CTC                          |                                  | Orthodox                     |                                  |
|                     | Quantity<br>(million<br>Kg.) | Average<br>Price<br>(Rs. per Kg) | Quantity<br>(million<br>Kg.) | Average<br>Price<br>(Rs. per Kg) | Quantity<br>(million<br>Kg.) | Average<br>Price<br>(Rs. per Kg) | Quantity<br>(million<br>Kg.) | Average<br>Price<br>(Rs. per Kg) |
| 2005                | 101.94                       | 61.11                            | 0.61                         | 61.62                            | 40.30                        | 59.19                            | -                            | -                                |
| 2006                | 100.75                       | 67.96                            | 0.72                         | 78.18                            | 40.90                        | 68.27                            | -                            | -                                |
| 2007                | 106.88                       | 70.09                            | 4.16                         | 73.93                            | 41.51                        | 73.02                            | 0.001                        | 50.00                            |
| 2008                | 110.14                       | 90.20                            | 0.56                         | 92.39                            | 41.99                        | 95.73                            | -                            | -                                |
| 2009                | 98.33                        | 108.52                           | 0.44                         | 111.21                           | 39.74                        | 115.10                           | -                            | -                                |
| 2010                | 87.33                        | 113.06                           | 0.36                         | 122.09                           | 38.94                        | 116.26                           | -                            | -                                |
| 2011                | 86.2                         | 108.74                           | 0.254                        | 109.28                           | 36.23                        | 107.93                           | -                            | -                                |
| 2012                | 70.84                        | 138.27                           | 0.551                        | 163.07                           | 30.97                        | 143.17                           | -                            | -                                |
| 2013                | 87.36                        | 130.11                           | 0.91                         | 168.58                           | 38.30                        | 137.34                           | -                            | -                                |
| 2014                | 80.34                        | 142.52                           | 0.48                         | 143.32                           | 39.64                        | 145.15                           | -                            | -                                |
| 2014<br>(upto July) | 32.69                        | 134.36                           | 0.52                         | 187.60                           | 15.87                        | 139.38                           | -                            | -                                |

Source: Guwahati Tea Auction Centre.

During 2014-15, about 82.99 million kgs of Assam Tea was exported to about 68 countries. The table below shows quantity of Assam tea exported and total revenue earned from it.

TABLE – 11.12  
EXPRT OF ASSAM TEA DURING 2014-15

| Sl. No. | Items             | Quantity<br>(in Kgs) | Value<br>(Rs. in lakh) |
|---------|-------------------|----------------------|------------------------|
| 1       | Black Tea in Bulk | 79489446             | 162534.95              |
| 2       | Black Tea in Bags | 3142158              | 10595.67               |
| 3       | Green Tea in Bulk | 133393               | 271.96                 |
| 4       | Green Tea in pack | 226664               | 316.18                 |
|         | Total             | 82991661             | 173718.76              |

Source: Office of the Commissioner of Industries and Commerce, Assam

## RUBBER INDUSTRY

The rubber cultivation has gained its popularity in Assam due to congenial agro-climatic condition as well as its eco-friendly environment. The Rubber Board has identified Assam as a "Potential State" from the "productivity" point of view as the State too has ample scope of rubber plantation. Considering the said conditions, the Rubber Board has planned to enhance rubber plantation area to 2 lakh hectares at the end of Twelfth Five Year Plan from the 28102 hectare at present to cope with the growing demand of rubber in the country which is expected to touch 1.78 lakh MT at the end of 2025. The area under rubber cultivation has grown from 16.5 thousand hectares in 2006-07 to 42.1 thousand hectares in 2014-15. The tapping area as well as production of rubber has also been increased considerably during the same period. The growth of coverage of the rubber plantation area as well as production in the State is presented in the Table 11.13. Considering the growth of plantation areas and rubber production trends, there is vast potential for setting up of rubber industries in the State.

TABLE – 11.13  
AREA AND PRODUCTION OF RUBBER IN ASSAM

| Year    | Area<br>(in hectare) | Production<br>(in MT) | Tapping Area<br>(in hectare) | Employment<br>Generation<br>(Mandays) |
|---------|----------------------|-----------------------|------------------------------|---------------------------------------|
| 2006-07 | 16508                | 3050                  | NA                           | 1503550                               |
| 2007-08 | 18271                | 4750                  | 3320                         | 1762591                               |
| 2008-09 | 20975                | 5097                  | 3518                         | 2040686                               |
| 2009-10 | 23075                | 9832                  | 6505                         | 2710230                               |
| 2010-11 | 27083                | 10213                 | 7686                         | 2767450                               |
| 2011-12 | 30791                | 10437                 | 8608                         | 3034993                               |
| 2012-13 | 34537                | 11054                 | 7634                         | 381992                                |
| 2013-14 | 39855                | 14337                 | 9070                         | 140386                                |
| 2014-15 | 42097                | 15342                 | 11080                        | 134357                                |

Source: The Rubber Board, Zonal Office, Guwahati.

## SERICULTURE

Traditionally, sericulture is a major cottage industry in the State. Sericulture has been practiced in Assam from time immemorial and continues to be an important labour-intensive and agro based cottage industry providing gainful occupation to around 2.50 lakh person in rural and semi-urban areas of Assam. Of this a sizeable number of male workers belong to the economically weaker section of the society and women. Moreover, sericulture is a sustainable farm-based economic enterprise positively favouring the rural poor in the un-organized sector because of its relatively low requirement of fixed capital and higher returns on investment.

The State of Assam is proud of traditionally producing Muga, Eri and Mulberry and lastly the Oak tassar in the hills districts. The State accounts for highest production of non-mulberry silk, muga and eri in the country. Assam has the monopoly in the world in the production of Muga, the "Golden Silk", as more than 97 percent of Muga Silk is produced in Assam. Assam has also achieved the right of 'Geographical Indication' for Muga thread. The State is also a Major producer of Eri Silk (about 65 percent).

This industry has undergone a number of changes with the changes in loom, fabric, design, technology etc. Non-mulberry silk in general and Muga silk in particular has been closely associated with the rituals and traditions of Assam and thus, silk production and its usage has been an important household activity in the State over the years. Muga Silk and Eri Silk have good demand in the national and international market. Rearing of Eri, Muga and Mulberry silkworm are playing an important role in the economic development of a large section of rural population of the State. It is practiced in 11281 villages at present and provides employment to 6.5 lakh families of the State.

The production of silk in the State was 2497 MT during the year 2014-15 which is 7.52 percent less than the previous year. During the year, a decrease in production has been noticed in respect of Eri Raw Silk (-7.89 percent), Mulberry raw silk (-2.2 percent) and Muga Raw Silk (-0.78 percent) over the previous year.

The total area under Silkworm Food Plants recorded decrease from 33790 in 2013-14 to 15417 in 2014-15.

The performance of Sericulture is presented in the table below.

TABLE – 11.14  
SERICULTURE ACTIVITIES IN ASSAM

| Item |   | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|------|---|---------|---------|---------|---------|---------|---------|---------|
| 1.   | Sericulture Villages (Nos.)                 | 9537    | 10532   | 10532   | 10740   | 10746   | 11411   | 11281   |
| 2.   | No. of Families Engaged                     | 238578  | 260707  | 254134  | 254516  | 291592  | 282073  | 652406  |
| 3.   | Area under Silk Worm food Plants (In Hect.) | 18556   | 21229   | 21301   | 24268   | 26827   | 33790   | 15417   |
| 3.1  | Eri   | 7538    | 7623    | 7670    | 8044    | 9172.5  | 15796   | 6601    |
| 3.2  | Muga  | 7305    | 8902    | 8908    | 9400    | 10230   | 10371   | 5995    |
| 3.3  | Mulberry                                    | 3713    | 4704    | 4723    | 6824    | 7424    | 7623    | 2821    |
| 4.   | Yield of Cocoons                            |         |         |         |         |         |         |         |
| 4.1  | Eri cut Cocoons (in MT)                     | 1080    | 1089    | 1108    | 1622.51 | 2514.16 | 3182    | 3050    |
| 4.2  | Muga Cocoons (in lakh Nos.)                 | 5040    | 4436    | 6368    | 5812    | 5450    | 6361    | 6528    |
| 4.3  | Mulberry Reeling Cocoons (in MT)            | 100     | 84      | 110     | 129.28  | 225.0   | 340.5   | 268     |
| 5.   | Production of Silk Yarn (in MT)             | 921     | 916.17  | 935.66  | 1187.42 | 2068.0  | 2700.04 | 2497.40 |
| 5.1  | Eri Raw Silk                                | 810     | 819.09  | 810.98  | 1061.61 | 1934.0  | 2545.6  | 2345.0  |
| 5.2  | Muga Raw Silk                               | 101     | 88.73   | 113.28  | 114.56  | 109.0   | 127.2   | 126.0   |
| 5.3  | Mulberry Raw Silk                           | 10      | 8.35    | 11.4    | 11.25   | 25.0    | 27.24   | 26.4    |

Source: Directorate of Sericulture, Assam.

At present Muga silk worm rearing in Assam is suffering due to high climatic pollution, extreme temperature and continuous rearing under domestic nature. To overcome the problem and to regain its wild nature and strength to survive with the present topography, the department proposed to release some muga silk worm in wild plantation in the Assam-Meghalaya border area near Boko in collaboration with State Forest Department. This will help improvement of domesticated Muga silk worm for quality seed production. The department also proposed to provide financial assistance to re-vitalize the Muga Research Sub-Station located at Dhakuakhana and other research organizations/private farms for conducting different experiments/researches for conservation and protection of muga silk worms.

#### HANDLOOM

In Assam, Handloom Weaving is inexorably linked with Assamese Culture and Heritage. Handloom Industry of Assam provides maximum number of employment after agriculture is known for its rich glorious tradition of making handloom and handicraft products. Handloom is a precious part of generational legacy and has been kept alive by the skilled weavers engaged in the age old tradition of weaving since antiquity in Assam. Contrary to use of modern technology and tools in the textile sector in present days, the handloom sector continued to play very important role in terms of employment generation and the socio-economic development of Assam. Handloom sector in Assam has gradually grown to the expected level for commercial production.

During 2014-15, there were 19.48 lakh weavers in the State out of which 15.30 lakh were part time weavers and 4.18 lakh whole time weavers. Number of Handloom demonstration circle were 221 and 14273 numbers of villages were covered under the activity. During the year, under Centrally Sponsored Scheme, 56354 numbers of weavers were covered under the Health Insurance and 4034 weavers were given Weavers Credit Card.

#### TOURISM

Tourism is a fastest growing industry in the world. Tourism is not only a growth engine but also an employment generator that has the capacity to create large scale employment both direct and indirect, for diverse sections in society, from the most specialized to unskilled workforce. Tourism in Assam is based on wildlife, natural beauty, unique flora & fauna, holy shrines, lush green tea gardens, turbulent rivers, vibrant and colourful cultural festivals. Assam has immense tourism potentials, which are to be explored as commercial resources. Eco-tourism is one of the fastest growing tourism segments and therefore the Government of Assam has given tremendous thrust with relevant to natural beauty and bounty.



The State Tourism Department has witnessed a considerable success and all round development both in respect of infrastructure development and creation of other facilities over the years with the financial assistance from the Central as well as the State Government. It is felt that to explore tourism potentials, adequate investments and integrated, coordinated and concerted efforts from all concerned departments are necessary. However, the State Tourism department has undertaken various steps for promotion/ infrastructure development in the State both individually and jointly with private sector.

For the growth of tourism sector, special emphasis has been given on Tourism Circuit Development, Destination Development, Wayside Amenities etc., through public and private partnership to tap the unexplored potential opportunities. Assam Tourism Policy, 2008 has also been adopted by the State Government giving special emphasis to encourage private investment in Tourism sector by providing financial and logistic support. The State Government has made all basic arrangements for construction of chain of 5 [Five] Star Hotels in collaboration with private investors and Indian Hotel Company Ltd.

Eco-tourism is aimed at the appreciation of both natural world and traditional cultures existent in natural areas and to protect natural and cultural assets. Assam has several ethnic groups residing in harmony in spite of the differences in rites and rituals, festivals and attires. One may discover the fascinating legacy of art and crafts in Assam, the proud producer of three unique varieties of Silk, the Golden Muga, the White Pat and Warm Eri. In Assam, one can hear the rhythms of the shuttles of looms in the craft village, which get momentum with the advent of spring. Special priority for development of Religious Tourism & Cultural festivals like "Ambubachi Mela" in Maa Kamakhya Temple, Dol Utsav in Barpeta has also given to attract both Indian and foreign tourists. The Brahmaputra Beach Festival, Kite festival, Kaziranga Golf Competition etc., are organised in collaboration with the Tourism Department is another important step to attract Indian and Foreign tourists to Assam.

Assam is also blessed with minerals especially petroleum. It is worth mentioning that India's first oil well was drilled in Digboi. The world's third oil refinery and the first oil refinery in India and too in Asia was established and located at Digboi has also special importance from the tourism point of view.

River cruise on the Brahmaputra from Guwahati, organised by Government as well as Private tour operators are major attractions. One can opt for short cruises or can avail longer sailing to Kaziranga National Park or to the ethno-religious island of Majuli or to the remnants of the Great Ahom Kingdom in Sivasagar. "M.V. Mahabahu"- the latest addition for river cruise with starred facility is new attraction for adventure tourism. Of let, Brahmaputra cruises has been recognised as one of the top 10 most adventures cruises by the CNN International in 2013.

The Table 11.15 shows the volume of tourist traffic and magnitude of revenue earning by the State over the last seven years.

TABLE –11.15  
NUMBER OF INDIAN AND FOREIGN TOURIST TO ASSAM  
AND REVENUE EARNED FROM THE TOURISTS

| Year    | Tourist staying in Tourist Lodges |         | Tourist Staying in other accommodation like Hotel etc. |         | Total Revenue earned from Tourist Lodges only (Rupees in lakh) |
|---------|-----------------------------------|---------|--|---------|--|
|         | Indian                            | Foreign | Indian   | Foreign |  |
| 2006-07 | 20279                             | 649     | 3459591  | 13008   | 81.30  |
| 2007-08 | 24057                             | 960     | 3465757  | 12839   | 94.99  |
| 2008-09 | 26439                             | 674     | 3672267  | 13859   | 103.92   |
| 2009-10 | 25665                             | 664     | 3869860  | 14030   | 131.63   |
| 2010-11 | 25831                             | 594     | 4101616  | 15039   | 143.60   |
| 2011-12 | 26439                             | 696     | 4381897  | 15964   | 184.49   |
| 2012-13 | 22057                             | 711     | 4522609  | 16997   | 248.19   |
| 2013-14 | 26394                             | 726     | 4417999  | 18360   | 191.32   |
| 2014-15 | 21092                             | 422     | 4842734  | 19583   | 211.77   |

Source: Directorate of Tourism, Assam.

During the year 2014-15, number of visit by foreign tourist increased in four National Parks except Dibru-Saikhowa where visit by foreign tourist decreased by 50 percent during the year over the previous year. Maximum increase of 181 percent was noticed in Orang National Park over 16 visit during 2013-14 followed by Manas (125 percent), Nameri (28 percent) and Kaziranga (15 percent). The Table below shows the trend of number of tourists visited various National Parks in Assam during the last eight years.

TABLE – 11.16  
NUMBER OF TOURIST VISITED NATIONAL PARKS IN ASSAM

| Year    | Kaziranga National Park |         | Manas National Park |         | Orang National Park |         | Dibru-Saikhowa National Park |         | Nameri National Park |         |
|---------|-------------------------|---------|---------------------|---------|---------------------|---------|------------------------------|---------|----------------------|---------|
|         | Indian                  | Foreign | Indian              | Foreign | Indian              | Foreign | Indian                       | Foreign | Indian               | Foreign |
| 2007-08 | 53640                   | 6106    | 6391                | 624     | 1631                | 215     | 1766                         | 53      | 4154                 | 524     |
| 2008-09 | 100384                  | 5767    | 1104                | 240     | 1285                | 267     | 2567                         | 74      | 5489                 | 479     |
| 2009-10 | 105264                  | 7580    | 8030                | 139     | 1628                | 325     | 2613                         | 62      | 4342                 | 346     |
| 2010-11 | 112392                  | 7447    | 10843               | 503     | 1702                | 180     | 2351                         | 40      | 4460                 | 352     |
| 2011-12 | 117308                  | 7521    | 19705               | 237     | 2678                | 159     | 3970                         | 42      | 5601                 | 457     |
| 2012-13 | 93747                   | 7418    | 15890               | 218     | 1847                | 70      | 2656                         | 19      | 4370                 | 528     |
| 2013-14 | 119289                  | 6922    | 20527               | 211     | 2329                | 16      | 4230                         | 54      | 5866                 | 806     |
| 2014-15 | 123360                  | 7994    | 9786                | 475     | 1946                | 45      | 4249                         | 27      | 8448                 | 1035    |

Source: The Principal Chief Conservator of Forest (Wildlife), Assam and Directorate of Tourism, Assam.

#### EMPLOYMENT GENERATION SCHEME FOR EDUCATED UNEMPLOYED YOUTHS

Thrust has been given to provide incentive under Chief Minister's Self-employment generation scheme "Assam Bikash Yojana" to local educated unemployed youths for undertaking tourism promotional activities like transport, wayside amenities, food kiosk, restaurants, dhabas, and Home stay facilities, resorts etc. For capacity building, youths studying in the institute of hotel management are provided with stipend and also incentive to the institutions. In addition educated unemployed youths have been provided with subsidy for purchase of tourist vehicles under the Scheme.

#### EFFORTS TO UNVEIL ASSAM TO NATIONAL AND FOREIGN TOURIST

At present, infrastructure development and destination management has been emphasised for sustained growth of tourism sector of Assam. Priority has also been given to establish an impeccable brand identity in the domestic and international market through publicity both in domestic and overseas countries. To achieve positive response from the national and global market, the Assam Tourism Department participated in different tourism fairs to showcase the tourism product in the national and international market so as to attract domestic and foreign tourists to the region. Accordingly, the Assam Tourism Department participated in the national level tourism fairs like Rath Yatra Festival at Puri, TTF Kolkata, Travel India, Kolkata, Surajkund Craft Mela, Buddhist Conclave, IITF New Delhi etc. In addition, the Assam Tourism Department too participated in several international tourism fairs as a part of publicity campaign and to draw tourists. The electronic and print media are also been extensively utilized for publicity and marketing campaign. The Assam Tourism Department has also started intensive media campaign through Domestic and National Level electronic media. Efforts have been made to establish linkages with the neighbouring North-eastern States and South East Asian countries as a regional tourism hub.

The Assam Tourism Department has prioritized infrastructure development of Rural Tourism for women to showcase the rural tourism products, rural lifestyle, culture, handicrafts etc., for unique visitor community as well as income and employment generation of rural women.

In addition, special attention has been given to upgrade existing facilities in wildlife parks, sanctuaries to accommodate more tourists.

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## APPENDIX – 11.1

## TOTAL NUMBER OF REGISTERED MSME UNITS AND TOTAL NUMBER OF WORKERS IN ASSAM

| Sl. No.                                | District     | Unit Registration During the year |         |                | Total Workers |         |                  |
|--|--------------|-----------------------------------|---------|----------------|---------------|---------|------------------|
|  |              | 2012-13                           | 2013-14 | 2014-15        | 2012-13       | 2013-14 | 2014-15          |
| 1                                      | 2            | 3                                 | 4       | 5              | 6             | 7       | 8                |
| 1.                                     | Kokrajhar    | 13                                | 5       | 9              | 106           | 25      | 206              |
| 2.                                     | Dhubri       | 56                                | 83      | 139            | 314           | 414     | 740              |
| 3.                                     | Goalpara     | 26                                | 89      | 77             | 139           | 494     | 532              |
| 4.                                     | Bongaigaon   | 48                                | 36      | 167            | 258           | 222     | 994              |
| 5.                                     | Barpeta      | 54                                | 59      | 122            | 555           | 371     | 818              |
| 6.                                     | Kamrup (M+R) | 297                               | 283     | R-171<br>M-206 | 3051          | 2381    | R-1138<br>M-1783 |
| 7.                                     | Nalbari      | 89                                | 78      | 100            | 439           | 375     | 577              |
| 8.                                     | Darrang      | 43                                | 107     | 120            | 310           | 452     | 436              |
| 9..                                    | Morigaon     | 37                                | 22      | 53             | 189           | 171     | 380              |
| 10.                                    | Nagaon       | 123                               | 180     | 213            | 718           | 1286    | 1276             |
| 11.                                    | Sonitpur     | 54                                | 89      | 135            | 319           | 532     | 916              |
| 12.                                    | Lakhimpur    | 23                                | 53      | 52             | 141           | 475     | 880              |
| 13.                                    | Dhemaji      | 27                                | 39      | 11             | 104           | 156     | 81               |
| 14.                                    | Tinsukia     | 81                                | 98      | 119            | 473           | 649     | 747              |
| 15.                                    | Dibrugarh    | 118                               | 154     | 180            | 470           | 1705    | 1480             |
| 16.                                    | Sivasagar    | 81                                | 100     | 282            | 760           | 632     | 2389             |
| 17.                                    | Jorhat       | 82                                | 86      | 141            | 565           | 471     | 866              |
| 18.                                    | Golaghat     | 42                                | 63      | 112            | 245           | 609     | 825              |
| 19.                                    | K. Anglong   | 6                                 | 15      | 17             | 76            | 154     | 96               |
| 20.                                    | Dima-Hasao   | 3                                 | 2       | 17             | 36            | 16      | 86               |
| 21.                                    | Cachar       | 50                                | 72      | 40             | 1802          | 494     | 221              |
| 22.                                    | Karimganj    | 25                                | 24      | 38             | 133           | 184     | 239              |
| 23.                                    | Hailakandi   | 37                                | 47      | 34             | 155           | 263     | 165              |
| 24.                                    | Chirang      | 11                                | 41      | 55             | 80            | 246     | 363              |
| 25.                                    | Baska        | 11                                | 32      | 6              | 134           | 166     | 54               |
| 26.                                    | Udalguri     | 14                                | 3       | 13             | 99            | 28      | 2208             |
| Total                                  |              | 1451                              | 1860    | 2629           | 11671         | 12971   | 20496            |
| MSME- Micro, Small, Medium Enterprises |              |                                   |         |                |               |         |                  |

Source: Commissionerate of Industries and Commerce, Assam.

## APPENDIX – 11.2

## DISTRICTWISE NUMBER OF MSME REGISTERED IN ASSAM DURING THE YEAR 2014-15

| Sl. No.                               | District      | Unit Registration during the year 2014-15 |       |        |       |
|---------------------------------------|---------------|---|-------|--------|-------|
|                                       |               | Micro                                     | Small | Medium | Total |
| 1                                     | 2             | 3   | 4     | 5      | 6     |
| 1.                                    | Kokrajhar     | 8   | 0     | 1      | 9     |
| 2.                                    | Dhubri        | 138                                       | 1     | 0      | 139   |
| 3.                                    | Goalpara      | 74  | 3     | 0      | 77    |
| 4.                                    | Barpeta       | 122                                       | 0     | 0      | 122   |
| 5.                                    | Morigaon      | 50  | 3     | 0      | 53    |
| 6.                                    | Nagaon        | 202                                       | 10    | 1      | 213   |
| 7.                                    | Sonitpur      | 128                                       | 6     | 1      | 135   |
| 8.                                    | Lakhimpur     | 46  | 6     | 0      | 52    |
| 9.                                    | Dhemaji       | 10  | 1     | 0      | 11    |
| 10.                                   | Tinsukia      | 116                                       | 3     | 0      | 119   |
| 11.                                   | Dibrugarh     | 168                                       | 11    | 1      | 180   |
| 12.                                   | Sivasagar     | 258                                       | 19    | 5      | 282   |
| 13.                                   | Jorhat        | 139                                       | 2     | 0      | 141   |
| 14.                                   | Golaghat      | 106                                       | 6     | 0      | 112   |
| 15.                                   | Karbi-Anglong | 14  | 3     | 0      | 17    |
| 16.                                   | Dima-Hasao    | 17  | 0     | 0      | 17    |
| 17.                                   | Cachar        | 35  | 5     | 0      | 40    |
| 18.                                   | Karimganj     | 36  | 2     | 0      | 38    |
| 19.                                   | Hailakandi    | 34  | 0     | 0      | 34    |
| 20.                                   | Bongaigaon    | 164                                       | 3     | 0      | 167   |
| 21.                                   | Chirang       | 51  | 4     | 0      | 55    |
| 22.                                   | Kamrup        | 156                                       | 12    | 3      | 171   |
| 23.                                   | Kamrup (M)    | 162                                       | 44    | 0      | 206   |
| 24.                                   | Nalbari       | 99  | 1     | 0      | 100   |
| 25.                                   | Baksa         | 5   | 1     | 0      | 6     |
| 26.                                   | Darrang       | 118                                       | 2     | 0      | 120   |
| 27.                                   | Udalguri      | 12  | 1     | 0      | 13    |
| ASSAM                                 |               | 2468                                      | 149   | 12     | 2629  |
| MSME-Micro, Small, Medium Enterprises |               |   |       |        |       |

Source: Commissionerate of Industries and Commerce, Assam.

## APPENDIX – 11.3

## INDEX NUMBER OF INDUSTRIAL PRODUCTION OF ASSAM

(Base : 2004-2005 = 100)

Manufacturing (Registered) Sector [2-digit (division) level]

| Sl. No. | 2-digit NIC | Industry Division   | Index Number |         |         |         |
|---------|-------------|---|--------------|---------|---------|---------|
|         |             |   | 2011-12      | 2012-13 | 2013-14 | 2014-15 |
| 1       | 2           | 3   | 4            | 5       | 6       | 7       |
| 1.      | 15          | Manufacturing of food products and beverages                                  | 117.47       | 136.70  | 146.37  | 143.76  |
| 2.      | 16          | Manufacture of tobacco products   | 176.66       | 193.53  | 204.25  | 224.58  |
| 3.      | 17          | Manufacturing of Textiles   | 158.59       | 178.21  | 195.52  | 186.17  |
| 4.      | 21          | Manufacturing of paper & paper products                                       | 117.84       | 135.63  | 154.99  | 151.21  |
| 5.      | 22          | Publishing, Printing & reproduction of recorded media                         | 221.94       | 254.69  | 289.20  | 289.60  |
| 6.      | 23          | Manufacturing of Coke, refined petroleum products & nuclear fuel              | 166.56       | 161.95  | 163.29  | 163.263 |
| 7.      | 24          | Manufacturing of Chemical & Chemical Products                                 | 178.52       | 217.53  | 236.44  | 237.27  |
| 8.      | 25          | Manufacturing of rubber & Plastic Products                                    | 188.65       | 211.37  | 226.86  | 231.46  |
| 9.      | 26          | Manufacturing of other non-metallic mineral products                          | 146.30       | 175.88  | 187.43  | 191.71  |
| 10.     | 27          | Manufacturing of basic metals   | 148.99       | 196.32  | 190.80  | 190.73  |
| 11.     | 28          | Manufacturing of fabricated metal products, except machinery & equipments     | 171.01       | 208.45  | 252.67  | 243.56  |
| 12.     | 29          | Manufacturing of machinery & equipments n.e.c.                                | 202.03       | 258.55  | 291.36  | 284.08  |
| 13.     | 31          | Manufacturing of electrical machinery and apparatus n.e.c.                    | 236.24       | 256.36  | 274.55  | 261.54  |
| 14.     | 32          | Manufacture of Radio, television and communication equipment and apparatus    | 126.48       | 134.61  | 142.25  | 129.43  |
| 15.     | 33          | Manufacture of medical, precision and optical instruments, watches and clocks | 143.22       | 164.86  | 195.06  | 203.45  |
| 16.     | 34          | Manufacturing of motor vehicles, trailers and Semi trailers.                  | 133.55       | 223.66  | 225.81  | 209.25  |
| 17.     | 36          | Manufacturing of furniture, Manufacturing n.e.c.                              | 134.58       | 156.95  | 179.55  | 184.70  |
| 18.     | 15-36       | Total Manufacturing   | 159.67       | 170.48  | 178.13  | 178.37  |

Source : Directorate of Economics &amp; Statistics, Assam.

APPENDIX- 11.4  
DISTRICTWISE DISTRIBUTION OF REGISTERED FACTORIES AND WORKERS IN  
ASSAM -2014

| Sl. No. | District      | Factories | Workers |
|---------|---------------|-----------|---------|
| 1       | 2             | 3         | 4       |
| 1.      | Kokrajhar     | 40        | 1407    |
| 2.      | Dhubri        | 93        | 2727    |
| 3.      | Goalpara      | 18        | 566     |
| 4.      | Barpeta       | 55        | 581     |
| 5.      | Morigaon      | 61        | 2236    |
| 6.      | Nagaon        | 356       | 16855   |
| 7.      | Sonitpur      | 454       | 18882   |
| 8.      | Lakhimpur     | 61        | 1997    |
| 9.      | Dhemaji       | 5         | 99      |
| 10.     | Tinsukia      | 622       | 24566   |
| 11.     | Dibrugarh     | 486       | 28122   |
| 12.     | Sivasagar     | 358       | 13252   |
| 13.     | Jorhat        | 338       | 8974    |
| 14.     | Golaghat      | 306       | 7882    |
| 15.     | Karbi-Anglong | 38        | 1198    |
| 16.     | Dima-Hasao    | 27        | 595     |
| 17.     | Cachar        | 329       | 12159   |
| 18.     | Karimganj     | 119       | 3949    |
| 19.     | Hailakandi    | 50        | 3472    |
| 20.     | Bongaigaon    | 65        | 5432    |
| 21.     | Chirang       | 21        | 1170    |
| 22.     | Kamrup        | 1438      | 46880   |
| 23.     | Kamrup (M)    |           |         |
| 24.     | Nalbari       | 26        | 476     |
| 25.     | Baksa         | 11        | 547     |
| 26.     | Darrang       | 88        | 2918    |
| 27.     | Udalguri      | 72        | 3177    |
| ASSAM   |               | 5537      | 210119  |

Source: Chief Inspector of Factories, Assam

## APPENDIX-11.5

## SELECTED INDICATORS OF DIFFERENT STATES / UNION TERRITORIES OF INDIA

(Annual Survey of Industries, 2011-12)

| Sl. No. | State/ Union Territory    | No. of Factories | No. of factories in Operation | Total No. of Workers |
|---------|---------------------------|------------------|-------------------------------|----------------------|
| 1       | Andaman & Nicobar Islands | 18               | 15                            | 362                  |
| 2       | Andhra Pradesh            | 27708            | 22124                         | 1110866              |
| 3       | Arunachal Pradesh         |                  |                               |                      |
| 4       | Assam                     | 3019             | 2870                          | 150065               |
| 5       | Bihar                     | 3231             | 2870                          | 108963               |
| 6       | Chandigarh                | 308              | 261                           | 9777                 |
| 7       | Chattisgarh               | 2472             | 2185                          | 138269               |
| 8       | Dadra & Nagar Haveli      | 1480             | 1114                          | 89668                |
| 9       | Daman & Diu               | 1950             | 1341                          | 80384                |
| 10      | Delhi                     | 3894             | 2851                          | 76890                |
| 11      | Goa                       | 586              | 563                           | 44710                |
| 12      | Gujrat                    | 22220            | 17529                         | 1059789              |
| 13      | Haryana                   | 6142             | 4822                          | 436925               |
| 14      | Himachal Pradesh          | 2489             | 2214                          | 116290               |
| 15      | Jammu & Kashmir           | 861              | 810                           | 53018                |
| 16      | Jharkhand                 | 2556             | 2259                          | 135795               |
| 17      | Karnataka                 | 11460            | 9459                          | 706332               |
| 18      | Kerala                    | 7031             | 6112                          | 330402               |
| 19      | Lakshadweep               |                  |                               |                      |
| 20      | Madhya Pradesh            | 4286             | 3696                          | 233511               |
| 21      | Maharashtra               | 28215            | 22615                         | 1320995              |
| 22      | Manipur                   | 102              | 97                            | 4552                 |
| 23      | Meghalaya                 | 100              | 99                            | 8821                 |
| 24      | Mizoram                   |                  |                               |                      |
| 25      | Nagaland                  | 86               | 85                            | 2195                 |
| 26      | Orissa                    | 2678             | 2486                          | 223571               |
| 27      | Pondicherry               | 832              | 775                           | 45173                |
| 28      | Punjab                    | 12593            | 10132                         | 484320               |
| 29      | Rajasthan                 | 8444             | 7622                          | 357888               |
| 30      | Sikkim                    | 61               | 54                            | 7138                 |
| 31      | Tamil Nadu                | 36996            | 26654                         | 1595342              |
| 32      | Tripura                   | 446              | 437                           | 27304                |
| 33      | Uttar Pradesh             | 14090            | 11631                         | 670748               |
| 34      | Uttaranchal               | 2843             | 2521                          | 273464               |
| 35      | West Bengal               | 8402             | 7407                          | 534838               |
|         | ALL INDIA                 | 217554           | 175710                        | 10438365             |

Source: Central Statistical Organisation (Industrial Statistical Wing), Govt. of India



## CHAPTER – XII

## POWER

With the pace of rapid urbanisation, followed by infrastructure development and industrial growth, there is a resulting upsurge of electricity demand in the Country. In the total electricity consumption, a sizeable part is from domestic and commercial categories. Therefore, electricity consumption, and its growth trends, reflects, and helps to know the priorities set thereby. As per the Central Electricity Authority Statistics, Northeast part of India has a hydro power potential of 63, 257 MW, which is about 43 percent of the total assessed hydro power of the country, as a whole. Assam, among the North-eastern States has a capacity to produce 680 MW of hydro power.

In pursuance of the Indian Electricity Act 2003, and as a part of the programme of Assam Power Sector Development, Government of Assam has unbundled the Assam State Electricity Board (ASEB) in the year 2004, into three Government Companies namely:

1. The Assam Power Generation Corporation Limited (APDCL)
2. The Assam Electricity Grid Corporation Limited (AEGCL) and
3. The Assam Power Distribution Company Limited (APDCL)

All these initiatives were taken up by the electricity sector in the State, in the interest of its stakeholders, namely consumers, shareholders, suppliers, creditors, infrastructure builders and the Government of Assam. However, schemes like externally aided Projects, rural electrification, accelerated power development and reform programme (APDRP) are still executed under ASEB.

The Assam Power Generation Corporation Limited (APGCL), are constituted to see to the power generation in the State Sector. Its final Transfer Scheme was implemented, since August, 2005. This Company is mainly responsible for development of both Thermal and Hydro Power Projects, to generate electricity to meet the energy demands in the State, as far as possible and feasible.

The present installed capacity of APGCL is 376.7 MW of which

LTPS= 157.2

NTPS= 119.5

KLHEP= 100 MW

The 18<sup>th</sup> Electric Power Survey of India, was undertaken by Central Electricity Authority (CEA) to forecast electric Energy Requirement, Electric Load and Power Station Bus Bars (Utilities only) for Twelfth Five Year Plan (2012-13 to 2016-17) for all States and Union Territories of India. As per the survey report by the end of 12<sup>th</sup> Plan period, the projected energy requirements for Assam will be 8947 M U and Peak Electric Load 1817 MW (Source: Press Information Bureau, Govt. of India, published in connection with the information given by MOS (I/C) Power, Shri Jyotiditya M Scindia in the Loka Sabha on 2. 5. 2013)

TABLE-12.1  
LONG TERM FORECAST OF  
ELECTRICAL ENERGY REQUIREMENT  
AT POWER STATIONS BUS BAR MW  
(Utilities Only)

| State   | 2011-12 | 2016-17 | 2021-22 |
|---|---------|---------|---------|
| Assam   | 1257    | 1817    | 2534    |
| India   | 124995  | 199540  | 283470  |
| Source: 18 <sup>th</sup> Electric Power Survey Report |         |         |         |

To meet this projected peak energy demand of 1817 MW by the end of 12<sup>th</sup> Five Year Plan period, ASEB has given emphasis on development of power projects based on coal and natural gas, along with steps taken up on the following:

- 1) Development of new projects on hydro energy
- 2) A distributed growth of small hydro projects
- 3) R & M of old power stations

- 4) Upgradation of infrastructure related to distribution, for reducing transmission and distribution losses thereby which will lead to an added capacity of 1452 MVA
- 5) Introduction of Sub-station automation and reliable communication system with OPGW, to reduce the system downtime which in turn will help in predictive maintenance.
- 6) Identification and construction of New Transmission and Transformation network.
- 7) Transmission capacity expansion for evacuation of power from central sector generating stations for distribution network. Transmission line capacity addition of length 614 CKM and MVA addition of 1310 MVA is expected.
- 8) To become less dependent on power purchased from outside the State.

#### INSTALLED CAPACITY AND GENERATION OF POWER

The installed capacity of generating plants at present in the State is 376.7 MW which include Coal, Hydel and Gas plants of the State.

The status of power generation in the state is not satisfactory from the point of power requirement of consumers is concerned. There has always been a shortage of power supply in the state due to generation of less amount of power in comparison to its demand. However, the ASEB has been trying to meet the power shortage by importing power from the Central Govt. and private foreign sources. It is observed that gross power generation in the State during the year 2014-15 has shown some improvement by generating 1895 MU or 2.68 percent more compared to gross power generation of 1845 MU in the previous year 2013-14

The installed capacity of various generating plants and the generation of power in the State during the last five years is shown in the Table- 12.2

TABLE – 12.2

#### INSTALLED CAPACITY AND GENERATION OF ELECTRICITY IN ASSAM

| Installed Capacity of Generation Plant (MW) |               | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---------------|---------|---------|---------|---------|---------|
| Hydel                                       | KLHEP         | 100     | 100     | 100     | 100     | 100     |
|   | M. SHEP St-II |         |         |         |         | 3       |
| Gas   | LTPS          | 120     | 120     | 120     | 120     | 120     |
|   | NTPS          | 97      | 97      | 97      | 97      | 97      |
| Waste Heat Recovery                         | LTPS WHRU     | -       | 37.2    | 37.2    | 37.2    | 37.2    |
|   | NTPS WHRU     | 22.5    | 22.5    | 22.5    | 22.5    | 22.5    |
| Total                                       |               | 339.5   | 376.7   | 376.7   | 376.7   | 379.7   |
| Gross Unit Generated (MU)                   |               |         |         |         |         |         |
| Hydal                                       | KLHEP         | 409.5   | 454.9   | 344.0   | 422.5   | 367.0   |
|   | M. SHEP St-II |         |         |         |         | 0.71    |
| Gas   | LTPS          | 767.8   | 751.7   | 888.1   | 896.2   | 935.3   |
|   | NTPS          | 530.5   | 565.7   | 533.2   | 526.6   | 591.7   |
| Total                                       |               | 1707.7  | 1772.3  | 1765.3  | 1845.3  | 1894.7  |
| AUX Consumption(MU)                         |               |         |         |         |         |         |
| Hydal                                       | KLHEP         | 2.1     | 2.3     | 1.7     | 2.1     | 1.8     |
|   | M. SHEP St-II |         |         |         |         | 0.013   |
| Gas   | LTPS          | 66.9    | 71.9    | 101.9   | 78.7    | 80.0    |
|   | NTPS          | 23.8    | 26.1    | 30.0    | 31.6    | 34.1    |
| Total                                       |               | 92.8    | 100.3   | 133.6   | 112.4   | 115.9   |
| Net Unit Generated (MU)                     |               |         |         |         |         |         |
| Hydal                                       | KLHEP         | 407.4   | 452.7   | 342.3   | 420.4   | 365.1   |
|   | M. SHEP St-II |         |         |         |         | 0.697   |
| Gas   | LTPS          | 700.9   | 679.7   | 786.2   | 817.5   | 855.3   |
|   | NTPS          | 506.7   | 539.6   | 503.2   | 495.0   | 557.6   |
| Total                                       |               | 1615    | 1672    | 1631.7  | 1732.8  | 1778.7  |

Source: Assam Power Generation Corporation Ltd.

## POWER SUPPLY POSITION

The energy requirement in the State has been worked out at 9104 Million Units (MU) during the year 2014-15 against 7434 Million Unit (MU) in the previous year 2013-14, but the availability of energy during the periods was 7165 MU and 6965 MU respectively. However, the power generation was 1894 MU and 1845 MU during the years 2014-15 and 2013-14 respectively. The peak electricity demand in the State during the period 2010-11 to 2014-15 has increased by 33.62 percent and shortage of power has increased from 144 MW in 2013-14 to 229 MW in 2014-15.

TABLE – 12.3

### PER CAPITA AVAILABILITY STATUS

| Year    | Electrical Energy<br>(million unit) |              | *Population | Per capita<br>Requirement<br>(Kwh) | Per Capita<br>Availability<br>(Kwh) |
|---------|-------------------------------------|--------------|-------------|------------------------------------|-------------------------------------|
|         | Requirement                         | Availability |             |                                    |                                     |
| 2001-02 | 3415                                | 3302         | **26655528  | 128                                | 124                                 |
| 2005-06 | 4216                                | 3536         | 28506000    | 150                                | 124                                 |
| 2006-07 | 4585                                | 3826         | 28896000    | 159                                | 132                                 |
| 2007-08 | 4621                                | 4018         | 29282000    | 158                                | 138                                 |
| 2008-09 | 5039                                | 4270         | 29660000    | 170                                | 144                                 |
| 2009-10 | 5049                                | 4590         | 30037000    | 168                                | 153                                 |
| 2010-11 | 5403                                | 5031         | 30413000    | 180                                | 165                                 |
| 2011-12 | 5877                                | 5700         | **31205576  | 188                                | 183                                 |
| 2012-13 | 6392                                | 5895         | 31167000    | 205                                | 190                                 |
| 2013-14 | 7434                                | 6965         | 31540000    | 236                                | 221                                 |
| 2014-15 | 9104                                | 7165         | 31914000    | 285                                | 224                                 |

\* Projected population as per 2001 Census

\*\* Population as per Census 2001 and 2011

Source: Commercial Wing of ASEB.

TABLE – 12.4

### REQUIREMENT AND SHORTAGE OF ELECTRICITY IN ASSAM

| Item                                 | 2001-02 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|--------------------------------------|---------|---------|---------|---------|---------|---------|
| Peak Demand(MW)                      | 553     | 1065    | 1135    | 1286    | 1362    | 1423    |
| Peak Demand MET<br>AT THAT TIME (MW) | 519     | 947     | 1060    | 1068    | 1218    | 1194    |
| Shortage(MW)                         | 34      | 118     | 75      | 218     | 144     | 229     |
| Shortage (in %)                      | 6.15    | 11.08   | 6.61    | 16.95   | 11.0    | 16.09   |

## TRANSMISSION AND DISTRIBUTION LOSSES

Power, when is supplied to various categories of consumers passes through various stages -from transformation to higher voltage level to final distribution in the premises of the consumers, involves energy losses is known as Transmission and Distribution losses. The table 12.4 reveals that aggregate transmission and commercial losses in the State is gradually came down from 30.48 percent in 2011-12 to 28.60 percent during 2013-14, which includes commercial losses as well. The situation has been gradually improving. The power loss through transmission is however an area of concern for the power deficit State like Assam. In order to bring down the T&D losses and AT&C losses to 19.49 percent and 21.34 percent levels respectively at the end of Twelfth Five Year Plan following measures are taken to reduce T & D loss as follows-

1. Energy accounting and electrically live ring fencing under R-APDRP.
2. R&M and Re- conducting of 33 KV, 11 KV & LT lines.
3. Changing of E&M and Stopped Meter with Electronic Meter.
4. Establishment of Police station in different circle for theft detection.
5. Energy Bill Payment through Net Banking.

In Assam, the transmission and distribution losses in Assam during the last five years may be evident from the Table- 12.5

TABLE – 12.5  
TRANSMISSION & DISTRIBUTION (T&D) LOSSES AND  
TRANSMISSION & COMMERCIAL (AT&C) LOSSES

| Item                             | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|----------------------------------|---------|---------|---------|---------|---------|
| Energy Input (MU)                | 4972    | 5684    | 5871    | 6462    | 6955    |
| Energy Billed (MU)               | 3535    | 3969    | 4205    | 4763    | 5485    |
| T&D Losses (MU)                  | 1437    | 1715    | 1666    | 1699    | 1470    |
| T&D Losses (%)                   | 28.90   | 30.17   | 23.38   | 26.29   | 21      |
| Amount Billed (Rupees in lakh)   | 158457  | 201265  | 227501  | 273980  | 303699  |
| Amount realized (Rupees in lakh) | 148942  | 190666  | 218035  | 265405  | 292441  |
| Collection Efficiency (%)        | 94.00   | 94.73   | 95.84   | 96.87   | 96.00   |
| Overall Efficiency (Percentage)  | 70.09   | 69.52   | 71.06   | 71.40   | 76.00   |
| AT&C Losses (Percentage)         | 29.91   | 30.48   | 28.94   | 28.60   | 24.00   |

T&D losses: Transmission and Distribution losses;

AT&C losses: Aggregate Transmission and Commercial Losses.

Source-Assam Power Distribution Company Ltd.

#### NUMBER OF ELECTRICITY CONSUMERS:

As per Census 2011, 37.0 percent of households of Assam, use electricity as a source of lighting compared to 67.0 percent households of all India. The rural-urban difference in use of electricity as a source of light is very high in Assam. Only 28.0 percent of rural households use electricity for lighting purposes in comparison to 84.1 percent urban households in Assam.

TABLE-12.6  
HOUSEHOLDS USING ELECTRICITY AS SOURCE OF LIGHTING

| Item                             | Assam     |          |           | India        |             |              |
|----------------------------------|-----------|----------|-----------|--------------|-------------|--------------|
|                                  | Rural     | Urban    | Total     | Rural        | Urban       | Total        |
| Total                            | 53,74,553 | 9,92,742 | 63,67,295 | 16,78,26,730 | 7,88,65,937 | 24,66,92,667 |
| Electricity                      | 15,24,221 | 8,34,679 | 23,58,900 | 9,28,08,038  | 7,30,89,256 | 16,58,97,294 |
| Households using electricity (%) | 28.0      | 84.1     | 37.0      | 55.0         | 93.0        | 67.0         |

Source: Annual Report, 2013-14 (Power and Energy Division), Planning Commission, India

According to the Assam Power Distribution Company, Limited, the number of consumers in the State has increased from 37.0 percent during the period from 2010-11 to 2013-14. The growth in domestic consumers during the same period was 41.0 percent. The numbers of electricity consumers in Assam during the last four years are shown in the Table-12.7 below.

TABLE-12.7

| TOTAL NUMBER OF CONSUMERS                     |          |            |         |
|---|----------|------------|---------|
| Year  | Domestic | Commercial | Total   |
| 2010-11                                       | 1655207  | 166399     | 1821606 |
| 2011-12                                       | 1811129  | 172310     | 2036429 |
| 2012-13                                       | 2130992  | 181781     | 2312773 |
| 2013-14                                       | 2640938  | 188801     | 2829739 |
| 2014-15                                       | 3018433  | 211896     | 3230329 |
| Source: Assam Power Distribution Company Ltd. |          |            |         |

### RURAL ELECTRIFICATION:

The Rajiv Gandhi Grameen Vaidyutikaran Yojana (RGGVY) in the State of Assam (As on 31/7/2015).

The RGGVY, is a Scheme for attaching the goal of providing access to electricity to 8406 nos. of Un-electrified (UE) villages and provide BPL connection to around 10 lakh consumers in 13081 nos. of Already Electrified (AE) villages in the State. In Assam, implementation of RGGVY was started in April 2007. The Status of village electrification in Assam, before implementation of RGGVY as on 31.3.2007 is shown in the Table-12.8 below.

| TABLE-12.8  |       |
|---|-------|
| Total nos. of Villages as per 2001 Census   | 25124 |
| Nos. of Electrified Villages  | 18567 |
| Nos. of De-electrified Villages   | 4051  |
| Nos. of Un-electrified Villages   | 4355  |
| Nos. of Villages taken for electrification under RGGVY (Including De-electrified and Partially electrified villages from 18567) | 21325 |
| Nos. of remote villages   | 2202  |

Progress of RGGVY as on 31-01-2014 may be evident from the table below:

TABLE-12.9  
PROGRESS OF IMPLEMENTATION OF RGGVY  
(as on 31-1-2014)

| Implementing Agency | Target |       |         | Achievement |       |         |
|---------------------|--------|-------|---------|-------------|-------|---------|
|                     | UE     | AE    | BPL     | UE          | AE    | BPL     |
| APDCL               | 6928   | 9484  | 1051524 | 6862        | 9431  | 1020896 |
| PGCIL               | 1486   | 3427  | 182373  | 1486        | 3410  | 193502  |
| Total:              | 8414   | 12911 | 1233897 | 8348        | 12841 | 1214398 |

## INITIATIVES ON SOLAR POWER GENERATION IN ASSAM:

Solar power has become a key strategic choice for high growth economies. Renewable energy is no longer considered an “alternate energy” source, but has increasingly become a key part, of the solution to meet a nation’s growing energy needs. The demand for electricity in Assam, is constantly on the rise, with the increase in the population and the growth of infrastructure. It is also seen, that there is a steady rise in the numbers of commercial, industrial, educational, institutional, and residential establishments, triggered by rising population and diversified economic activities. In Assam, the demand for electricity exceeds the supply of the same, resulting in power unavailability and crises situation arising.

### INITIATIVES TAKEN UP BY APDCL FOR PROMOTION OF RENEWABLE ENERGY:

Special attention has been given to the development of the State, through a separate budget allocation granted by GOA, under various renewable energy programmes over and above receipt of CFA from the Ministry of New and Renewable Energy. Government of Assam, has allocated budgetary support for the deployment of community based rural electrification model through mini/micro solar power plants for providing basic lighting facilities to the inhabitants of un-electrified villages and un-electrified hamlets of electrified villages. In most North Eastern States, remote villages are typified by widely dispersed households, small population, and many times, large distances from motorable roads. In addition, many villages in Assam are located in Char Areas of the Brahmaputra River, which has to be frequently shifted, due to annual inundation. In such circumstances, good lightning facilities can not only provide basic comforts to the householders but also improve safety from wild animals, etc. Solar photovoltaic based home lighting systems have been providing, a welcome relief, to people living in such remote villages.

Hybrid Solar and wind lighting prototypes is another promising applications related to renewable energy based favourable combination of two or more energy sources within the same system, such as wind and solar ones. The hilly slopes of the territories in Assam are ideal for putting up wind generated power stations.

Grid interactive solar photovoltaic power plant on the roof top terrace of buildings is a viable option of solar energy application. It has been proposed to set up grid connected solar photovoltaic power plant on the roof terrace of buildings or ground based projects with provision for net-metering. The scheme targets large area roofs or vacant land of Government/Semi Government Offices, hospitals, educations institutions. Implementation of the projects would meet partial load of the building during working days and contribute the surplus power available to the Grid during week ends and holidays.

APDCL has also been taking initiative to make use of solar energy and energy efficiency measures in public street lighting as part of smart street lighting solutions.

### CHIEF MINISTER’S POWER SUPPLY ASSURANCE MISSION:

The distribution network of APDCL requires improvement of the existing system for the provision of quality and reliable power supply to the consumers. In large areas, the capacity of existing transformers are inadequate for handling the required quantum of load. Due to non availability of ready transformers, the risk of existing transformers are more and they also fail to cope up with the present over load.

In order to ease out the situation and also to maintain quality power supply at consumer’s end with minimum interruption, The Hon’ble Chief Minister of Assam, Shri Tarun Gogoi, has laid emphasis on the improvement of power supply at the consumers’ door step. An amount of Rs.300 lakh against AP 2014-15 and Rs.387 lakh against AP 2015-16 has been proposed for the above project.

## CONSULTATION FOR PPP IN POWER DISTRIBUTION:

The Governor of the state of Assam, acting through the Secretary, Department of Power, Government of Assam has resolved to undertake the development and modernisation of the distribution system of the upper Assam Region through Public private Partnership (the 'PPP' mode) on aspects namely, Design, Build, Finance, operation and Transfer (the 'DBFOT' basis).

With a view to inviting bids for the Project, the Authority has decided to conduct a feasibility study for determining the technical feasibility and financing viability of the project. The initiative is supported by the Planning Commission. If the Project is found feasible, then the second stage bidding for selection of a PPP partner, through a transaction advisor, shall also be carried out.

The proposed cost of the study for Rs.4.00 crore has been included in the Annual Plan 2013-14. An amount of Rs.50.00 lakh has been proposed under Annual Plan 2014-15.

## EXTERNALLY AIDED PROJECTS (EAP): (APSEIP):

In 2009, Govt. of India approved ADB Assistance \$ 200 million USD on 90:10 basis, with counterpart fund of 114.6 million USD in respect of Assam's Power Sector Enhancement Investment Programme (APSEIP) to partly finance Govt. of Assam's investment programme. ADB Assistance is being given in 3 tranches Loan Agreement of all the 3 tranches has been signed and all counterpart packages have been awarded.

## WORLD BANK ASSISTANCE PROJECT AS EAP FOR NORTH EASTERN REGION POWER SYSTEM INVESTMENT PLAN (NERPSIP):

The road map for development of the power sector of NER and Sikkim, specifying the needs for strengthening of overall transmission and Sub-transmission system was brought out in "Pasighat Proclamation on Power" during the 1<sup>st</sup> Sectoral Meet in Pasighat in Arunachal Pradesh in January 2007. The Power Grid Corporation of India Limited (POWERGRID) has been appointed by Ministry of Power, GOI as Project Management Consultant for proposed World Bank Assisted NERPSIP. An agreement was signed by both AEGCL and APDCL with Power Grid in June 2013. Accordingly, steps for finalisation of Project. Implementation Plan (PIP), finalization of number of packages, preparation of bid document etc. have been taken up as per direction of the Ministry of Power, Govt. of India and in consultation with POWERGRID. DPR for 1<sup>st</sup> Trench of Transmission Works comprising of construction of 11 nos. of grid sub-station and associated transmission line with augmentation works at 3 grid sub-station, Distribution works comprising of construction of 16 nos. of 33/11 KV sub- station with associated 33 KV lines is submitted by PGCIL for an estimated amount of Rs.1435.55 crore (Transmission system: Rs.1095.19 crore and Distribution system: Rs. 340.36 crore.)

The funding pattern proposed for implementation of the Plan is 50 percent from World Bank and 50 percent as grant from the Ministry of Development of North Eastern Region, Govt. of India and the project will be a Central Sector Project with POWERGRID as implementing agency. Cost of land acquisition, re- settlement & rehabilitation issues will have to be borne by the State authority which estimated at Rs.138.15 crore.

## PROJECT/SCHEMES FOR DEVELOPMENT OF RENEWABLE ENERGY SECTOR:

The Assam Power Distribution Company Limited (APDCL) has been undertaking various projects/schemes for the development of renewable project in Assam. The performance and achievement both in physical and financial are as follows:



| District      | No. of villages Electrified (Cumulative) |         |         |         |         |
|---------------|--|---------|---------|---------|---------|
|               | 2010-11                                  | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| Dhubri        | 1122                                     | 1226    | 1226    | 1226    | 1226    |
| Kokrajhar     | 515                                      | 754     | 806     | 829     | 834     |
| Bongaigaon    | 793                                      | 836     | 838     | 844     | 845     |
| Goalpara      | 741                                      | 741     | 741     | 741     | 741     |
| Barpeta       | 934                                      | 998     | 998     | 998     | 1006    |
| Nalbari       | 727                                      | 739     | 798     | 798     | 798     |
| Kamrup        | 1130                                     | 1292    | 1293    | 1304    | 1316    |
| Darrang       | 1275                                     | 1305    | 1305    | 1305    | 1305    |
| Sonitpur      | 1484                                     | 1542    | 1542    | 1542    | 1542    |
| Lakhimpur     | 963                                      | 1082    | 1087    | 1093    | 1093    |
| Dhemaji       | 740                                      | 1023    | 1027    | 1027    | 1099    |
| Morigaon      | 447                                      | 468     | 474     | 484     | 484     |
| Nagaon        | 1216                                     | 1317    | 1327    | 1327    | 1354    |
| Golaghat      | 1027                                     | 1032    | 1032    | 1032    | 1033    |
| Jorhat        | 769                                      | 769     | 769     | 769     | 769     |
| Sivasagar     | 452                                      | 452     | 452     | 452     | 452     |
| Dibrugarh     | 912                                      | 1035    | 1035    | 1035    | 1035    |
| Tinsukia      | 1075                                     | 1075    | 1075    | 1075    | 1075    |
| Karbi Anglong | 1903                                     | 2211    | 2252    | 2256    | 2330    |
| N.C Hills     | 366                                      | 445     | 482     | 496     | 506     |
| Karimganj     | 675                                      | 749     | 758     | 759     | 759     |
| Hailakandi    | 309                                      | 313     | 313     | 313     | 313     |
| Cachar        | 890                                      | 890     | 890     | 890     | 890     |
| Baksa*        |  |         |         |         |         |
| Chirang**     |  |         |         |         |         |
| Udalguri***   |  |         |         |         |         |
| Kamrup(M)**** |  |         |         |         |         |
| Assam         | 20465                                    | 22294   | 22520   | 22595   | 22805   |

N.B: \* Baksa is included in Nalbari District

\*\* Chirang is included in Bongaigaon District

\*\*\* Udalguri is included in Darrang District

\*\*\*\* Kamrup (M) is included in Kamrup District

Out of the total 26395 number of villages as per Census, 2011 in the State, the number of villages electrified was 22805 (86%) till 2014-15.

DETAILS OF CENTRAL SECTOR AND CENTRALLY SPONSORED SCHEME  
(Scheme- wise Targets & Achievement financial & physical for Last three years)

TABLE : 12.11

## Allocation for Annual Plan 2015-16

| Departments / Sections      | Normal Work | Schemes announced in Budget Speech 2013-14 | CM's Barak Valley Package | CM's Dhakuakhana's Package | State Project | United SCA | EAP      | Total    |
|-----------------------------|-------------|--|---------------------------|----------------------------|---------------|------------|----------|----------|
| 1                           | 2           | 3  | 4                         | 5                          | 6             | 7          | 8        | 9        |
| ENERGY                      |             |  |                           |                            |               |            |          |          |
| Power (ASEB)                | 17000.00    | 5700.00                                    | 387.00                    | 80.00                      | 1650.00       | 1000.00    | 57000.00 | 82817.00 |
| Non- Con. Sources of Energy | 15.00       |  |                           |                            |               |            |          | 15.00    |
| Total                       | 17015.00    | 5700.00                                    | 387.00                    | 80.00                      | 1650.00       | 1000.00    | 57000.00 | 82832.00 |

TABLE-12.12

## Schemes Announced in the Budget Speech (2013-14): Plan Allocation 2015-16

| Power | Particulars of Schemes   | Allocation (Rs in lakh) |
|-------|--|-------------------------|
| 1     | 2  | 3                       |
| Power | Replacement of damaged transformers and installation of new transformers with associated lines and fittings on all constituencies of the State | 5000.00                 |
|       | Commissioning of 3 MW stage and 6 MW Stage.1 Myntriang Small Hydro Electric Project.   | 700.00                  |

TABLE-12.13

## CM's Special Package for Barak Valley: Plan Allocation 2015-16

| Sector                     | Name of Schemes  | Allocation (Rs. in lakh) |
|----------------------------|--|--------------------------|
| 1                          | 2  | 3                        |
| Power (Electricity Sector) | Electrification of unconquered Area under RGGVY including installation of transformers where necessary |                          |
|                            | Installation of Transformer of 100 KVA 4 star-60 nos.  |                          |
|                            | Extension of LT line with transformer in consultation with local EE                                    |                          |
| Total                      |  | 387.00                   |

TABLE-12.14

## Chief Minister's Special Package for Dhemaji District : Plan Allocation

| Sector | Name of Scheme   | Estimated cost | Allocation (Rs. In lakh) |
|--------|--|----------------|--------------------------|
| 1      | 2  | 3              | 4                        |
| ASEB   | Installation of Solar Lighting System at Jonai & Dhemaji Sub-Divisions | 212.00         | 0.0                      |

| TABLE-12.15  |   |                |                             |
|--|---|----------------|-----------------------------|
| Chief Minister's Special Package for Dhakuakhana District : Plan Allocation, 2015-16 |   |                |                             |
| Department/<br>Sector  | Name of Schemes   | Estimated cost | Allocation<br>(Rs. In lakh) |
| 1  | 2   | 3              | 4                           |
| Power  | i. Rural Electrification /Replacement of Damaged Transformer at Subansiri GP<br>ii. Barkhamukh, G. P., iii.Morioni GP | 100.00         | 80.00                       |

| TABLE-12.16                                       |  |                             |
|---|--|-----------------------------|
| State Specific Schemes : Plan Allocation, 2015-16 |  |                             |
| Sector  | Particulars of the Schemes   | Allocation<br>(Rs. In lakh) |
| 1   | 2  | 3                           |
| Power   | Individual home Lighting System through Mini Solar Power Plant including storage capacity 100 MW   | 300.00                      |
|   | Installation of hybrid Solar and Wind lighting prototypes in institutions / public locations   | 100.00                      |
|   | Roof Top Solar PV station on Government buildings  | 100.00                      |
|   | Rural Electrification and installation of Solar light at Golaghat  | 1000.00                     |
|   | Smart Street lighting Project in identified urban areas. The scheme includes putting up energy efficient led lighting to save and consume energy | 150.00                      |

| TABLE-12.17  |   |                             |
|--|---|-----------------------------|
| United Special Central Assistance (SCA) : Plan Allocation, 2015-16 |   |                             |
| Sector   | Particulars of the Schemes                          | Allocation<br>(Rs. In lakh) |
| 1  | 2   | 3                           |
| Power  | Upper Primary/ Lower Primary School Electrification | 1000.00                     |

| TABLE-12.18                                    |   |                             |
|--|---|-----------------------------|
| Externally Aided Project, Annual Plan, 2015-16 |   |                             |
| Department                                     | Particulars of the Schemes  | Allocation<br>(Rs. In lakh) |
| 1  | 2   | 3                           |
| Power  | Assam power Sector Enhancement investment programme (ADB)             | 27000.00                    |
|  | Assam Power sector Enhancement investment Programme Trance 4 (ADB)    | 8000.00                     |
|  | Composite Scheme of Transmission and Distribution in NER (WB)         | 22000.00                    |
|  | Assam Power Sector Enhancement Investment Programme under MFF 2 (ADB) |                             |

## APPENDIX-11.1

SOLAR HOME LIGHTING SYSTEMS INSTALLED BY ASSAM ENERGY  
DEVELOPMENT AGENCY (AEDA) UNDER REMOTE VILLAGE ELECTRIFICATION  
PROGRAMME (RVEP)

| Sl. No | District                  | Total Home Lighting System<br>(As on 31-3-2015) |
|--------|---------------------------|---|
| 1      | 2                         | 3   |
| 1      | Dhubri                    | 4468  |
| 2      | Goalpara                  | 1163  |
| 3      | Barpeta                   | 1573  |
| 4      | Morigaon                  | 956   |
| 5      | Nagaon                    | 0   |
| 6      | Sonitpur                  | 1842  |
| 7      | Lakhimpur                 | 2818  |
| 8      | Dhemaji                   | 5862  |
| 9      | Tinsukia                  | 351   |
| 10     | Dibrugarh                 | 45  |
| 11     | Sivasagar                 | 0   |
| 12     | Jorhat                    | 436   |
| 13     | Golaghat                  | 1180  |
| 14     | Karbi Anglong             | 3874  |
| 15     | Dima Hasao                | 762   |
| 16     | Cachar                    | 998   |
| 17     | Karimganj                 | 2287  |
| 18     | Hailakandi                | 252   |
| 19     | Bongaigaon                | 2566  |
| 20     | Kokrajhar (Incl. Chirang) | 1027  |
| 21     | Kamrup (Incl. Metro)      | 6812  |
| 22     | Nalbari                   | 0   |
| 23     | Baksa                     | 0   |
| 24     | Darrang                   | 763   |
| 25     | Udalguri                  | 0   |
| 26     | Assam                     | 40035   |

Home Lighting Systems includes:

Solar Module = 12v, 37 wp-1 No,

Tabular Plate Battery = 12V, 40AH-1 No, Luminary=9W-2 Nos.

Source: Assam Power Distribution Company (Rural Electrification)

\* \* \*



The table 13.2 shows the road length network maintained by the State PWD.

TABLE – 13.2  
ROAD NETWORK IN ASSAM

| Item                | (in Km.) |         |         |         |         |         |
|---------------------|----------|---------|---------|---------|---------|---------|
|                     | 2009-10  | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| Surfaced Road*      | 13163    | 18753   | 21200   | 22700   | 23747   | 23948   |
| Unsurfaced Road     | 24338    | 21047   | 24300   | 22800   | 21753   | 20914   |
| National Highway    | 2841     | 2841    | 2848    | 3069    | 3069    | 3834.68 |
| State Highway       | 3134     | 3134    | 3134    | 3134    | 3134    | 2530    |
| Major District Road | 4413     | 4413    | 4413    | 4413    | 4413    | 4379    |
| Rural Road          | 28753    | 30844   | 36544   | 36544   | 36544   | 36544   |
| Urban Road          | 1202     | 1409    | 1409    | 1409    | 1409    | 1409    |

\*Excluding National Highways

Source: Office of the Chief Engineer PWD (Roads), Assam.

The surfaced road kilometer [excluding NH Way] constitutes almost 54 percent of the total road length in the State as on March 2015. This indicates that compared to total road length availability [including NH Way and Project roads] of about 58 Km. per 100 Sq.Km. and about 144 Km. per lakh of population [2011 Census] as on March 2015 availability of surface road calculated at 30.7 Km. per 100 Sq.Km. of geographical area and about 77.2 Km. per lakh of population [2011 Census] in the State during the same period.

#### NATIONAL HIGHWAY DEVELOPMENT PROJECT

The National Highways are very important as even though these comprise about 2.0% of the road network but are carrying about 40% of the total road traffic. The Ministry of Road Transport & Highways is responsible for the development and maintenance of National Highways.

Out of the total 96214 Km. length of NH in the country, Assam shares only 3.9 percent. Compared to 21.83 Km. NH length per thousand Sq. Km. geographical areas and 5.93 Km. NH length per lakh of population (2011 Census) of the country as a whole, Assam has 39.13 Km. per thousand Sq. Km. geographical area and 9.84 Km. NH per lakh of population in the State.

The Government of India has also proposed to construct/improve roads connecting Doboka (Assam) to Dimapur (Nagaland Border), Baihata-Chariali to Banardardewa, Bandardewa (Assam) to Arunachal Border, Assam/Meghalaya Border to Assam Tripura Border and Silchar (Assam) to Mizoram Border under NHDP Phase-II.

The Government of India has approved implementation of 4 laning of NH-37 on Nagaon-Jorhat-Dibrugarh stretch from Numaligarh to Dibrugarh (201 Km.) along with construction of 4-lane Bridge over river Brahmaputra connecting Numaligarh and Gohpur.

In addition, construction works of Dhola-Sadiya 2-lane Bridge (bridge length 9.3 Km.) connecting Dhola & Sadiya Ghats upto Islampur (NH 37 extension) at the cost of Rs. 876 crore is in progress and expected to be complete in a year. This project will not only save about 4 hours travel time between Assam and Arunachal Pradesh, but will also promote socio-economic activity around the area.

Government of India has approved implementation of Arunachal Pradesh Package of Roads & Highways covering 2319 Km. of roads at an estimated cost of Rs.11703 crore. Out of 2319 Km., 139 Km. falls in Assam.

The Govt. of India has also approved the following three major long-pending road infrastructure projects for Assam worth over Rs. 1,933 crore (excluding land acquisition and other pre-construction activities) with a view to expedite the improvement of infrastructure in Assam and reduce travel time and cost of travel for traffic, particularly heavy traffic, plying between Guwahati

and Dibrugarh and beyond. These projects would also increase the employment potential for local labourers for project activities. The project covered the districts of Golaghat, Jorhat, Sivasagar, Dibrugarh and passes through the towns of Numaligarh, Dergaon, Jorhat, Jhanji, Gaurisagar, Sivasagar, Demow, Sepon, Moran and Dibrugarh.

- Four-laning of the Demow-Bogibil junction section of National Highway-37 under the Special Accelerated Road Development Programme in North Eastern Region (SARDP-NE) on Design, Build, Finance, Operate and Transfer (DBFOT) basis in Build-Operate-Transfer (BOT) (Annuity) mode of delivery. The cost is estimated to be Rs. 473.45 crore. The length of the road will be approximately 46 Km.
- The second project is four laning of the 'Jorhat-Demow' section of National Highway-37 under SARDP-NE Phase 'A' on Design, Build, Finance, Operate and Transfer (DBFOT) basis in Build-Operate-Transfer (BOT) (Annuity) mode of delivery. The cost is estimated to be Rs. 874.69 crore. The length of the road will be approximately 80 Km.
- The third project is of four-laning of the 'Numaligarh-Jorhat' section of National Highway-37 also under SARDP-NE Phase 'A' on Design, Build, Finance, Operate and Transfer (DBFOT) basis in Build-Operate-Transfer (BOT) (Annuity) mode of delivery. The cost is estimated to be Rs. 584.68 crore. The length of road will be approximately 51 Km.

## IMPLEMENTATION OF FLAGSHIP PROGRAMME FOR DEVELOPMENT OF ROAD INFRASTRUCTURE

The PMGSY has been implemented with the objective of connecting rural habitations with all-weather roads in order of priority. Till end of March 2015, 8819 villages have been covered under rural connectivity programme. Out of the total 8819 villages, 5656 villages having 1000 or more habitations, 1854 villages with 500 or more habitations and 1309 villages having habitations from less than 250 habitations to below 500 habitations.

### ROAD TRANSPORT

Road transport is considered to be vital to economic development and social integration of the country. Road transport is also one of the most cost effective and preferred mode of transport, both for freight and passengers, keeping in view its level of penetration into populated areas. Easy availability, adaptability to individual needs and the cost savings are some of the factors which go in favour of road transport. Road transport also acts as a feeder service to railway, shipping and air traffic.

### MOTOR VEHICLES

The rapid increase of the number of motor vehicles on road in Assam has been observed over the past few years. The on road vehicle population in the State has reached 2384576 as on March 2015 compared to 1984880 as on March 2014. An additional of 399696 or 20.1 percent on road motor vehicles was added during the year 2014-15 over 2013-14. Out of the total 2384576 motor vehicles during on road about 60.3 percent vehicles were two wheelers.

According to the Motor vehicle registering authority of the State as many as 267900 new motor vehicles were registered during the year 2014-15 in the State which is 7.3 percent more than that of the previous year. Out of the total registered motor vehicle more than 70.5 percent were two wheelers.

The total number of Motor vehicles on road in the State was recorded about 20.1 percent growth as on March 2015 compared to 15.1 percent growth as on March 2014 (1984880).

The density of motor vehicles in Assam was 30.4 per Sq. Km. during the year 2014-15 as against 25.3 vehicles per Sq. Km. during the year 2013-14. During the year 2000-01, density of motor vehicles in Assam was only 6.8 per Sq. Km.

The increase in the number of Motor vehicles registered as well as Motor vehicles on road in the State over the years may be evident from the Table -13.3.



TABLE – 13.3  
NUMBER OF MOTOR VEHICLE REGISTERED AND  
MOTOR VEHICLE ON-ROAD IN ASSAM

| Year    | No. of Motor Vehicle Registered | No. of Registered Motor Vehicle per |                    | No. of Motor Vehicle on road | No. of Motor Vehicle on road per |                    |
|---------|---------------------------------|-------------------------------------|--------------------|------------------------------|----------------------------------|--------------------|
|         |                                 | 100 Sq.Km.                          | Lakh of Population |                              | 100 Sq. Km.                      | Lakh of Population |
| 2000-01 | 52518                           | 67                                  | 198                | 534885                       | 682                              | 2017               |
| 2004-05 | 88470                           | 113                                 | 315                | 777328                       | 991                              | 2765               |
| 2006-07 | 106666                          | 136                                 | 369                | 983488                       | 1254                             | 3404               |
| 2007-08 | 96796                           | 123                                 | 331                | 1074763                      | 1370                             | 3670               |
| 2008-09 | 119126                          | 152                                 | 402                | 1180177                      | 1504                             | 3979               |
| 2009-10 | 241247                          | 308                                 | 803                | 1320867                      | 1684                             | 4397               |
| 2010-11 | 199076                          | 253                                 | 655                | 1363625                      | 1738                             | 4484               |
| 2011-12 | 226010                          | 288                                 | 725                | 1528269                      | 1948                             | 4903               |
| 2012-13 | 227367                          | 290                                 | 729                | 1725222                      | 2199                             | 5528               |
| 2013-14 | 249564                          | 318                                 | 799                | 1984880                      | 2530                             | 6360               |
| 2014-15 | 267900                          | 341                                 | 858                | 2384576                      | 3040                             | 7641               |

Source: Office of the Commissioner of Transport, Assam and Directorate of Economics and Statistics, Assam.

With the increasing growth of motor vehicles the number of road accidents in the State is also increasing. During the year 2014-15, the number of road accidents reported in the State was 7143 which was calculated 1.4percent less over the previous year. During the year 2013-14, number of road accidents reported 7251. The number of persons killed and injured as a result of road accidents during 2014-15 were 2465 and 6499 respectively compared to 2407 and 6734 number of persons killed and injured respectively during 2013-14. The number of persons killed and injured in 2014-15 recorded 2.4 percent and 3.4 percent more compared to the number of persons killed and injured reported during the year 2013-14. However, the number of persons killed per 100 accidents recorded 34.5 during 2014-15 compared to 33.2 during 2013-14.

The Road accidents severity in Assam may be evident from the Table-13.4 below.

TABLE – 13.4  
NUMBER OF ROAD ACCIDENTS AND PERSONS INVOLVED IN ASSAM

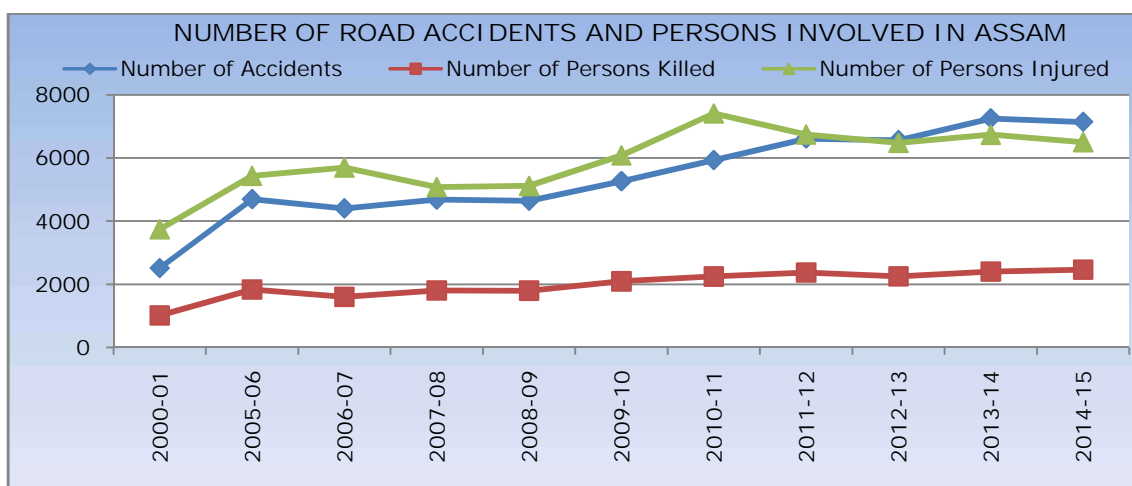
| Year    | Number of Accidents | Number of Persons |         | Accident Severity* |
|---------|---------------------|-------------------|---------|--------------------|
|         |                     | Killed            | Injured |                    |
| 2000-01 | 2516                | 1021              | 3744    | 40.6               |
| 2005-06 | 4694                | 1841              | 5435    | 39.2               |
| 2006-07 | 4403                | 1604              | 5697    | 36.4               |
| 2007-08 | 4683                | 1807              | 5081    | 38.6               |
| 2008-09 | 4641                | 1803              | 5115    | 38.8               |
| 2009-10 | 5263                | 2099              | 6082    | 39.9               |
| 2010-11 | 5929                | 2250              | 7404    | 38.0               |
| 2011-12 | 6617                | 2375              | 6741    | 35.9               |
| 2012-13 | 6562                | 2252              | 6472    | 34.3               |
| 2013-14 | 7251                | 2407              | 6734    | 33.2               |
| 2014-15 | 7143                | 2465              | 6499    | 34.5               |

\*Accident Severity: Number of persons killed per 100 Accidents.

Source: Office of the Additional Director General of Police, Criminal Investigation Department, Assam.

The Commissionerate of Transport has laid special emphasis for promotion of Road safety through Education and Enforcement during the 12<sup>th</sup> Five Year plan period. The education component comprises to impress on spreading awareness on Road Safety and for enforcement. The Enforcement Staff will be trained on the legal front and will be provided with latest equipments and mobility to prevent traffic offences and accidents. The Commissionerate of Transport has also given stress to construct driving track and vehicle inspection ground in every district in a phased manner in order to have a sound Transport System to check road accidents throughout the State.

Apart from providing fast and comfortable services to the commuters as well as to create self-employment avenues among the unemployed youths, Trekkers services, post-paid City Taxi services have been introduced in the State, which became not only very popular in the greater Guwahati and in adjoining areas but also in various parts of the State.



The collection of transport revenue by the Department of Transport during the year 2014-15 was Rs. 378.98 crore as against Rs. 361.54 crore in 2013-14. The collection of transport revenue during the year 2014-15 was 4.8 percent more than that of 2013-14.

### ASSAM STATE TRANSPORT CORPORATION

The public Road Transport is the most important means of communication for the movement of goods as well as passengers traffic in the State. In the road transport system of the State, both public and private sector operators are playing equally important role. Earlier, the Assam State Transport Corporation (ASTC), a State Government undertaking and one of the premier public enterprises of the State with its headquarter in Guwahati, is mainly concerned with the movement of passenger traffic on the nationalized routes of the State, while the private sector road transport operators are involved in the Intra-State movement of both goods and passenger traffic throughout the State. With the changing scenario, both the ASTC and private operators are providing transport services equally in the interest of passenger traffic. The ASTC has been providing efficient, safe, reliable, economic and dedicated services to the people especially in the rural and other backward areas since its inception and have earned the appreciation of the people of the State. ASTC has luxury and regular buses for normal bus routes and special mini buses for hill routes. ASTC operates Night Super deluxe, Executive class; air conditioned class and Volvo coach buses providing affordable fares and reliable road transport to passengers. Besides providing online ticket booking facility to passengers, ASTC also provides courier services, cargo services.

To sustain its services it is felt necessary to improve infrastructural facilities like well-developed station buildings and to have well equipped maintenance workshops. As a step towards improvement of passenger amenities the State Government has already constructed two Inter-State Bus Terminus (ISBT) one at Guwahati and the other at Silchar to facilitate Inter-State transportation of passengers. At present, both the Inter-State Bus Terminuses are fully functional.

Inter-State Bus Terminuses have also been constructed at Jorhat, Dibrugarh and Sivasagar by the ASTC with all modern facilities for passengers and bus operators. For providing better passenger amenities, the ASTC has taken initiative to construct new Bus Terminuses at Guwahati City (City Service), Bongaigaon, Halflong, North Lakhimpur and Nalbari. The ASTC has also proposed to construct a modern Inter-State Bus Terminus at Adabari to cater to the demands of the increased number of buses and passengers and to reconstruct /improve the present status of 100 numbers of Station buildings, both major & minor, spread all over the State during 12<sup>TH</sup> Five Year Plan. The ASTC has also set up a multistoried car parking building at Guwahati City to ease out shortage of car parking space within the market locality at Paltan bazar.

To improve its performance and for better transport connectivity, as a part of the Public Transport Policy of the Govt. of India, the ASTC needs to purchase new Buses every year for replacing the old and over-aged ones as well as to augment its fleet position to provide its services to every nook and corner of the State as well as to mobilize its earnings. During the 11<sup>TH</sup> Five Year Plan (2007-2012) period, ASTC acquired as many as 448 new vehicles and planned to procure additional 140 buses under "Assam BikashYojana".

The performance of ASTC during the period 2009-2015 may be evident from the Table-13.5.

TABLE – 13.5  
PERFORMANE OF ASSAM STATE TRANSPORT CORPORATION (ASTC)

| Year    | Average No. of own vehicle held | Average No. of own Vehicle on road | Fleet utilisation (%) | Total km operated during the year (in lakh) | Monthly Av. Net income from own buses (Rs. In lakh) | Staff-Bus ratio | No of Private Buses operated under ASTC | Monthly Average Income from Privately operated buses (Rs. in lakh) |
|---------|---------------------------------|------------------------------------|-----------------------|---|---|-----------------|---|--|
| 2009-10 | 312                             | 271                                | 87                    | 148.92                                      | 70.42   | 8:01            | 1317                                    | 103.92   |
| 2010-11 | 357                             | 299                                | 84                    | 159.45                                      | 85.30   | 6:01            | 1189                                    | 95.12  |
| 2011-12 | 538                             | 441                                | 82                    | 222.36                                      | 123.61  | 5:01            | 1170                                    | 92.25  |
| 2012-13 | 665                             | 540                                | 81                    | 248.48                                      | 136.64  | 4:01            | 1344                                    | 76.31  |
| 2013-14 | 751                             | 559                                | 74                    | 279.30                                      | 138.32  | 4:01            | 1300                                    | 72.52  |
| 2014-15 | 815                             | 570                                | 69.88                 | 284.45                                      | 148.40  | 6:01            | 1112                                    | 61.31  |

Source: Assam State Transport Corporation.

The Rural Connectivity Scheme has become very popular with the masses and there is huge demand for economically viable transportation system. As the private bus operators are reluctant to operate in the rural and interior areas of the State, ASTC with its social service oriented motive planned to provide more bus services in these areas so that the rural masses may have easy transport accessibility in reaching nearest towns or District/Sub-Division Head Quarters.

To cater the transportation needs of the ever increasing population in both the urban and rural areas of the State, the ASTC has planned to acquire 1550 buses [@ 330 buses per year] by the end of the Twelfth Five Year Plan. The organisation has procured 120 buses during the year 2013-14 to enhance bus services for rural connectivity. During last 4 years, 440 buses have been procured and placed in the rural and interior areas of the state under Assam Bikash Yojana and these buses have significantly changed the transport scenario in rural Assam. ASTC has received 182 buses under the JNNURM scheme. With the augmentation of fleet, the procurement of bus chassis will increase which will assist the small scale industries engaged in fabrication of bus bodies and ancillary business to boost their business as well as help in employment generation. Moreover, the ASTC is having a substantial area of un-utilised land within its Station Complexes spread all over the State and these properties can be utilised for commercial purposes, such as, construction of market complexes, parking yard for small segment vehicles etc., which can be let-out to educated un-employed youth of the State, thereby, generating employment opportunity as

well garnering additional revenue for the Corporation. For creating the necessary infrastructure the ASTC has planned to invest Rs.100.00 lakh during the 12<sup>TH</sup> Five Year Plan period.

The ASTC is implementing Dharmajyoti Scheme under which 50 percent bus fare is charged from the pilgrims visiting religious places within and outside the State of Assam. The Scheme has become very popular and more than 2(two) lakh pilgrims have availed the facility.

## RAILWAYS

As per information available from the N.F. Railway, Headquarters, Maligaon, Guwahati, Assam has total railway route length 2471.18 Km. at present. This 2471.18 Km. comprising of 2091.87 Km. under Broad Gauge and 379.31 Km. Meter Gauge. The proportion of Broad Gauge railway route length in the State, although, is 84.65 percent, it shares only 2.63 percent of the country's total broad gauge railway route length. Taking into account of total railway route length 65000 Kms. for the country, Assam shares only 3.8 percent of the total railway route length of the country till the end of March, 2015.

The Ministry of Railways has undertaken various developmental activities in the Railway Sector in the State including extension of railways line to link the other States of North-Eastern States Meghalaya, Arunachal Pradesh, and Mizoram through Assam. The ongoing railway projects, Bogibeel rail cum Road Bridge is under progress and gauge conversion of Lumding – Silchar – Jiribam has been completed. Badarpur to Baraigram – Kumarghat, Rangia – Murkongselek, Bhairabi – Sairang projects are declared as national projects and the works are on progress. The construction of 19.75 Km. railway stretch connecting Dudhnoi (Assam) – Mendipathar (Meghalaya) and construction of new Broad Gauge lines connecting Harmuti (Assam) and Naharlagun (Arunachal Pradesh) – 20 Km has been completed and New Mainaguri to Jogighopa (257 Km.), New Jalpaiguri – Siliguri – New Bongaigaon (433 Km.) are under progress.

The Bogibeel rail-cum-road bridge, India's longest bridge coming up across the mighty Brahmaputra and the fourth bridge across the Brahmaputra River is expected to be not only the lifeline for the Northeast but will also strengthen the country's security. The project of 4.94 Km. rail cum road bridge is implemented by the North East Frontier Railway is scheduled to be completed in 2016 which will connect two existing railway networks running at north bank and south bank of the river and will provide connectivity to around five million people residing in upper Assam and Arunachal Pradesh. It starts from Chaulkhowa station and Moranhat Station at south bank and joins between Sisibargaon and Siripani station of Rangia – Murkongselek section in north bank.

The Railways run a number of inter-State trains linking Guwahati and Dibrugarh with other important places of the country, such as Delhi, Kolkata, Mumbai, Chennai, Tiruvantapuram, Bangalore, Cochin, and Jammu etc. The Northeast Frontier Railway authority has also started plying direct train service between Lumding (Assam) and Agartala (Tripura) and the following new lines connecting Dudhnoi-Mendipathar New Line; Lumding-Badarpur-Silchar Gauge Conversion; Harmuti-Murkongselek and Balipara- Bhalukpong sections will soon get commissioned.

## AIR TRANSPORT

Assam is well connected with the rest of the country through Air Transport. The State has the highest numbers of operational civil airports and these are located at Guwahati, Tezpur, Jorhat, Dibrugarh, North Lakhimpur and Silchar. In addition, one more civil airport located at Dhubri (Rupshi) district of Assam is lying closed and non-functional for long time. The State Govt. has demanded to reopen the airport for passenger traffic for the benefit of the State which will further benefit the people of Meghalaya. All major airlines including private commercial airlines viz., Indian Airlines, JetLite, Go-air etc. are operating their flights to and from Guwahati and intra-state air services regularly. In addition to these civil airports, small private airstrips in the interior areas are present in large numbers. Some small and remote airstrips are being operated under private operators like tea gardens and PSUs.

In the Guwahati sector movement of air traffic as well as passenger traffic [both domestic and international] has been increasing rapidly since 2004-05. However, as per available records, air

traffic movement and passenger traffic (only for LGBI Airport, Guwahati and Mohanbari Airport, Dibrugarh published by the DGCA) has gone up by 3.1 percent and 4.5 percent respectively during 2014-15 compared to the previous year. Similarly average number of flights handled by these two airports per day also went up to 83 in 2014-15 from 81 in 2013-14. In respect of handling of freights, the growth was calculated at 32.9 percent in 2014-15 over the previous year.

TABLE – 13.6  
AIR TRANSPORT STATISTICS OF ASSAM

| Year     | Air Traffic Movement (No.) | Passenger Handled (No.) | Freight loaded /Unloaded (Tonne) | Mail loaded/unloaded (Tonne) | Average number of flight per day | Average number of passenger handled per day | Average Cargo Handled per day (Tonne) |
|----------|----------------------------|-------------------------|----------------------------------|------------------------------|----------------------------------|---|---------------------------------------|
| 2004-05  | 20334                      | 828640                  | 5199                             | 1320                         | 57                               | 2270  | 18                                    |
| 2008-09  | 34855                      | 1693319                 | 2404                             | 453                          | 196                              | 4639  | 9                                     |
| 2009-10  | 35270                      | 1997506                 | 5829                             | 469                          | 97                               | 5473  | 17                                    |
| 2010-11* | 34649                      | 2326142                 | 9322                             | NA                           | 95                               | 6373  | 26                                    |
| 2011-12* | 35022                      | 2685871                 | 8601                             | NA                           | 96                               | 7359  | 24                                    |
| 2012-13* | 33535                      | 2526434                 | 6668                             | NA                           | 92                               | 6922  | 18                                    |
| 2013-14* | 29426                      | 2442613                 | 8124                             | NA                           | 81                               | 6692  | 22                                    |
| 2014-15* | 30363                      | 2552861                 | 10796                            | N.A.                         | 83                               | 6994  | 30                                    |

\* Figures excluding Lakhimpur, Tezpur and Jorhat Airport.

Source: Directorate General of Civil Aviation Statistical Division, New Delhi.

The Lokapriya Gopinath Bordoloi International Airport, Guwahati is the only International Airport in the North-East India. The number of aircraft movements to and from this International airport has increased manifold during 2011-12 and 2014-15. During the year 2011-12 and 2014-15, the number of air traffic movements recorded 452, 416, 494 and 474 respectively. Accordingly, movements of passenger has also been increased and calculated at 11.8 percent growth during 2014-15 over the previous year.

The number of aircraft movement, passengers as well as freight handled in the LGB International airport during the period from 2007-08 to 2014-15 is detailed in the Table -13.7.

TABLE – 13.7  
AIR TRANSPORT STATISTICS OF L.G.B. INTERNATIONAL AIRPORT, GUWAHATI

| Year    | Aircraft Movement | Passenger handle (No) |         | Freight loaded/unloaded (Tonne) |
|---------|-------------------|-----------------------|---------|---------------------------------|
|         |                   | Embark/Disembark      | Transit |                                 |
| 2007-08 | 98                | 2044                  | 1393    | 6                               |
| 2008-09 | 100               | 7282                  | 0       | 2                               |
| 2009-10 | 46                | 5421                  | 0       | 0                               |
| 2010-11 | 226               | 14523                 | NA      | 0                               |
| 2011-12 | 452               | 26864                 | NA      | 0                               |
| 2012-13 | 416               | 21810                 | NA      | 94                              |
| 2013-14 | 494               | 24633                 | NA      | 36                              |
| 2014-15 | 474               | 27564                 | NA      | 15                              |

Source: Directorate General of Civil Aviation Statistical Division, New Delhi.

## INLAND WATER TRANSPORT

Inland water transport is generally accepted as the most efficient mode of transportation from the point of energy consumption. It is also considered as the cheapest mode of transportation as well as labour intensive and environment friendly in nature. Assam is a riverine State. As much as 32

percent of the water resource of the country flow down through the river Brahmaputra, Barak and their myriad tributaries weave a vast network of waterways in the State. The Brahmaputra has 891 Km. navigable length of water ways from Sadiya to Dhubri while the Barak has 121 Km. length of navigable waterways. The Sadiya – Dhubri stretch (891 Km.) of the Brahmaputra River has been declared as the 2<sup>ND</sup> National waterways of the country in the year 1988 and afterwards the proposals to activate the Commercial Service have been moved for overall economic development of the North-eastern Region. The [Lakhipur - Bhanga](#) stretch of 121 Km. of the [Barak River](#) is also declared by the Union Govt. as the 6th National Waterway in January 2013 for unified development of the waterways for shipping and navigation and transportation of cargo to the North Eastern Region particularly in the states of Assam, Nagaland, Mizoram, Manipur, Tripura and Arunachal Pradesh.

For effective exploitation of the waterways, being the cheapest mode of transport and in order to cater to the growing need for goods and passenger movement, two Government owned organisations of Assam viz, Central Inland Waterways Corporation and Directorate of Inland Water Transport (IWT), are operating the water transport services on the river Brahmaputra and Barak on commercial basis and have been trying to improve the water transport system in the region. The Brahmaputra has several small river ports. In addition, there are more than thirty pairs of ferry ghats on the Brahmaputra transporting both passengers and cargo. But due to scarcity of serviceable vessels under the department most of the ferry services often suffer problems in their smooth operation. However, there is need to augment the IWT fleet by suitable type of vessels to ensure adequate cargo support.

At present the Directorate of Inland Water Transport is operating 86 (eighty six) ferry services under 3(three) IWT Divisions on the river Barak, Brahmaputra and its tributaries for the purpose of public utility. The IWT Department has introduced 54 nos. of cargo cum passenger service also in Assam for transportation of commuters throughout the nook and corner of the State where no road communications are available. At present the IWT department has possessed 211 vessels of different capacity and proposed to add a good number of vessels during the 12<sup>th</sup> Five Year plan period. Besides these Government owned organisations, large number of private owners conducted ferry services [including commonly known Bhoot-bhooty services] to transport goods and passengers to the remotest hinterlands under un-organised sector.

To exploit the potential, there is a need to augment the IWT by adding suitable type of fleet of vessels to increase passenger services as well as to provide adequate cargo support. Therefore, the IWT Directorate planned to procure 20 numbers of higher speed 16.0 M long steel Shallow Draft Boat (SDB) for plying as Water Taxi on the river Brahmaputra and Barak, 8 numbers of 22.0 M long steel RPL and 4 numbers of 22.0 M long steel Marboat for plying on the river Brahmaputra for Majuli and Dhubri, 6 numbers of 18.0 M long steel single boat for plying on the river Barak etc., during the Twelfth Five Year Plan period. In addition, the IWT Assam proposed to construct 12 nos of 19 .0 Metre long wooden boats fitted with marine engine for operation in the Govt. Notified/newly established ferry services.

#### OTHER ACTIVITIES

The IWT department has introduced Air-conditioned long distance river cruise service for the development for river tourism. The department has leased out a vessel M. K. Charaidew to private entrepreneur on hire basis. The department has also introduced two luxurious A/C cruise vessels on the river Brahmaputra and they are being operated by the department itself at Guwahati. The IWT department has also proposed to construct a 28.0 m long Double Decker steel pontoon to be utilised as Luxurious Floating Restaurant on the River Brahmaputra at Guwahati (as per DRSC proposal).

The IWT department has also constructed a RCC jetty on the 11 nos. of floating restaurants (A/C & Non A/C) on board of IWT vessels and three river cruise services on the river Brahmaputra. The department has also constructed 7 nos. of 25m long single Decker floating terminal at north bank



and 2 nos. of 28m long double Decker floating terminal at the south bank of the Brahmaputra at Guwahati under centrally Sponsored scheme.

## COMMUNICATION:

### POSTAL COMMUNICATION

The Assam Postal Circle has a network of 4012 Post Offices [as on March 2015] out of which 3725 post offices are located in rural areas. On an average, each Post Office serves a population of 7774 persons and covers 19.54 Sq.Km. areas. There are 3 Night Post Offices also functioning in the State located at Guwahati GPO, Dibrugarh HO and Silchar HO for convenience of the people. In addition, there are 353 modernised post offices and 634 computerised post offices in the State. Apart from the above, there are 4 National Speed Post Centre and 16 Speed Post Centre in the State and Postal Mail Conveyance covers 4428 railway kilo metre.

The Assam Postal Circle has taken initiative to start Core Banking Solution (CBS) in 12 selected post offices of Assam under Pilot Project to bring the postal customers under postal banking coverage so that the customers can access their savings bank accounts from any of the above selected post office. Assam is among the six states across India selected for the Pilot. After successful implementation of CBS in these pilot offices, other post offices will be brought under coverage of CBS in a phased manner. In addition; Assam State has also been selected for the Rural-ICT project for computerisation and networking of rural post offices (also called Branch Post Offices). A total of 375 Branch Post Offices of Sivasagar Postal Division comprising of three districts –Sivasagar, Jorhat and Golaghat are the pilot offices covered under Rural-ICT project for Assam Circle.

The Circle is utilising services of Indian Airlines & Jet Airways for transmitting outward airmails from all the Air Centres of the region. From Guwahati, outward airmails are transmitted in direct flight for Kolkata by Indian Airlines and for Delhi Sector by Jet Airways. For mail transmission in the North East Region freighter air craft service has been used which is running in the Kolkata-Guwahati-Imphal- Agartala Sector. The service of ASTC and Private Night Super Buses are also utilised for transmission of local mails to all District Headquarters except Morigaon and Dhemaji.

### TELECOMMUNICATION

Assam Telecom Circle of Bharat Sanchar Nigam Limited (BSNL) is the largest telecom operator in Assam which was formed in 1987, providing comprehensive range of telecom services in the State. BSNL, Assam Circle is the only service provider, making focused efforts and planned initiative to bridge the rural-urban Digital Divider ICT sector. BSNL is reaching the nook and corner of Assam with focused development thrust. At present 577 telephone exchanges are functioning in the State (as on March 2015).

It is evident from the status of telecom facilities in Assam shown in the Table 13.8 that the overall tele-density (Telephone per 100 of population) of the State as on December 2014 was 51.90 as against the national average 77.59. During the year 2013-14, the overall tele-density of Assam was 48.74 as against the national average of 75.23. While the urban tele-density of Assam stood at 129.05 as on December 2014 compared to 126.27as on March 2014, the rural tele-density was only 37.41 as on December 2014 and seems to be slightly higher over the previous year (34.36). However, in respect of overall tele-density as well as urban tele density the position of Assam stood far below the national average [overall 77.23 and urban 147.75 as on December 2014. In respect of rural segments also tele-density of Assam was considerably below the national average.(rural-46.14) during the same period.

TABLE – 13.8  
TELECOM FACILITIES IN ASSAM

| Item   | 2009-10                                     | 2010-11                                  | 2011-12                                  | 2012-13                                  | 2013-14                                  | 2014-15                                      |
|--|---|--|--|--|--|--|
| Direct Exchange Lines                        | 1449647                                     | 1739591                                  | 1492608                                  | 1430077                                  | 1463773                                  | 1427318                                      |
| Rural Telephone Connections                  | 481092                                      | 594291                                   | 491881                                   | 445399                                   | 459014                                   | 449347                                       |
| Village Public Telephones (VPTs)             | 23992                                       | 24196                                    | 24415                                    | 24688                                    | 24692                                    | 24692  |
| Total Telephones                             | 9064392                                     | 11928394                                 | 14437929                                 | 14582059                                 | 15462192                                 | 16611629                                     |
| A)Wire line Phones=Fixed DELs                | 308339                                      | 257683                                   | 229854                                   | 194395                                   | 183984                                   | 178191                                       |
| Ai)PSU Operators                             | 307725                                      | 255584                                   | 227229                                   | 193915                                   | 182904                                   | 176841                                       |
| Aii)Private Operators                        | 614   | 2099                                     | 2625                                     | 480                                      | 1080                                     | 1350   |
| B)Wireless Phones (GSM+CDMA)                 | 8756053                                     | 11670711                                 | 14208075                                 | 14387664                                 | 15278208                                 | 16433438                                     |
| Bi) PSUs Operators                           | 1141922                                     | 1484007                                  | 1265379                                  | 1236162                                  | 1280869                                  | 1276828                                      |
| Bii)Private Operators                        | 7614131                                     | 10186704                                 | 12942696                                 | 13151502                                 | 13997339                                 | 15156610                                     |
| Tele-density [%] (Phones Per 100 of Persons) | 29.99<br>Urban-<br>96.54<br>Rural-<br>18.49 | 38.98<br>Urban-<br>124.45<br>Rural-23.93 | 46.61<br>Urban-<br>148.54<br>Rural-28.35 | 46.51<br>Urban-<br>130.92<br>Rural-31.13 | 48.74<br>Urban-<br>126.27<br>Rural-34.36 | 51.90<br>Urban-<br>129.05<br>Rural-<br>37.41 |
| Public Call Offices [Local+STD+Highway]      | 33862                                       | 27380                                    | 19307                                    | 11929                                    | 11207                                    | 10350  |

Source: Annual Reports- 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 of Department of Telecommunication, Govt. of India.

The subscriber base basic services provided by the BSNL in the State were 1427318 as on March 2015 as against the total capacity of 2152273 which included WLL subscribers and wireless subscribers. The total number of telephone connections as on December 2014 was 7.4 percent more than that of March 2014. Private operators also provided 1350 wire-line phones to its subscribers till December 2014 in Assam.

In respect of wireless phone [mobile segment] connections, there were 1.64 crore mobile subscribers in Assam as on December 2014. BSNL alone provides around 7.3 percent of the total mobile connections in the State till December 2014. The private mobile service operators, on the other hand, provided about 1.51 crore mobile connections as on December 2014. Thus, the share of mobile connections provided by the private operators has been increased from 91.6 percent as on March 2014 to 92.2 percent as on December 2014. Bharati Televentures (Airtel), Disnet Wireless (Aircel), Reliance and Vodafone are the main private mobile service provider companies operating in Assam.

According to the Annual Report 2014 of the Department of Telecommunications, Govt. of India, there were 16611629 telephones in Assam out of which 59.48 percent were rural. Moreover, the total telephones in Assam as on December 2014 share only 1.76 percent total telephones in the Country. BSNL also provided Village Public Telephones (VPTs) to 24692 inhabited villages of Assam till December 2014.

TABLE – 13.9  
MAJOR GROUP-WISE WIRELESS SUBSCRIBER IN ASSAM  
(As on March 2015)

| Circle | Wireless Subscriber Group |           |           |           |          |          | Total     |
|--------|---------------------------|-----------|-----------|-----------|----------|----------|-----------|
|        | Bharati                   | Reliance  | Vodaphone | Idea      | Aircel   | BSNL     |           |
| Assam  | 5128549                   | 2325258   | 3181129   | 850910    | 4403721  | 1261324  | 17150891  |
| India  | 226017413                 | 109472475 | 183803013 | 157807668 | 81395713 | 77223655 | 969893795 |

Source: Telecom Regulator Authority of India Press Release dated 12-3-2014.



## APPENDIX-13.1

DISTRICT-WISE LENGTH OF PWD ROADS BY TYPE AS ON 31<sup>ST</sup> MARCH' 2015 IN ASSAM

(in Km.)

| Sl. No. | District      | Black Topped | Earthen/ Gravelled | Total |
|---------|---------------|--------------|--------------------|-------|
| 1       | 2             | 3            | 4                  | 5     |
| 1.      | Kokrajhar     | 814          | 988                | 1802  |
| 2.      | Dhubri        | 819          | 334                | 1153  |
| 3.      | Goalpara      | 842          | 707                | 1549  |
| 4.      | Barpeta       | 1070         | 715                | 1785  |
| 5.      | Morigaon      | 558          | 584                | 1142  |
| 6.      | Nagaon        | 2020         | 1063               | 3083  |
| 7.      | Sonitpur      | 1167         | 1482               | 2649  |
| 8.      | Lakhimpur     | 809          | 281                | 1090  |
| 9.      | Dhemaji       | 685          | 656                | 1341  |
| 10.     | Tinsukia      | 1056         | 687                | 1743  |
| 11.     | Dibrugarh     | 1070         | 622                | 1692  |
| 12.     | Sivasagar     | 1126         | 1749               | 2875  |
| 13.     | Jorhat        | 934          | 1082               | 2016  |
| 14.     | Golaghat      | 1311         | 1170               | 2481  |
| 15.     | Karbi-Anglong | 1065         | 3135               | 4200  |
| 16.     | Dima-Hasao    | 484          | 1235               | 1719  |
| 17.     | Cachar        | 940          | 222                | 1162  |
| 18.     | Karimganj     | 498          | 437                | 935   |
| 19.     | Hailakandi    | 269          | 204                | 473   |
| 20.     | Bongaigaon    | 663          | 142                | 805   |
| 21.     | Chirang       | 554          | 72                 | 626   |
| 22.     | Kamrup        | 2171         | 1027               | 3198  |
| 23.     | Kamrup (M)    | 423          | 35                 | 458   |
| 24.     | Nalbari       | 658          | 258                | 916   |
| 25.     | Baksa         | 751          | 322                | 1073  |
| 26.     | Darrang       | 660          | 407                | 1067  |
| 27.     | Udalguri      | 531          | 1298               | 1829  |
|         | ASSAM         | 23948        | 20914              | 44862 |

Source: P.W.D. (Roads) Assam.

APPENDIX- 13.2  
DISTRICT-WISE LENGTH OF ROADS ACCORDING TO  
DIFFERENT CLASSES UNDER PWD IN ASSAM, AS ON 31<sup>ST</sup> MARCH'2015  
(in Km.)

| Sl. No. | District      | State Highway | Major District Road | Rural Road | Urban Road | Total |
|---------|---------------|---------------|---------------------|------------|------------|-------|
| 1       | 2             | 3             | 4                   | 5          | 6          | 7     |
| 1.      | Kokrajhar     | 23            | 131                 | 1632       | 16         | 1802  |
| 2.      | Dhubri        | 55            | 53                  | 1007       | 38         | 1153  |
| 3.      | Goalpara      | 137           | 48                  | 1354       | 10         | 1549  |
| 4.      | Barpeta       | 120           | 171                 | 1463       | 31         | 1785  |
| 5.      | Morigaon      | 134           | 86                  | 909        | 13         | 1142  |
| 6.      | Nagaon        | 260           | 326                 | 2409       | 88         | 3083  |
| 7.      | Sonitpur      | 55            | 402                 | 2133       | 59         | 2649  |
| 8.      | Lakhimpur     | 121           | 97                  | 828        | 44         | 1090  |
| 9.      | Dhemaji       | 45            | 42                  | 1168       | 86         | 1341  |
| 10.     | Tinsukia      | 41            | 171                 | 1479       | 52         | 1743  |
| 11.     | Dibrugarh     | 109           | 163                 | 1357       | 63         | 1692  |
| 12.     | Sivasagar     | 100           | 310                 | 2425       | 40         | 2875  |
| 13.     | Jorhat        | 127           | 89                  | 1714       | 86         | 2016  |
| 14.     | Golaghat      | 160           | 157                 | 2131       | 33         | 2481  |
| 15.     | Karbi-Anglong | 228           | 561                 | 3341       | 70         | 4200  |
| 16.     | Dima-Hasao    | 223           | 199                 | 1237       | 60         | 1719  |
| 17.     | Cachar        | 107           | 165                 | 848        | 42         | 1162  |
| 18.     | Karimganj     | 35            | 342                 | 539        | 19         | 935   |
| 19.     | Hailakandi    | 17            | 99                  | 351        | 6          | 473   |
| 20.     | Bongaigaon    | 41            | 16                  | 712        | 36         | 805   |
| 21.     | Chirang       | 0             | 189                 | 429        | 8          | 626   |
| 22.     | Kamrup        | 52            | 230                 | 2916       | 0          | 3198  |
| 23.     | Kamrup (M)    | 0             | 0                   | 0          | 458        | 458   |
| 24.     | Nalbari       | 70            | 45                  | 779        | 22         | 916   |
| 25.     | Baksa         | 71            | 43                  | 959        | 0          | 1073  |
| 26.     | Darrang       | 143           | 119                 | 785        | 20         | 1067  |
| 27.     | Udalguri      | 56            | 125                 | 1639       | 9          | 1829  |
|         | ASSAM         | 2530          | 4379                | 36544      | 1409       | 44862 |

Source: P.W.D. (Roads) Assam.

## APPENDIX-13.3

## LENGTH OF ROADS PER LAKH OF POPULATION AND PER 00 SQ. KM. AREA IN ASSAM (AS ON 31 MARCH 2015)

(in Km.)

| Sl. No. | District      | Total Road length | Road length per lakh population | Road length per 00 Sq.Km. Area |
|---------|---------------|-------------------|---------------------------------|--------------------------------|
| 1       | 2             | 3                 | 4                               | 5                              |
| 1.      | Kokrajhar     | 1802              | 203                             | 58.16                          |
| 2.      | Dhubri        | 1153              | 59                              | 69.35                          |
| 3.      | Goalpara      | 1549              | 154                             | 84.98                          |
| 4.      | Barpeta       | 1785              | 105                             | 68.13                          |
| 5.      | Morigaon      | 1142              | 119                             | 74.15                          |
| 6.      | Nagaon        | 3083              | 109                             | 78.53                          |
| 7.      | Sonitpur      | 2649              | 138                             | 50.15                          |
| 8.      | Lakhimpur     | 1090              | 105                             | 47.91                          |
| 9.      | Dhemaji       | 1341              | 195                             | 41.40                          |
| 10.     | Tinsukia      | 1743              | 132                             | 46.57                          |
| 11.     | Dibrugarh     | 1692              | 127                             | 51.40                          |
| 12.     | Sivasagar     | 2875              | 250                             | 107.72                         |
| 13.     | Jorhat        | 2016              | 185                             | 71.94                          |
| 14.     | Golaghat      | 2481              | 234                             | 70.82                          |
| 15.     | Karbi-Anglong | 4200              | 435                             | 41.30                          |
| 16.     | Dima-Hasao    | 1719              | 805                             | 38.38                          |
| 17.     | Cachar        | 1162              | 67                              | 30.72                          |
| 18.     | Karimganj     | 935               | 77                              | 51.74                          |
| 19.     | Hailakandi    | 473               | 72                              | 35.64                          |
| 20.     | Bongaigaon    | 805               | 110                             | 46.66                          |
| 21.     | Chirang       | 626               | 130                             | 33.42                          |
| 22.     | Kamrup        | 3198              | 211                             | 92.86                          |
| 23.     | Kamrup (M)    | 458               | 36                              | 72.87                          |
| 24.     | Nalbari       | 916               | 119                             | 95.59                          |
| 25.     | Baksa         | 1073              | 113                             | 54.84                          |
| 26.     | Darrang       | 1067              | 117                             | 57.60                          |
| 27.     | Udalguri      | 1829              | 220                             | 109.20                         |
| 28.     | ASSAM         | 44862             | 144                             | 58.01                          |

Source: P.W.D. (Roads) Assam.

APPENDIX- 13.4  
COLLECTION OF REVENUE AND TARGET OF THE DEPARTMENT OF TRANSPORT,  
ASSAM

(Rupees in crore)

| SL. No. | Name of D.T.O & Check Gate    | 2011-12          | 2012-13          | 2013-14          | 2014-15 |                  |
|---------|-------------------------------|------------------|------------------|------------------|---------|------------------|
|         |                               | Revenue Realised | Revenue Realised | Revenue Realised | Target  | Revenue Realised |
| 1       | 2                             | 6                | 8                | 10               | 11      | 12               |
| 1.      | Kamrup (R & L)                | 94.19            | 102.08           | 104.78           | 110.72  | 110.19           |
| 2.      | Kamrup (R.T.A)                | 0.99             | 0.70             | 0.59             | 0.61    | 0.76             |
| 3.      | Kamrup(Enforcement)           | 2.04             | 1.82             | 1.70             | 1.80    | 1.84             |
| 4.      | Kamrup (Rural)                | 2.41             | 5.88             | 6.45             | 6.82    | 8.24             |
| 4.      | Barpeta                       | 7.09             | 7.37             | 8.12             | 8.58    | 8.42             |
| 5.      | Nalbari                       | 3.81             | 4.52             | 4.97             | 5.25    | 5.70             |
| 6.      | Goalpara                      | 5.98             | 6.62             | 6.72             | 7.10    | 5.95             |
| 7.      | Dhubri                        | 6.32             | 6.95             | 7.34             | 7.76    | 7.91             |
| 8.      | Sonitpur                      | 12.32            | 14.00            | 14.97            | 15.82   | 15.24            |
| 9.      | Mangaldoi (Darrang)           | 3.82             | 4.10             | 4.72             | 4.99    | 5.33             |
| 10.     | Lakhimpur                     | 7.62             | 8.54             | 9.64             | 10.19   | 10.90            |
| 11.     | Dibrugarh                     | 18.74            | 18.74            | 19.68            | 20.80   | 21.23            |
| 12.     | Tinsukia                      | 15.72            | 17.17            | 18.57            | 19.62   | 19.67            |
| 13.     | Dhemaji                       | 3.43             | 3.08             | 3.69             | 3.90    | 3.91             |
| 14.     | Sivasagar                     | 14.10            | 16.78            | 18.48            | 19.53   | 20.16            |
| 15.     | Jorhat                        | 14.73            | 16.96            | 18.10            | 19.12   | 18.57            |
| 16.     | Golaghat                      | 5.83             | 6.63             | 8.41             | 8.89    | 8.68             |
| 17.     | Nagaon                        | 14.80            | 15.97            | 17.82            | 18.83   | 19.01            |
| 18.     | Morigaon                      | 3.72             | 4.67             | 4.69             | 4.96    | 4.42             |
| 19.     | Dima Hasao                    | 0.85             | 0.87             | 0.72             | 0.76    | 0.80             |
| 20.     | Karbi-Anglong                 | 4.40             | 4.74             | 4.94             | 5.22    | 5.01             |
| 21.     | Karimganj                     | 3.30             | 3.98             | 4.05             | 4.28    | 3.63             |
| 22.     | Hailakandi                    | 3.06             | 3.22             | 3.30             | 3.49    | 3.35             |
| 23.     | Cachar                        | 13.47            | 15.35            | 16.54            | 17.48   | 17.39            |
| 24.     | Srirampur<br>M.V. Check gate  | 1.85             | 3.15             | 3.31             | 3.55    | 2.01             |
| 25.     | Boxirhat M.V. Check<br>gate   | 4.05             | 3.57             | 3.36             | 3.50    | 2.95             |
| 26.     | Kokrajhar                     | 5.80             | 5.89             | 6.09             | 6.44    | 6.38             |
| 27.     | Bongaigaon                    | 7.82             | 9.09             | 10.01            | 10.58   | 9.10             |
| 28.     | S.T.A.                        | 22.38            | 24.23            | 22.13            | 23.38   | 23.21            |
| 29.     | Digharkhal M.V.<br>Check gate | 1.08             | 1.00             | 1.01             | 1.58    | 1.23             |
| 30.     | Udalguri                      | 2.26             | 2.28             | 2.61             | 2.76    | 2.79             |
| 31.     | Chirang                       | 2.37             | 2.55             | 2.45             | 2.59    | 3.26             |
| 32.     | Baksa                         | 1.77             | 1.88             | 1.58             | 1.67    | 1.56             |
|         | A SSAM                        | 312.12           | 344.38           | 361.54           | 382.57  | 378.98           |

Source: Office of the Commissioner of Transport, Assam.

APPENDIX- 13.5  
DI STRICT-WISE NUMBER OF MOTOR VEHICLE REGISTERED IN ASSAM

| Sl. No | District       | Total Number of Vehicles Registered |         |         |         |         |         |
|--------|----------------|-------------------------------------|---------|---------|---------|---------|---------|
|        |                | 2009-10                             | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| 1      | 2              | 3                                   | 4       | 5       | 6       | 7       | 8       |
| 1.     | Dhubri         | 3428                                | 4884    | 5803    | 5575    | 5895    | 6765    |
| 2.     | Kokrajhar      | 2599                                | 4242    | 4953    | 4040    | 4589    | 5045    |
| 3.     | Bongaigaon     | 21879                               | 6430    | 6863    | 8060    | 7749    | 7966    |
| 4.     | Goalpara       | 2238                                | 3478    | 4729    | 9527    | 4417    | 3922    |
| 5.     | Barpeta        | 5490                                | 8410    | 10087   | 8128    | 9869    | 7834    |
| 6.     | Nalbari        | 2230                                | 2864    | 2930    | 4323    | 5275    | 6553    |
| 7.     | Kamrup (M)     | 43457                               | 57509   | 64815   | 58638   | 66941   | 66691   |
| 8.     | Darrang        | 31430                               | 4472    | 4840    | 5095    | 5546    | 5595    |
| 9.     | Sonitpur       | 55514                               | 10041   | 11681   | 10742   | 12974   | 14174   |
| 10.    | Lakhimpur      | 4808                                | 7250    | 8524    | 7265    | 9808    | 11299   |
| 11.    | Dhemaji        | 1958                                | 3664    | 3784    | 4084    | 2990    | 4229    |
| 12.    | Morigaon       | 1470                                | 2980    | 3193    | 3375    | 3129    | 4531    |
| 13.    | Nagaon         | 7948                                | 12156   | 13966   | 13687   | 15961   | 18382   |
| 14.    | Golaghat       | 4603                                | 4342    | 4693    | 4697    | 6419    | 6089    |
| 15.    | Jorhat         | 8568                                | 14576   | 14279   | 13166   | 15146   | 14672   |
| 16.    | Sivasagar      | 13080                               | 8654    | 9327    | 11439   | 12955   | 13653   |
| 17.    | Dibrugarh      | 9945                                | 11434   | 14866   | 12782   | 13358   | 14978   |
| 18.    | Tinsukia       | 5925                                | 10375   | 10882   | 11046   | 12571   | 14847   |
| 19.    | Karbi-Anglong  | 2342                                | 4154    | 4211    | 4461    | 4918    | 4847    |
| 20.    | Dima-Hasao     | 136                                 | 229     | 411     | 349     | 483     | 439     |
| 21.    | Karimganj      | 1332                                | 1814    | 1954    | 2650    | 2753    | 2732    |
| 22.    | Hailakandi     | 1555                                | 2018    | 2209    | 2098    | 2262    | 2618    |
| 23.    | Cachar         | 5952                                | 6599    | 9314    | 9164    | 10103   | 9760    |
| 24.    | Baksa          | 362                                 | 2095    | 2468    | 1827    | 1436    | 1388    |
| 25.    | Chirang        | 1373                                | 2442    | 2631    | 2214    | 2307    | 2952    |
| 26.    | Udalguri       | 1625                                | 1964    | 2597    | 2400    | 2677    | 2858    |
| 27.    | Kamrup (Rural) |                                     |         |         | 6535    | 7033    | 13081   |
| ASSAM  |                | 241247                              | 199076  | 226010  | 227367  | 249564  | 267900  |

Source: Office of the Commissioner of Transport, Assam.

## APPENDIX – 13.6

## DISTRICT-WISE NUMBERS OF MOTOR VEHICLE ON ROAD IN ASSAM

| Sl. No.   | District      | Total No. of Vehicles on Road |            |         |         |         |         |
|-----------|---------------|-------------------------------|------------|---------|---------|---------|---------|
|           |               | 2009-10                       | 2010-11    | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| 1         | 2             | 3                             | 4          | 5       | 6       | 7       | 8       |
| 1.        | Dhubri        | 22437                         | 18443      | 23329   | 24011   | 29906   | 31928   |
| 2.        | Kokrajhar     | 9573                          | 5520       | 6739    | 10556   | 15611   | 32778   |
| 3.        | Bongaigaon    | 40816                         | 32573      | 37511   | 44711   | 53593   | 61486   |
| 4.        | Goalpara      | 17606                         | 19992      | 24692   | 36439   | 34494   | 38396   |
| 5.        | Barpeta       | 30669                         | 36263      | 44562   | 54651   | 62766   | 71211   |
| 6.        | Nalbari       | 23664                         | 23609      | 28611   | 32934   | 49304   | 61524   |
| 7.        | Kamrup (M)    | 423943                        | 532933 (p) | 584217  | 645131  | 709103  | 770041  |
| 8.        | Darrang       | 35393                         | 34489      | 34191   | 34549   | 37076   | 32729   |
| 9.        | Sonitpur      | 121019                        | 18736      | 21693   | 22387   | 35361   | 112438  |
| 10.       | Lakhimpur     | 42360                         | 43868      | 49597   | 63583   | 73028   | 85628   |
| 11.       | Dhemaji       | 4403                          | 5036 (p)   | 16947   | 17615   | 29117   | 33260   |
| 12.       | Morigaon      | 2304                          | 16023      | 16733   | 20597   | 23731   | 28232   |
| 13.       | Nagaon        | 64538                         | 80044      | 85063   | 98406   | 115395  | 142302  |
| 14.       | Golaghat      | 16842                         | 10167      | 6872    | 19769   | 26188   | 27295   |
| 15.       | Jorhat        | 116677                        | 131467     | 145667  | 158874  | 174077  | 187096  |
| 16.       | Sivasagar     | 120348                        | 89084      | 98127   | 97800   | 110735  | 199087  |
| 17.       | Dibrugarh     | 80952                         | 91770      | 107057  | 108419  | 126458  | 141168  |
| 18.       | Tinsukia      | 55034                         | 66314      | 71526   | 77753   | 86508   | 97527   |
| 19.       | Karbi-Anglong | 15716                         | 18787      | 21703   | 21963   | 26964   | 31779   |
| 20.       | Dima-Hasao    | 5165                          | 5079       | 5405    | 5416    | 5899    | 5329    |
| 21.       | Karimganj     | 14006                         | 12725      | 13248   | 16611   | 19338   | 22102   |
| 22.       | Hailakandi    | 9880                          | 9006       | 10905   | 15477   | 17815   | 20386   |
| 23.       | Cachar        | 40905                         | 47121      | 53960   | 62657   | 70202   | 78685   |
| 24.       | Baksa         | 1059                          | 3255 (p)   | 3483    | 6412    | 7812    | 9177    |
| 25.       | Chirang       | 3882                          | 6284       | 8808    | 9096    | 14688   | 17618   |
| 26.       | Udalguri      | 1676                          | 5037       | 7623    | 10046   | 12744   | 15479   |
| 27.       | Kamrup (R)    |                               |            |         | 9359    | 16967   | 29895   |
| A S S A M |               | 1320867                       | 1363625    | 1528269 | 1725222 | 1984880 | 2384576 |

Source: Office of the Commissioner of Transport, Assam.

## CHAPTER – XIV

## INSTITUTIONAL FINANCE

## BANKING

The financial system is an important growth fundamental for the economy of a country or a state. A well structured and efficient network of financial institutions helps to boost economic growth. Banks are playing an important role in sustaining economic development by mobilizing deposits and credits. With the objective to bring more and more people within the institutional finance coverage, the banking network has been increased by opening new branches in the State. As a result, the number of reporting Bank Offices of all Scheduled Commercial Banks in Assam has been increased from 1262 as on March 2007 to 2047 as on March 2015. With the increase in the bank networking, the dependence per bank offices in Assam has been considerably decreased over the years and reduced from 62.15 Sq.km as on March 2007 to 38.32 Sq.km as on March 2015. However, average population covered per bank branch office in Assam was calculated at 15.24 thousand (based on Population Census 2011) as on March, 2015 compared to All India average of 10.5 thousand during the same period. The table 14.1 shows the number of Scheduled Commercial Bank Offices in Assam as well as in India and the trend of deposits and credit over the period of past ten years.

Banking sector comprises of Scheduled and non-scheduled banks. Scheduled banks are of two types viz. Scheduled Commercial Banks and Scheduled Cooperative Banks. Scheduled Commercial banks are classified into five types –State bank of India & its associates, Nationalized Banks, Private sector Banks, Regional Rural Banks and Others (Foreign Banks). At the end of March, 2015, there were 2047 bank offices, of which, 48.0 percent bank offices were located in rural, 29.0 percent were in semi-urban and 23.0 percent were in urban areas. At the end of March 2015, growth of aggregate deposits in the State was 14.5 percent compared to 9.4 percent growth in the previous year. Growth of bank credit, on the other hand, was calculated at 13.2 percent during the year ending March 2015 compared to 11.0 percent growth of aggregate credit in the previous year.

TABLE – 14.1  
GROWTH OF SCHEDULED COMMERCIAL BANKS IN ASSAM AND INDIA

(at the end of March)

| Year | Number of Offices |        | Deposits<br>(Rs. in Crore) |         | Credit<br>(Rs. in Crore) |         |
|------|-------------------|--------|----------------------------|---------|--------------------------|---------|
|      | Assam             | India  | Assam                      | India   | Assam                    | India   |
| 2004 | 1256              | 68645  | 14507                      | 1511273 | 4612                     | 880312  |
| 2005 | 1272              | 69969  | 17782                      | 1746814 | 6271                     | 1152468 |
| 2006 | 1234              | 68681  | 20872                      | 2093042 | 8763                     | 1517497 |
| 2007 | 1262              | 70711  | 25757                      | 2598823 | 11154                    | 1949567 |
| 2008 | 1317              | 74326  | 31666                      | 3228817 | 13057                    | 2394566 |
| 2009 | 1369              | 79058  | 39427                      | 3937336 | 15115                    | 168977  |
| 2010 | 1434              | 83997  | 49545                      | 4601926 | 18311                    | 3345619 |
| 2011 | 1504              | 89110  | 59101                      | 5426510 | 21053                    | 4076868 |
| 2012 | 1574              | 96059  | 67455                      | 6174147 | 25171                    | 4821527 |
| 2013 | 1682              | 104647 | 77730                      | 7051332 | 28576                    | 5506496 |
| 2014 | 1861              | 115822 | 85069                      | 8028220 | 31713                    | 6264290 |
| 2015 | 2047              | 125863 | 97378                      | 8922111 | 35911                    | 6878472 |

\*Reporting Offices only.

Source: (1) 2004–2006, Basic Statistical Return of Scheduled Commercial Banks in India, Reserve Bank of India (Various issues).

(2) Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks, March 2007 to March 2015 of RBI.



The spread of Groups of Bank as noted above have a distinctive role to play in the economic scenario of the State. A comparative status of performance of the Bank Groups in Assam up to the second quarter of 2014-15 may be evident from the Table 14.2.

TABLE -14.2  
BANK GROUP WISE SCHEDULED COMMERCIAL BANKS IN ASSAM

(Upto March, 2015)

| Bank Group                             | No. of offices | Deposits<br>(Rs. in Crore) | Credit<br>(Rs. in Crore) |
|--|----------------|----------------------------|--------------------------|
| State Bank of India and its Associates | 334            | 38135                      | 12848                    |
| Nationalized Banks                     | 1062           | 44218                      | 15203                    |
| Foreign Banks                          | 2              | 187                        | 124                      |
| Regional Rural Banks                   | 465            | 7878                       | 4159                     |
| Private Sector Banks                   | 184            | 6960                       | 3577                     |
| All Scheduled Commercial Banks         | 2047           | 97378                      | 35911                    |

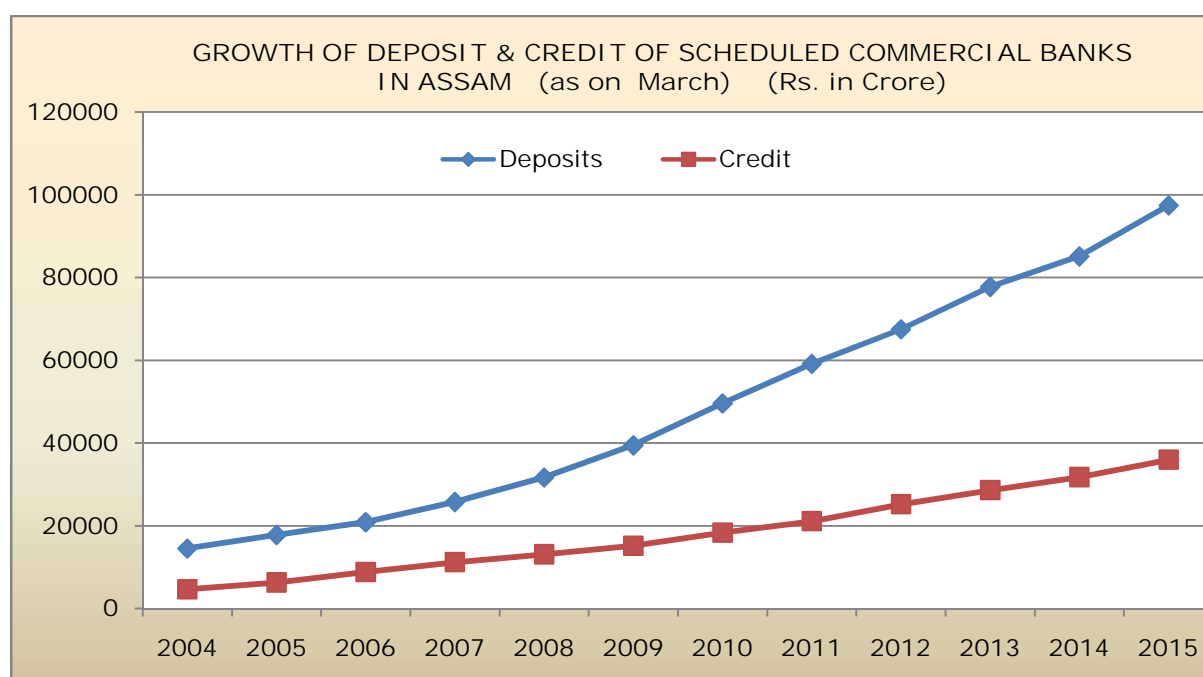
\*Reporting Offices only: Total may not be equal due to rounding off.

Source: Reserve Bank of India.

### GROWTH OF DEPOSITS AND CREDIT

The expansion of banking facilities in the State over the years augmented not only in respect of volume of deposits but also in respect of disbursement of credit. The aggregate deposit with Scheduled Commercial Banks in Assam, which was Rs.85069 crore in March 2014, has increased to Rs.97378 crore in March 2015. The volume of deposits has been increased by 14.5 percent in March 2015 over the previous year. The per capita deposit in the State has also been increased from Rs.27266 in March 2014 to Rs.31211 in March 2015. Thus, the per capita deposit in the State has recorded 14.5 percent increase over the previous year.

Like deposits, disbursement of credit by Scheduled Commercial Banks also recorded an impressive growth in Assam. The total volume of credit disbursed by the banks has been increased to Rs.35911 crore in March 2015 from Rs.31713 crore in March 2014 thereby recorded an impressive growth of 13.24 percent. However, the credit disbursement by the Scheduled Commercial banks in Assam shared only 0.52 percent of the total credit disbursed in the country as a whole during March 2014. The per capita credit has been increased to Rs.11510 in March 2015 compared to Rs.10164 in March, 2014.



## CREDIT – DEPOSIT RATIO

The Credit-Deposit ratio of all Scheduled Commercial Banks in Assam remained slightly lower with 36.9 in 2014-15 (ending March 2015) compared to 37.3 percent during the year 2013-14. The credit-deposit ratio of all Scheduled Commercial banks was highest with 43.3 percent in 2006-07 (ending March 2007).

The Credit –Deposit Ratio of all Scheduled Commercial Banks in Assam, however, remained far below when compared with the All India ratio. During the year 2014-15 (ending March) the Credit-Deposit Ratio of all Scheduled Commercial Banks in India was 77.4 percent compared to 78.0 percent during 2013-14 (ending March).

Table 14.3 shows the Credit - Deposit ratio of all scheduled commercial banks in Assam and India from 2001 to 2014. Table 14.4 shows the status of Credit-Deposit ratio in the districts of Assam.

TABLE – 14.3  
CREDIT DEPOSIT RATIO OF ALL SCHEDULES  
COMMERCIAL BANKS IN ASSAM AND INDIA

(as on March)

| Year  | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Assam | 32.0 | 31.7 | 29.3 | 31.8 | 35.2 | 41.9 | 43.3 | 41.2 | 38.3 | 37.0 | 35.6 | 37.3 | 36.8 | 37.3 | 36.9 |
| India | 56.7 | 58.4 | 59.2 | 58.2 | 65.9 | 72.5 | 75.0 | 74.2 | 72.6 | 72.7 | 75.1 | 77.5 | 78.1 | 78.0 | 77.4 |

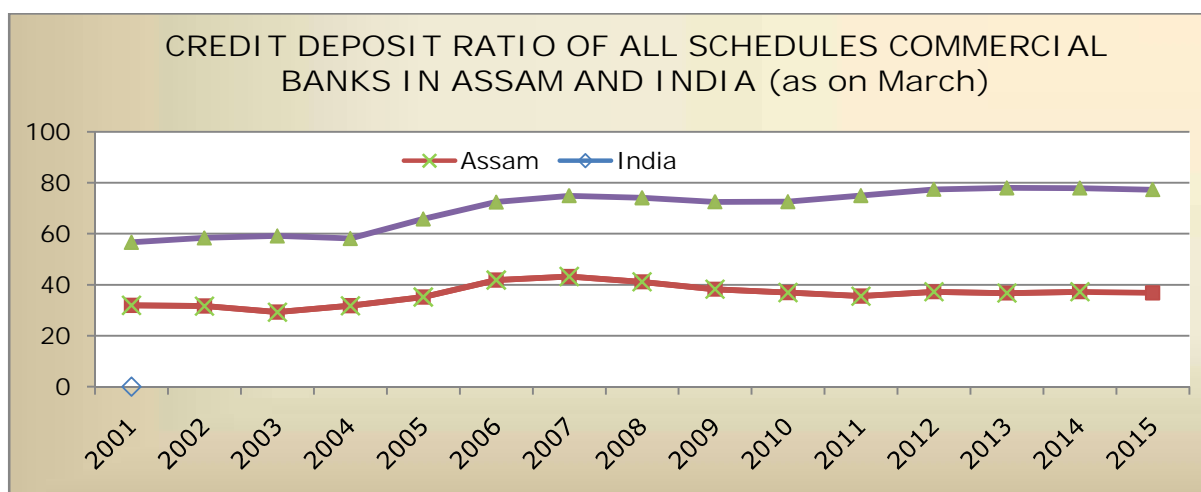
Source: (i) Basic Statistical Return of Scheduled Commercial Banks (2001-2006); and  
(ii) Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks, March 2007 to March 2015, Reserve Bank of India

TABLE-14.4  
DISTRICTWISE CREDIT DEPOSIT RATIO IN ASSAM  
(AS ON MARCH)

(Figure in %)

| DISTRICT   | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | DISTRICT      | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|------------|------|------|------|------|------|------|---------------|------|------|------|------|------|------|
| Kamrup     | 91.8 | 86.3 | 49.9 | 44.8 | 42.0 | 48.2 | Nagaon        | 45.0 | 43.1 | 43.8 | 41.5 | 41.7 | 38.2 |
| Bongaigaon | 30.1 | 26.8 | 32.5 | 34.7 | 37.5 | 37.0 | Tinsukia      | 35.2 | 32.8 | 34.3 | 35.2 | 36.2 | 35.4 |
| Goalpara   | 46.8 | 38.9 | 42.4 | 39.2 | 38.7 | 36.4 | Karbi anglong | 34.2 | 37.9 | 37.3 | 32.2 | 28.7 | 30.5 |
| Hailakandi | 41.9 | 34.6 | 34.0 | 35.4 | 34.3 | 32.7 | Karimganj     | 35.6 | 33.6 | 32.9 | 32.5 | 30.0 | 27.2 |
| Morigaon   | 57.2 | 55.7 | 56.3 | 56.5 | 60.0 | 57.0 | Dima hasao    | 44.8 | 34.5 | 25.2 | 21.1 | 20.6 | 19.6 |
| Sonitpur   | 47.6 | 45.2 | 47.6 | 47.5 | 48.1 | 46.7 | Dhubri        | 43.3 | 39.2 | 41.2 | 39.0 | 36.8 | 34.6 |
| Darrang    | 55.3 | 48.9 | 52.5 | 53.8 | 53.8 | 48.7 | Kokrajhar     | 29.7 | 26.7 | 30.4 | 26.7 | 26.9 | 27.1 |
| Nalbari    | 54.8 | 50.1 | 50.6 | 47.6 | 49.5 | 47.0 | Barpeta       | 43.2 | 41.6 | 43.5 | 44.2 | 45.2 | 44.9 |
| Dibrugarh  | 23.3 | 23.0 | 27.1 | 25.0 | 32.0 | 30.0 | Cachar        | 36.7 | 33.4 | 33.8 | 33.2 | 35.0 | 31.5 |
| Lakhimpur  | 56.1 | 55.3 | 61.6 | 62.1 | 61.7 | 59.0 | Kamrup(M)     | 28.1 | 28.3 | 34.0 | 34.4 | 33.4 | 35.3 |
| Jorhat     | 40.1 | 36.7 | 40.5 | 39.2 | 43.5 | 36.0 | Chirang       | 38.5 | 32.0 | 35.4 | 39.5 | 29.6 | 27.8 |
| Sivasagar  | 47.8 | 43.0 | 43.1 | 41.8 | 44.4 | 42.4 | Baksa         | 50.8 | 45.3 | 49.0 | 50.2 | 41.0 | 41.3 |
| Golaghat   | 51.7 | 43.7 | 49.4 | 46.2 | 47.0 | 37.7 | Udalguri      | 61.2 | 56.1 | 64.8 | 67.5 | 64.6 | 67.6 |
| Dhemaji    | 51.9 | 49.7 | 60.9 | 65.4 | 65.0 | 55.8 | Assam         | 37.0 | 35.6 | 37.3 | 36.8 | 37.3 | 36.9 |

Source: Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks, Reserve Bank of India



### PRIORITY SECTOR ADVANCES

The outstanding priority-sector advances showed a growth of 6.20 percent at the end of March 2015 over the end of March 2014 according to the State Level Bankers' Committee reports. The agriculture and allied sector was disbursed Rs.8878.37 crore in 2014-15 of which Scheduled Commercial Banks shared 70.0 percent, Regional Rural Banks 18.2 percent and Co-operative Banks 1.0 percent. Remaining 10.8 percent was disbursed under various schemes of NEDFi, NABARD (RIDF), MIDC and SIDBI. The Agriculture and allied sector credit during the period was disbursed to 13.98 lakh accounts. The disbursement of advances to agriculture & allied activities has steadily increased from Rs.7497.58 crore [19.78%] in 2013-14 to Rs.8878.37 crore [20.58%] in 2014-15.

The per capita priority sector advances has been significantly increased from Rs. 6937.00 in 2013-14 to Rs.7766.00 in 20145 (11.95 percent increase).

TABLE – 14.5  
ADVANCES OUTSTANDING UNDER PRIORITY SECTOR

(Rupees in Crore)

| Sectors  | 2007-08            | 2008-09             | 2009-10             | 2010-11             | 2011-12             | 2012-13             | 2013-14             | 2014-05             |
|--|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Aggregate Advances                                     | 16081.43           | 17750.99            | 20910.97            | 23843.62            | 30363.22            | 32825.11            | 37902.92            | 43142.92            |
| Total Priority Sector Advance                          | 8322.25<br>[51.75] | 10705.50<br>[60.31] | 11314.92<br>[54.11] | 13242.59<br>[55.54] | 16080.72<br>[55.83] | 19429.10<br>[59.19] | 21645.83<br>[57.11] | 22987.58<br>[53.28] |
| Agriculture & Allied Activities                        | 2158.80<br>[13.42] | 2345.86<br>[13.22]  | 3868.37<br>[18.50]  | 4557.40<br>[19.11]  | 5733.91<br>[19.91]  | 6614.39<br>[20.15]  | 7497.58<br>[19.78]  | 8878.37<br>[20.58]  |
| Industries   | 1281.63<br>[7.97]  | 1460.25<br>[8.23]   | 2054.15<br>[9.82]   | 2490.30<br>[10.44]  | 2819.38<br>[9.79]   | 4326.50<br>[13.18]  | 5158.53<br>[13.61]  | 5465.16<br>[12.67]  |
| Per capita Priority Sector Advances [Figure in Rupees] | 3122               | 4016                | 4245                | 4968                | 5153                | 6226                | 6937                | 7766                |

\* Figure within bracket indicates percentage share to Aggregate Advances.

❖ Per Capita Priority Sector Advances calculation based on the Population Census 2001 and for 2011-12 to and 2013-14, Census-2011

Source: Various Reports of State Level Bankers Committee, Assam.

### REGIONAL RURAL BANKS

Regional Rural Banks [RRBs] were established under the Regional Rural Banks Act, 1976 with an objective to give a boost to rural economy by providing rural credit to farmers, agricultural labourers, artisans and small entrepreneurs etc.

At present, there are two RRBs in the State - Assam Gramin Vikash Bank [AGVB] and Langpi Dehangi Rural Bank [LDRB]. While the Assam Gramin Vikash Bank is operating both in the Brahmaputra Valley and Barak Valley covering 25 districts with 406 branches, the service area of the Langpi Dehangi Rural Bank is confined within the two hill districts of Assam with 57 bank branches as on March 2015.

Out of the total branch network of the Assam Gramin Vikash Bank, 308 branches located in rural areas, 82 branches in semi-urban areas and 16 branches in urban areas. In respect of Langpi Dehangi Rural Bank, 50 branches located in rural areas and 7 branches located in semi-urban areas.

The aggregate deposits of RRBs was Rs.6961.07 crore at the end of March 2015 compared to Rs.6961.07 crore at the end of March 2014. The aggregate deposits of RRBs was Rs.5879.36 crore at the end of March 2013. The growth of aggregate deposits of RRBs was calculated at 13.24 percent at the end of March 2015 over March ending 2014. The aggregate volume of credit disbursed by these banks was also increased to Rs.4161.72 crore at the end of March 2015 from Rs.3890.15 crore as on March 2014 indicating an increase of 6.98 percent. Credit-Deposit ratio of these banks has reached 52.79 at the end of March, 2015 but remained slightly lower compared to 55.88 as on March 2014. The performance of Regional Rural Banks is presented in the Table- 14.6.

TABLE – 14.6  
ACHIEVEMENTS OF REGIONAL RURAL BANKS IN ASSAM

(Rupees in lakh)

| Period<br>(as on) | Achievements under Annual Credit Plan |                          |                     | Credit - Deposit Ratio (%) |       |
|-------------------|---------------------------------------|--------------------------|---------------------|----------------------------|-------|
|                   | Annual Target for All Banks           | Achievement of All Banks | Achievement of RRBs | All Banks                  | RRBs  |
| 31.3.2008         | 175518.40                             | 155511.33                | 32211.73 (20.71)    | 50.48*                     | 52.64 |
| 31.3.2009         | 221924.24                             | 150226.67                | 37082.91 (24.68)    | 45.85*                     | 49.62 |
| 31.3.2010         | 257892.21                             | 250725.49                | 52181.55 (20.81)    | 42.05*                     | 47.50 |
| 31.3.2011         | 354847.18                             | 289468.82                | 70261.61 (24.27)    | 39.71*                     | 47.94 |
| 31.3.2012         | 449985.62                             | 458541.64                | 76721.43 (16.73)    | 44.64*                     | 53.75 |
| 31.3.2013         | 642041.89                             | 463765.9                 | 61755.56 (13.32)    | 43.56*                     | 56.28 |
| 31.3.2014         | 1067096.67                            | 647419.05                | 78707.27(12.16)     | 43.48*                     | 55.88 |
| 31.3.2015         | 1001174.85                            | 612794.07                | 86143.45(46.37)     | 42.79                      | 52.79 |

Figure in bracket shows the percentage share of achievements of RRBs to All Banks.

\*Lending by NEDFi and under RIDF by NABARD has been incorporated as priority sector advances.

Hence C.D ratio figure is different from the figure shown in the Table-14.4.

Source: State Level Bankers Committee reports of various years.

## FINANCIAL INCLUSION OF VILLAGES

Financial inclusion is an important priority of the Govt. of India. The objective of financial inclusion is to extend financial services to the large un-served population of the country to unlock its growth potential. To extend the reach of banking to those outside the formal banking system, various initiatives are undertaken by the Govt. of India and RBI from time to time. As per direction of Govt. of India regarding opening of at least one bank account for each family in FI villages latest by 30<sup>th</sup> June 2012, all villages with population of over 2000 have been covered as on 31-3-2012. Out of the total villages in Assam 5244 villages with population more than 1000 but below and 2000 have been identified as not having access to banking services. Of these, 3233 villages have been allocated to Commercial Banks and 1991 villages to RRBs for providing banking services by 31-3-2015. [Source: SLBC Report for the quarter ending March 2012 and March, 2015 and State Focus Paper for the XII FY Plan 2012-17.

## PRIME MINISTER'S JAN DHAN YOJANA

The scheme has been started with a target to provide 'universal access to banking facilities' starting with "Basic Banking Accounts" with overdraft facility of Rs. 5000.00 after six months and RuPay Debit card with inbuilt accident insurance cover of Rs.1.00 lakh and RuPay Kisan Card.

Under the scheme:

1. Account holders will be provided zero-balance bank account with RuPay debit card, in addition to accidental insurance cover of Rs.1.00 lakh (to be given by 'HDFC Ergo').
2. Those who open accounts by January 26,2015 over and above the Rs.1.00 lakh accident, they will be given life insurance cover of Rs.30, 000.00 (to be given by LIC).
3. After Six months of opening of the bank account, holders can avail Rs.5,000 overdrafts from the bank.
4. With the introduction of new technology introduced by National Payments Corporation of India (NPCI), a person can transfer funds, check balance through a normal phone which was earlier limited only to smart phones so far.
5. Mobile banking for the poor would be available through National Unified USSD Platform (NUUP) for which all banks and mobile companies have come together.

Till 31 October, 2015, 59.02 lakhs accounts have been opened in 2 RRBs operating in Assam under the Scheme.

## AGRICULTURAL CREDIT

Credit is an essential requirement for revitalizing agriculture sector. Within the priority sector, the share of agriculture advances in the State has increased from 34.6 percent in 2013-14 to 38.6 percent in 2014-15 which was 34.04 percent in 2012-13. On the other hand, the agricultural credit constitutes 20.58% to the total bank credit as on March, 2015 which was 19.78 percent as on March 2014 [according to the figures published by the State Level Bankers' Committee, Assam According to the State Level Bankers' Committee Report, banks operating in the State could disburse agricultural credit of RS.2492.60 crore during the year 2014-15 as against the annual commitment of Rs.5176.00 crore or 48.16 percent of the target amount. During the year 2013-14, total agricultural credit disbursed in the State was Rs. 2756.66 crore against the annual commitment of Rs.4564.00 crore or 60.40 percent of the annual target for the said year.

TABLE – 14.7  
TREND OF CREDIT FLOW TO AGRICULTURE AND ALLIED  
ACTIVITIES UNDER ANNUAL CREDIT PLAN

| Year                            | Advance to Agriculture & Allied Activities (Rs. in crore) | Crop Loans (Rs. in crore) | % Share of crop Loan to Total Agricultural Advances | Per Capita Crop Loan (Rupees) | Crop Loan per farmer family# (Rupees) |
|---------------------------------|---|---------------------------|---|-------------------------------|---------------------------------------|
| 2003-04                         | 100.81  | 43.82                     | 43  | 16.44                         | 161                                   |
| 2004-05                         | 243.76  | 79.46                     | 33  | 29.81                         | 293                                   |
| 2005-06                         | 331.89  | 84.31                     | 25  | 31.63                         | 311                                   |
| 2006-07                         | 468.91  | 79.44                     | 17  | 29.80                         | 293                                   |
| 2007-08                         | 566.71  | 121.61                    | 21  | 45.62                         | 448                                   |
| 2008-09                         | 523.38  | 203.12                    | 39  | 76.20                         | 749                                   |
| 2009-10                         | 814.69  | 359.39                    | 44  | 134.82                        | *1307                                 |
| 2010-11                         | 876.76  | 373.63                    | 43  | 139.94                        | *1359                                 |
| 2011-12                         | 2002.47   | 1082.03                   | 54  | 346.80                        | *3935                                 |
| 2012-13                         | 1851.01   | 908.28                    | 49  | 291.11                        | *3303                                 |
| 2013-14                         | 2756.66   | 1460.02                   | 53  | 468.00                        | \$5368                                |
| 2014-15                         | 2492.60   | 1599.75                   | 64  | 512.65                        | \$5881                                |
| (%) Growth 2014-15 over 2013-14 | -9.58   | 9.57                      | -   | 9.54                          | 9.56                                  |

# Total Farmer Family=27.12 lakh as per Agriculture Census 2000-01.

\* Total Farmer Family =27.50 lakh as per Agriculture Census 2005-06.

\$Total Farmer Family = 27.20 lakh as per Agriculture Census 2010-11

Source: Reports of State Level Bankers Committee, Assam.

It is observed that the annual growth of advances to agriculture & allied activities during the year 2014-15 was declined by 9.58 percent compared to 2013-14 which was 48.9 percent 2013-14. While the growth of crop loans was 60.7 percent during the same period.

### FINANCING UNDER KISHAN CREDIT CARD SCHEME

Like other states of the Country, the banks operating in Assam have been extending timely, cost effective and hassle free credit support to the farmers of the State through Kishan Credit Card [KCC] Scheme which was introduced in 1998-99. Kishan Credit Card scheme has facilitated in augmenting credit flow for agricultural activities. The scope of the KCC has been broad-based to include term credit and consumption needs. During the year 2014-15, 2.82 lakh KCC were issued to the farmers of the State and sanctioned Rs.1331.36 crore compared to 3.08 lakh KCC issued and sanctioned Rs.1505.67 crore in 2013-14.

Cumulatively about 18.10 lakh KCCs have been issued in the State up to March 2015 since introduction of the scheme. The Scheme, thus, covered around 66.54 percent of the total farmer family (there are 27.20 lakh farmer families as per Agriculture Census 2010-11) of the State at the end of March 2015.

TABLE – 14.8  
ADVANCES UNDER KISHAN CREDIT CARD SCHEME

(Rupees in lakh)

| Year    | Annual Achievement |           | Cumulative Achievement |            |
|---------|--------------------|-----------|------------------------|------------|
|         | Card Issued (No.)  | Amount    | Card Issued (No.)      | Amount     |
| 2003-04 | 94377              | 9728.64   | -                      | -          |
| 2004-05 | 86822              | 9382.86   | 172965                 | 22202.28   |
| 2005-06 | 70238              | 9677.79   | 339750                 | 38839.94   |
| 2006-07 | 50067              | 7862.03   | 359395                 | 40580.52   |
| 2007-08 | 62132              | 16365.83  | 329932                 | 67908.97   |
| 2008-09 | 103361             | 37589.23  | 480393                 | 104682.06  |
| 2009-10 | 149822             | 43055.94  | 630070                 | 158372.04  |
| 2010-11 | 163063             | 50495.87  | 793801                 | 209071.23  |
| 2011-12 | 371474             | 130329.35 | 967220                 | 307834.01  |
| 2012-13 | 265797             | 93219.58  | 1329203                | 393538.41  |
| 2013-14 | 308306             | 150567.42 | 1586687                | 1551091.21 |
| 2014-15 | 281889             | 133136.24 | 1809898                | 629941.72  |

Source: Reports of State Level Bankers Committee, Assam.

### MICRO-FINANCE

The Micro Finance Scheme is an effective instrument for financial inclusion which was launched to meet the financial demands of small entrepreneurs as well as regarded as an effective programme for poverty reduction as well empowerment of the poor. The micro-finance programme of NABARD, which began in 1992 with formation of 500 Self Help Groups (SHGs), has emerged as the largest micro-finance programme in the world. The Self-Help Group – Bank linkage programme, the main micro-finance model and institutional finance mechanism to provide financial credit support to the micro-entrepreneurs (including farmers) in the country as a whole, has been proved to be the most cost effective credit delivery system in India. The programme has also helped in providing banking services to the uncovered rural poor.

The Self Help Groups movement started picking up in Assam in the recent years. The programme has gathered momentum from the year 2001-02 onwards. Till the end of March 2015 all total 568225 SHGs have been bank linked in the State out of which 248802 SHGs were credit linked.

Cumulative position of bank linked SHGs presented in the Table –14.9.

TABLE – 14.9  
SELF-HELP GROUPS FINANCED BY BANKS

(Rupees in lakh)

| Year    | Total bank linked SHGs |           | Deposit linked |          | Credit Linked |           |
|---------|------------------------|-----------|----------------|----------|---------------|-----------|
|         | Number                 | Amount    | Number         | Amount   | Number        | Amount    |
| 2004-05 | 122304                 | 20975.75  | 79592          | 3409.05  | 42712         | 17566.70  |
| 2005-06 | 269917                 | 48239.13  | 175565         | 9846.77  | 94352         | 38392.36  |
| 2006-07 | 230902                 | 58040.52  | 121474         | 5261.61  | 109428        | 52778.91  |
| 2007-08 | 257863                 | 57417.70  | 142147         | 6044.72  | 115716        | 51372.98  |
| 2008-09 | 305132                 | 77365.49  | 166740         | 7485.51  | 138392        | 69879.98  |
| 2009-10 | 374745                 | 92724.79  | 210890         | 9123.46  | 163855        | 83601.33  |
| 2010-11 | 433954                 | 118051.17 | 240032         | 11195.29 | 193922        | 106855.88 |
| 2011-12 | 499183                 | 139741.00 | 272822         | 10928.00 | 226361        | 128813.00 |
| 2012-13 | 540566                 | 164138.86 | 281018         | 12228.9  | 259548        | 151909.96 |
| 2013-14 | 589268                 | 175686.05 | 319417         | 15092.27 | 269851        | 160593.78 |
| 2014-15 | 568225                 | 157395.13 | 319423         | 13487.17 | 248802        | 143907.76 |

Source: Reports of State Level Bankers Committee, Assam.

#### SHG-BANK LINKAGE UNDER SGSY

Swarnajayanti Gram Swarojgar Yojana is the mother programme of all poverty alleviation programmes. The objective of the programme is to uplift economic status of the rural people living below the poverty line by providing sustainable economic activities with bank loan and Government subsidy.

Up to the end of March 2015, about 2.49 lakh SHGs have been covered under the ambit of bank credit in the State out of which 1.23 lakh SHGs have been covered SGSY programme. Cumulative progress of SHG-Bank linkage programme under SGSY shown in the Table -14.10 below:

TABLE – 14.10  
SHG-BANK LINKAGE UNDER SGSY

(Rupees in lakh)

| Year    | Total Credit Linked SHGs |           | Credit linked SHGs under SGSY |           |
|---------|--------------------------|-----------|-------------------------------|-----------|
|         | Number                   | Amount    | Number                        | Amount    |
| 2004-05 | 42712                    | 17566.70  | 20388                         | 11273.74  |
| 2005-06 | 94352                    | 38392.36  | 48235                         | 25024.66  |
| 2006-07 | 109428                   | 52778.91  | 54735                         | 36549.70  |
| 2007-08 | 115716                   | 51372.98  | 54790                         | 31006.57  |
| 2008-09 | 138392                   | 69879.98  | 69144                         | 45898.88  |
| 2009-10 | 163855                   | 83601.33  | 84678                         | 55161.36  |
| 2010-11 | 193922                   | 106855.88 | 102166                        | 74784.79  |
| 2011-12 | 226361                   | 128813.00 | 123473                        | 94423.5   |
| 2012-13 | 259548                   | 151909.96 | 134107                        | 106687.46 |
| 2013-14 | 269851                   | 160593.78 | 139340                        | 105503.75 |
| 2014-15 | 248802                   | 143907.96 | 123055                        | 92746.31  |

Source: Reports of State Level Bankers Committee, Assam.



## NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT (NABARD)

During 2014-15, the NABARD disbursed refinance to banks in the State to the tune of Rs.245.85 crore compared to Rs.108.33 crore in 2013-14. During the year 2012-13 refinance disbursed by NABARD was Rs.122.82 crore. Agency wise, purpose wise and activity wise refinance disbursed by the NABARD are shown in the Table-14.11.

TABLE – 14.11  
AGENCY WISE, PURPOSE WISE AND ACTIVITY WISE  
REFINANCE DISBURSED BY NABARD

| Purpose  | 2013-14          |                 |                  | 2014-15          |                  |                  |
|--|------------------|-----------------|------------------|------------------|------------------|------------------|
|  | Commercial Banks | RRBs            | Total            | Commercial Banks | RRBs             | Total            |
| Minor Irrigation   | 92.569           | 0.770           | 93.339           | 0.000            | 15.510           | 15.510           |
| Land Development   | 2.493            | 0.000           | 2.493            | 0.000            | 0.000            | 0.000            |
| Farm Mechanization                                       | 421.150          | 167.100         | 588.250          | 0.000            | 1183.970         | 1183.970         |
| Plantation & Horticulture                                | 2124.115         | 40.340          | 2164.455         | 200.480          | 55.630           | 256.110          |
| Animal Husbandry (Dairy, Poultry, Sheep, Goat & Piggery) | 1140.734         | 918.738         | 2059.472         | 0.000            | 1898.160         | 1898.160         |
| Fisheries  | 41.715           | 40.922          | 82.637           | 0.000            | 132.830          | 132.830          |
| Market Yard & Godown                                     | 0.000            | 0.000           | 0.000            | 0.000            | 0.000            | 0.000            |
| Forestry   | 5.983            | 0.000           | 5.983            | 0.000            | 3082.710         | 3082.710         |
| RNFS (i/c Rural Housing)                                 | 0.000            | 0.000           | 0.000            | 0.000            | 104.730          | 104.730          |
| Agro processing  | 290.328          | 0.000           | 290.328          | 7366.319         | 0.000            | 7366.319         |
| SC/ST Action Plan  | 0.000            | 0.000           | 0.000            | 0.000            | 10518.450        | 10518.450        |
| Others (SHG, SRTO-Truck etc)                             | 5545.714         | 0.000           | 5545.714         | 0.000            | 26.460           | 26.460           |
| <b>Total</b>   | <b>9664.801</b>  | <b>1167.870</b> | <b>10832.671</b> | <b>7566.799</b>  | <b>17018.450</b> | <b>24585.249</b> |

Source: National Bank for Agriculture and Rural Development.

### INFRASTRUCTURE SUPPORT UNDER RURAL

#### INFRASTRUCTURE DEVELOPMENT FUND (RIDF)

To meet the major infrastructure gaps, the Government of Assam has taken initiative for development of infrastructure in rural areas with the financial assistance from NABARD under RIDF. As on 31 December 2015, NABARD has sanctioned 2901 projects involving RIDF loan of



Rs.3930.22 crore, since inception. Out of the total loan sanctioned Rs.3930.22 crore, Rs.2314.23 crore has been disbursed to the State Government as on 31 December 2015. As against 2901 projects sanctioned 1122 projects have been completed and remaining projects are under various stages of implementation.

The activity wise number of projects and amount sanctioned including amount released under RIDF are given below:

TABLE – 14.12  
ACTIVITY WISE PROJECT WISE INFRASTRUCTURE DEVELOPMENT LOANS  
SANCTIONED AND DISBURSED BY NABARD UNDER RIDF

(Rupees in crore)

| Activity  | No. of Projects | Loan sanctioned | Loan disbursed (Cumulative upto 31-12-2015) |
|---|-----------------|-----------------|---|
| Rural Bridges   | 1408            | 1503.24         | 1216.03                                     |
| Rural Roads   | 519             | 871.45          | 395.97                                      |
| Irrigation  | 198             | 377.50          | 205.42                                      |
| Flood Control   | 146             | 705.63          | 340.21                                      |
| Animal Husbandry & Vety. Projects and Modern Abattoir (MA & AH Project) | 201             | 150.74          | 45.16                                       |
| Small Hydel Project   | 2               | 46.14           | 46.14                                       |
| Marketing Infrastructure  | 14              | 90.86           | 21.97                                       |
| Beel Fisheries Projects   | 65              | 33.14           | 14.42                                       |
| Pay & use toilets   | 21              | 8.30            | 2.49  |
| Meat Processing   | 1               | 3.92            | 3.91  |
| Revitalisation of sericulture Farms                                     | 40              | 23.04           | 6.23  |
| Rural Godowns   | 251             | 49.46           | 8.02  |
| Cattle Feed Plant   | 1               | 4.73            | 1.00  |
| Soil Conservation   | 33              | 51.33           | 7.26  |
| Handloom Silk Dying   | 01              | 10.74           | 0.00  |
| Total   | 2901            | 3930.22         | 2314.23                                     |

Source: NABARD Regional Office, Guwahati.

### NORTH EASTERN DEVELOPMENT FINANCE CORPORATION LTD [NEDFI]

NEDFi, since its inception has been playing a crucial role in catalyzing the development of economy of the Northeast India. NEDFi has been instrumental for identifying, financing and nurturing eco-friendly and commercially viable industries, infrastructure and agro-horticultural projects in the region. NEDFi is also giving special emphasis to cover small enterprises and micro finance to the needy at the grassroots in the region.

During the year 2014-15, the Corporation sanctioned Rs.312.03 crore and disbursed Rs.387.20 crore in the Region. The sanction and disbursement in the State of Assam was Rs.150.70 crore and Rs.207.26 crore respectively.

#### MICRO FINANCE SCHEME

NEDFi's Micro Finance Scheme has proved to be an effective instrument for financial inclusion where credit is routed to SHGs/JLGs and individuals through established and good Non-Government Organizations (NGO)/Micro Finance Institutions (MFIs) to meet the needs of smaller entrepreneurs (preferably Self-Help Group or individual) of the region for taking up productive activities in the field of agriculture, micro industries and service sectors including transportation, etc. NEDFi has completed its sixteen years of intervention towards Micro Finance Service in the financial year 2014-15.

Till the end of March 2015, the Corporation has sanctioned Rs.404.92 crore and disbursed Rs.398.34 crore, through which NEDFi has been able to reach out to 5.00 lakhs beneficiaries in the NE Region.

TABLE – 14.13  
SUMMARY OF AMOUNT SANCTIONED AND AMOUNT DISBURSED  
UNDER MICRO FINANCE IN ASSAM (as on March, 2015)

(Amount Rupees in Lakh)

| Item              | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Amount Sanctioned | 243     | 93      | 150     | 501     | 1170    | 1344    | 1196    | 3031    | 4743    | 3691    | 5520    | 5570    |
| Amount Disbursed  | 204     | 140     | 140     | 499     | 515     | 1120    | 1490    | 3346    | 3908    | 3866    | 5570    | 5848    |

Source: Annual Reports of NEDFi various years.

### DISBURSEMENT OF CENTRAL SUBSIDIES

The Corporation is a nodal agency for disbursement of Central Subsidies under NEIP 1997 & NEIIP 2007, which is administered by the Department of Industrial Policy and Promotion, Ministry of Commerce, Govt. of India. The Corporation is thus facilitating disbursement of Central subsidies to various industrial units in the region. The details of disbursement under various schemes during the financial year 2014-15 may be evident from the table below.

TABLE – 14.14  
SCHEMewise DISBURSEMENT OF SUBSIDIES BY NEDFi

(Rs. in Crore)

| Scheme                                    | 2013-14 | 2014-15 | Cumulative as on 31-3-2015 |
|---|---------|---------|----------------------------|
| Central Transport Subsidy (CTS)           | 205.46  | 107.57  | 2561.41                    |
| Central Capital Investment Subsidy (CCIS) | 132.73  | 152.69  | 615.85                     |
| Central Interest Subsidy (CIS)            | 18.10   | 25.95   | 191.19                     |
| Central Comprehensive Insurance Subsidy   | 0.43    | 1.88    | 13.41                      |
| Total                                     | 356.72  | 288.09  | 3381.86                    |

### NEDFi'S PERFORMANCE IN ASSAM AND NER

The slowdown in the national economy coupled with slowdown in the investment cycle, high inflation and volatile currency and interest rates the economy of the NE States got affected and therefore there was hardly any investment in the region. Against this unfavourable situation loans sanctioned by NEDFi for the entire NE region was declined by 32 percent and that for Assam was declined by 40 percent during 2014-15 compared to the previous year. While loan disbursed by NEDFi for the entire NE region was increased by 6.17 percent and that for Assam was increased by 12 percent during 2014-15 compared to the previous year. Loan sanctioned and disbursed by the NEDFi to the North-Eastern States including Assam may be evident from the Table-14.15.

TABLE – 14.15  
YEAR-WISE LOAN SANCTIONS AND DISBURSEMENTS BY NEDFi  
(As on March 2015)

(Rupees in lakh)

| Year    | Sanctions |       | Disbursements |       |
|---------|-----------|-------|---------------|-------|
|         | Total NER | Assam | Total NER     | Assam |
| 2005-06 | 13132     | 7053  | 10431         | 5342  |
| 2006-07 | 13872     | 8545  | 9424          | 6680  |
| 2007-08 | 27945     | 16588 | 11643         | 8872  |
| 2008-09 | 26689     | 21351 | 18409         | 13071 |
| 2009-10 | 33341     | 22370 | 20808         | 13512 |
| 2010-11 | 42138     | 33135 | 28138         | 19963 |
| 2011-12 | 43223     | 26544 | 33456         | 23854 |
| 2012-13 | 45349     | 26047 | 34873         | 20842 |
| 2013-14 | 45751     | 25684 | 36469         | 18488 |
| 2014-15 | 31203     | 15070 | 38720         | 20726 |

Source: NEDFi

TABLE – 14.16

## YEAR-WISE NUMBER OF PROJECTS SANCTIONED (AS ON MARCH 2015)

| States | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Assam  | 110     | 98      | 66      | 73      | 72      | 72      | 95      | 145     | 109     | 69      |
| NER    | 285     | 300     | 169     | 173     | 211     | 198     | 253     | 535     | 543     | 428     |

Source: NEDFI

**ASSAM FINANCIAL CORPORATION**

The Assam Financial Corporation is considered to be the torch bearer of the industrial development of the region. The Corporation has been striving to boost up its performance and persistently working for it. On the sanction and disbursement front, in spite of various constraints, the Corporation is continuing its lending operations. At present the Corporation has 2 numbers of DGM level branches, 4 numbers of Senior Manager level branches, 5 numbers of Assistant Manager level branches, 2 numbers Field Offices and one Satellite Office to provide need based customer service. It is worth mentioning that the Corporation obtained Quality Management Certificate confirming to the ISO 9001:2008 standards in service and delivery and has become an ISO certified organization w.e.f 10<sup>th</sup> April 2012 for a period of 3 years.

In spite of sluggish economic environment the Corporation has been able to sustain its revival by registering a net profit of Rs.2.31 lakhs for 9<sup>th</sup> consecutive year. During the financial year 2014-15, total loan sanctioned amounted to Rs.1273.36 lakhs and total disbursement amounted to Rs.1618.58 lakhs compared to Rs.1829.39 lakhs and Rs.1798.39 lakhs respectively in the financial year 2013-14.

The total recovery of loan declined marginally to Rs.1514.89 lakhs from Rs.1563.54 lakhs in the previous year. Increase in the standard loan portfolio and continuous effort put by the AFC on recovery from NPA loans during 2014-15 have resulted in maintaining Gross NPA at 35.69 percent as on 31-03-2015 compared to 34.57 percent as on 31.03.2014. But net NPA has increased to 16.56 percent as on 31-03-2015 compared to 9.08 percent as on 31.03.2014 due to slippage of assets.

The revenue earned from non-fund based activities has not been very encouraging during the financial year 2014-15 as the Corporation could earn an amount of Rs. 3.61 lakhs only against Rs.3.05 lakhs earned in the previous year.

The Net-Worth of the Corporation has been declined to Rs. 3081.54 lakhs as on 31-03-2015 compared to Rs. 3370.47 lakh as on 31.03.2014 due to increase in accumulated loss..

The corporation continued to support Micro finance Institutions under Chief Minister's Micro Finance Scheme (CMMF) during the year 2014-15 also. The amount of loan sanctioned and disbursed during the financial year 2014-15 stands at Rs. 227.76 lakhs and Rs.282.76 lakhs in comparison to Rs.55.00 lakhs and Rs. 25.00 in the previous year. As against the micro finance fund of Rs.1000.00 lakh provided by the Govt. of Assam, the cumulative sanction and disbursements stands at Rs.2083.76 lakhs and Rs.1463.76 lakhs respectively at the end of 31-3-2015. However, micro finance lending of the Corporation has substantially declined during the last three financial years due to imposition of restriction on NGO-MFI from carrying out micro finance activities.

The name of the 'Venture Capital Fund' of the Corporation which was launched to encourage the new and first generation entrepreneurs with innovative activities has been changed to "AXOM FUND" during the year 2013-14. During the year 2014-15, the Corporation could not sanction & disburse any loan under the scheme while in the year 2013-14 it disbursed Rs. 50.00 lakh to one unit. The Corporation has earmarked sanction and disbursement target of Rs.100.00 lakh and Rs.100.00 lakhs respectively for the financial year 2015-16.

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## CHAPTER – XV

## CO-OPERATION

The main task of the Co-operation Sector is to facilitate the formation and working of Co-operative Societies in the State for the purpose of promoting self-help and mutual aid among agriculturalists, artisans and other persons with common economic needs so as to bring about a higher standard of living, better business, better method of production and equitable distribution. The Co-operative institutions have advantage in tackling the problems of poverty alleviation, food security and employment generation and considered as a potential instrument for delivery of goods and services. This delivery mechanism of goods and services to the people through cooperative window is considered to be the best as it associates with the target group in its process implementation.

Since the Assam economy is predominantly rural in character, an extensive network of sound and viable co-operatives can help tremendously in giving right shape to the socio-economic structure of Rural Assam in particular and for achieving the much needed overall economic growth and social transformation of the State. But, the co-operative sector failed to achieve its desired objective due to existence of good number of uneconomic and dormant cooperatives. Therefore, to strengthen the role of existing Cooperative Societies towards socio-economic development as well as their impact on poverty reduction, employment generation and social integration the Assam Cooperative Act, 2007 has been enacted to give renewed fillip to the effort of the State Government to promote voluntary formation, autonomous functioning, democratic control and professionalism to the cooperative societies.

However, setting up of the Assam Rajiv Gandhi University of Cooperative Management under academic guidance of Indian Institute of Management, Ahmadabad under the State Government initiative brings some hope to the Cooperative sector to achieve professionalism and quality performance of various societies in the State as envisaged.

The Cooperation Department of Assam has given special thrust in certain areas at present for revival of the cooperative structure in the State so as to attain the objective of upliftment of the economic conditions of the poor people of the society by providing low cost credit to the farmers and employment generation programmes. The Government of Assam proposed to strengthen the cooperative societies by giving logistic support in terms of better regulation, better facilitation and by closing the sick cooperatives and nurturing the good and economically viable cooperatives.

TABLE – 15.1

## STATISTICS OF CO-OPERATIVE SOCIETIES IN ASSAM

| Year    | Number of Societies | Membership (in '000 nos) | Share Capital (Rs. in Crore) | Working Capital (Rs. in Crore) |
|---------|---------------------|--------------------------|------------------------------|--------------------------------|
| 2005-06 | 10134               | 4499                     | 106.84                       | 1393.30                        |
| 2006-07 | 10028               | 4473                     | 120.90                       | 1390.96                        |
| 2007-08 | 10150               | 4482                     | 123.91                       | 1394.54                        |
| 2009-10 | 7696                | 4608                     | 112.56                       | 2186.37                        |
| 2010-11 | 7906                | 4612                     | 107.36                       | 2724.29                        |
| 2011-12 | 8006                | 4600                     | 98.35                        | 2806.09                        |
| 2012-13 | 8422                | 4592                     | 102.07                       | 2812.66                        |
| 2013-14 | 8835                | 4513                     | 103.23                       | 3171.31                        |

Source: Registrar Co-operative Societies, Assam.

At present there are 8835 nos. of different types of Cooperative Societies in the State including State Level Cooperative societies such as ASCARD Bank, APEX Bank, APOL, HOUSEFED, and FISHFED. Various types of Primary Cooperative Societies like Gaon Panchayat level Cooperatives (GPSS), women Cooperatives, Housing Cooperatives, Fishery & Pisciculture cooperatives, Farming Cooperatives, Consumer Cooperatives, Tourism Cooperatives, handloom Cooperatives, Dairy Cooperatives etc are also organized for specific purposes and performing various economic activities.

## TWELFTH FIVE YEAR PLAN: THRUST AREAS

The aim of the 12<sup>TH</sup> Five Year Plan is inclusive growth having Agriculture & allied activities, Education, Health Care, Social Welfare and development of Rural Infrastructure as an thrust area with an object to employment generation and improve quality of life especially of the downtrodden strata of the society, the Department has given emphasis to attain the goal through special focus on the thrust areas like –

- 1) Micro Finance-Financial inclusion;
- 2) Implementation of ICDP under Central Sector Scheme;
- 3) Revamping of GPSS and Women Multipurpose Cooperative Societies;
- 4) Organization of a State Level Consumer Marketing Federation;
- 5) Diversification of new areas and activities like Health Care, Education, Cold Storage, Food Processing;
- 6) Dairy and Fishery;
- 7) Rehabilitation of potentially viable weak cooperatives;
- 8) Administrative reforms etc.

## MICRO FINANCE

It is proposed to provide soft loan to the needy poor in cooperative fold by linking SHG-Cooperative credit Institutions during the 12<sup>TH</sup> Five Year Plan Period under National Rural Livelihood Mission(NRLM) with a view to facilitate a platform to reach the poor people into formal banking system for their financial need. It will generate employment, women employment and will contribute towards State GDP in a modest way.

## INTEGRATED COOPERATIVE DEVELOPMENT PROJECT (ICDP)

Integrated Cooperative Development Project (ICDP) stands for creation of Rural Infrastructure, employment generation, enhancement of farm production that is the thrust areas of 12<sup>th</sup> Five Year Plan. It is proposed to cover all the 27 Districts of Assam during the 12<sup>th</sup> Five Year Plan.

## REVAMPI NG OF PACS

In Assam Gaon Panchayat Samabai Samiti (GPSS) in plains and Large Area Multipurpose Cooperative Society (LAMPS) in the two Hill Districts are commonly known as primary Agricultural Credit Society (PACS).The Primary Agricultural Credit Societies (PACS) are the backbone of the Co-operative movement to address socio-economic issues of farmer vis-a-vis vehicle for development of Rural India. PACS are mainly operating in the village areas. There are 1484 nos. Of new GPSS have in the state that deals in agricultural produces distribution of essential commodities. The main objective of these cooperatives are - 1) Production, 2) Procurement and 3) Distribution of essential commodities. The process of creating of new PACS cop-terminus with the existing Gaon Panchayat of the state is likely to be completed within 2016 by providing them adequate supply of infrastructure development during the 12<sup>th</sup> Five Year Plan period.

## WOMEN COOPERATIVE SOCIETIES

There are more than 2700 women Co-operative Societies including 2486 number of Goan Panchayat level Multipurpose Women Cooperatives in Assam with membership exclusively confined to women. These societies are organised with the objectives of improving the socio-economic status of women by harnessing their talent and individual skill for achieving higher standard of living, but due to financial constrains, these societies could not render services to the members providing facilities and gainful employment. Considering such aspects Govt. has been providing financial assistance to the women cooperatives societies in a phased manner.

The State Govt. has proposed to provide financial assistance of Rs. 47.00 lakh under general area to 47 such societies and Rs.37.00 lakh under TSP to 37 women cooperatives during the 2015-16.

## ORGANIZATION OF A STATE LEVEL CONSUMER MARKETING FEDERATION

The Assam State Cooperative Federation (ASCOF) has been organised in the month of November, 2011 with all PACS, Wholesale Consumer Cooperatives, Marketing and Processing Cooperatives as its members. At the initial stage this federation has been taken members drive for marketing of paddy under paddy procurement scheme on behalf of FCI, setting up of consumers goods distribution in the model of 'Amar Dokan'(Our Own Shop).

## DIVERSIFICATION OF NEW AREAS

Since from the beginning of organised Cooperative Society in the State back in 1904 starting with agricultural credit business, passing, through the centenary and more back from the day, the cooperative covered cooperative banking, consumer business, industry, fertilizer, farming, plantation marketing, dairy, piggery, fishery and in so many fields of economy of the people. Its journey to enter into the new fields of economy is going on. Now it is entering into the field of health care, education, Eco-tourism, cold storage etc. Nursing homes in Barpeta and Goalpara town as cooperative society which achieved a tremendous success may be an example of cooperative entering into the health sector.

New cooperative are being registered in Guwahati and in all the Districts. Govt. has come forward to assist financial help for setting up rural goddowns and cold storage to the willing cooperative with the help of NABARD.

## ANIMAL HUSBANDRY

It is proposed to set up District Dairy Federation in the district where viable and also a State level Dairy Federation exists. The objective of setting up of dairy federation in the district federations is to create awareness and for propaganda of white revolution. Poultry and Piggery cooperatives, which are both directly and indirectly involved employment generation, are proposed to be covered under financial support during the 12<sup>TH</sup> Five Year Plan.

## REHABILITATION OF POTENTIALLY VIABLE WEAK COOPERATIVES:

So many weak Cooperatives like STATEFED, Nagaon Sugar Mills etc. were liquidated. On the other hand Government has taken initiative for rehabilitation of potentially viable weak Cooperatives. The Assam Polyester Cooperative Society Ltd. (APOL) has restarted functioning. Government has cleared its bank loan liabilities.

## ADMINISTRATIVE REFORMS

Cooperatives should be free from the Government control or in other ward Cooperatives are given more democracy by making law in the light of Vaidanathan Committee's recommendation. The Assam Cooperative Societies Act, 2007 is amended in the year 2013 in priority with the 97<sup>th</sup> Constitutional amendment. Participation of Women in the management is ensured. Provision is made for inclusion made for inclusion of professionals in the management of the Cooperatives.

## REVIIVAL OF VARIOUS CO-OPRATIVE SOCIETIES

The Co-Operation Department has taken various schematic programmes for revival of various sick Co-Operatives in the State.

## PROCESSING CO-OPERATIVES

A large number of processing units have been set up in the State under Co-operative Sector comprising of Rice and Oil Mill, Mustard Oil Mill, Spinning Mill, Jute Mill etc. These Cooperatives are helping local producers in procuring their raw materials and get profitable markets for their finished products. The Assam Polyester Cooperative Society Ltd. (APOL), one of such kind of cooperative societies as well as a downstream spinning industry, is one of the prestigious organizations under the Cooperative sector in the State. This organization remained non-functional for some time due to financial constraints. The State Government has decided to provide financial assistance to revive the organization.

## CREDIT COOPERATIVES

With a view to providing credit to local entrepreneur for undertaking various types of business activities, credits cooperative are being formed. These credits are being carried out through three



types of cooperative banks viz., 1) APEX, 2) ASCARD 3) Urban Cooperative Bank and thus providing employment to unemployed youth. The State Government has already taken several steps to implement the scheme for revival package of Short Term Cooperative Credit Structure (STCCS) through Apex Bank and long term Cooperative credit structure (LTCCS) through ASCARD Bank.

#### CONSUMER CO-OPERATIVE

There are 36 urban wholesale consumer stores with 474 affiliated primary consumer stores and 640 Tea Garden consumer stores in the State. These Co-Operative Societies extended yeoman service to the urban population and in maintaining price line.

#### HOUSING CO-OPERATIVE

There are 223 numbers of primary Housing Co-Operatives with one Apex Level Society, HOUSEFED, Assam is rendering service to its members. This Federation has provided housing facilities to the Govt. departments and loan for dwelling houses to the low and middle income people in the urban and rural areas, that has been able to achieve a noticeable performance during the last couple of years.

#### REVIVAL OF DAIRY COOPERATIVES

There are three Regional Level Milk Co-operative Unions viz.- The West Assam Milk Production Cooperative Union Ltd (WANMUL), The East Assam Milk Production Cooperative Union Ltd. (EAMUL) and The Central Assam Milk Production Cooperative Union (CAMUL) and more than 504 Primary Dairy Cooperatives in the state and out of these CAMUL is in a defunct stage. After handing over the management of WAMUL to NDDDB, WAMUL sells its products under the brand Purabi, which has become a household name and has made good progress in recent years after going through a hard phase since its inception. The Government of Assam has received Additional Financing (AF) from the World Bank for implementation of the AACP(Assam Agricultural Competitiveness Project). As per Credit agreement between Government of Assam and the World Bank, World Bank has already provided Rs.11.82 crore to WAMUL for dairy development during the year, 2014-15.

Similarly, special attention has been given with a view to revive EAMUL and CAMUL in the interest of Milk producer members in particular and Cooperative Movement in general, a triparties agreement is made between the Government of Assam, the National Dairy Development Board (NDDDB) and the EAMUL, CAMUL. The process of handing over the management of the aforesaid/ Cooperatives is in progress. It has been proposed to provide Rs.10.00 lakh as financial assistance to 10 nos. of Primary Dairy Cooperatives to assist in enhancing their working Capital and increase business.

#### FISHERY SECTOR

There are more than 450 nos. Primary Fishery Cooperatives with one Apex Level Federation (FISHFED) functioning in the State. The Society is organised to help the poor fisherman community who are economically backward scheduled caste people for their socio-economic development. Scheduled caste and backward communities are direct beneficiaries of fishery sector. Most of the people of these communities are fisherman by profession and fishery is taking place as most remunerative commercial venture for all unemployed irrespective of Caste and creed. The Apex body, FISHFED has been given responsibility to take up steps for coordinated development of primary fishery cooperative Societies including production, marketing, processing of fish and provide technical guidance etc. For this purpose, the State Govt. has been provided financial assistance to fishery cooperatives for the last three years.

Government has given importance in formation of dairy and fishery cooperatives. Now a fishery cooperative can be registered in the Directorate of Fisheries and a dairy cooperative can be registered in the Directorate of Dairy Development in addition to the Registrar of Cooperatives.

#### OTHER COOPERATIVES

In addition to the above mentioned Co-operative Societies, there is large number of functional Co-operative like Poultry, Piggery, Duckery, Pisci-culture, Cane and Bamboo Industries, Brick Industries, Transport and Communication, Rickshaw puller, Bee-keeping, Blacksmith, Carpentry etc., and these are mostly confined to economically weaker section of the Society in the State. The

financial assistance to these societies will go a long way in enabling economically weaker section of the society to achieve their economic upliftment. The State Govt. has proposed to provide financial assistance to these cooperative societies including Small Tea Growers Coop., Tourism Coop. and Health Coop. under new proposed scheme to be implemented by the Department. The State Government has decided to provide an amount of Rs.23.00 lakh to 23 such Societies as financial assistance during the year 2015-16.

## PERFORMANCE OF STATE LEVEL COOPERATIVE SOCIETIES

The performance of some of the State Level Credit and Non-Credit Co-Operative institutions is elaborated below :

### ASSAM STATE CO-OPERATIVE APEX BANK LIMITED

The Assam State Co-operative Apex Bank Limited is a pioneer Co-operative institution in channelizing credit for agricultural operation to boost up the development process of the rural economy as well as financing other urban business and industrial activities through co-operative channel in the State. The bank, registered in the year 1948, has 68 branches in the State at present.

Generally, this Cooperative Bank lend agricultural loans to the farmers through Primary Agricultural Credit Societies (PACS). During the decades of seventies and eighties the Apex Bank played an extensive role in the rural Credit lending through the GPSS/LAMPS. But, from the nineteen due to gradually increasing overdue burden the bank was compelled to control rural credit lending through the GPSS/LAMPS. During this period the Apex Bank was running in loss. To revive the Short Term Cooperative Credit Structure (STCCS), the Assam Government accepted revival package as recommended by Prof. A Vaidyanathan. Accordingly, a Tripartite MOU was signed between Govt of Assam, Government of India and NABARD. The state Government has already release its 10 percent share amounting to Rs.19.96 crore of total projected amount of Rs. 196.00 crore under revival package. The Govt. of India has released Rs.43.62 crore against 480 PACS out of total 681 selected PACS under revival package under, during the year 2012-13, the bank has lent agricultural credit upto Rs.2236.33 lakh. During the year 2012-13 the bank has wipe out previous accumulated losses and marked a net profit of Rs. 1985 crore. Lent

As per available information, the membership of the bank has increased from 76 thousand in 2009-10 to 94 thousand in 2014-15. The share Capital has increased to Rs.10.84 lakh in 2014-15 from Rs.7.80 crore in 2009-10. The working Capital is also increased to Rs.2079.81 crore from Rs.1225.06 crore in 2009-10. The performance of the Assam state Cooperative Apex Bank during the last six years may be evident from the table below.

TABLE – 15.2

#### THE PERFORMANCE OF ASSAM STATE CO-OPERATIVE APEX BANK LTD.

| Particulars           | Unit      | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|-----------------------|-----------|---------|---------|---------|---------|---------|---------|
| Bank Branches         | No        | 68      | 68      | 67      | 67      | 68      | 67      |
| Members               | 000 No    | 76      | 78      | 82      | 91      | 93      | 94      |
| Paid up Share Capital | Rs. crore | 7.80    | 8.13    | 8.84    | 9.13    | 9.74    | 10.84   |
| Reserve               | -do-      | 23.82   | 96.84   | 22.15   | 33.69   | 30.08   | 43.03   |
| Deposits              | -do-      | 118.88  | 1544.51 | 1559.47 | 1500.63 | 1950.92 | 1888.50 |
| Working Capital       | -do-      | 1225.06 | 1775.03 | 1777.40 | 1687.60 | 2032.21 | 2079.81 |
| Borrowing Outstanding | -do-      | Nil     | Nil     | 7.0     | 6.45    | 7.37    | 4.87    |
| Investments           | -do-      | 781.12  | 1144.95 | 1019.56 | 987.10  | 1268.28 | 102.86  |
| Loans Advances        | -do-      | 150.23  | 215.50  | 419.58  | 125.29  | 358.77  | 287.95  |
| Loan Outstanding      | -do-      | 322.82  | 313.44  | 504.84  | 483.71  | 686.36  | 787.33  |
| Loan Overdue          | -do-      | 101.22  | 99.83   | 98.98   | 98.38   | 135.31  | 88.06   |

NB. Total may not be equal due to rounding off.

Source: Registrar of Cooperative Societies, Assam.



**ASSAM COOPERATIVE AGRICULTURAL AND RURAL DEVELOPMENT BANK LTD. (ASCARD)**

The Assam Cooperative Agricultural and Rural Development Bank (ASCARD), which was formerly known as Assam Coop. Central Land Mortgage Bank Ltd was established in the year 1955. The functioning of the bank was hampered due to ill financial health for several years. The Govt. of Assam has decided to revive the bank by correcting all deficiencies and to implement the revival package rules formulated by the Govt. of India for revival of the Long Term Rural Cooperative Credit Structure based on Report of the Task force headed by Prof. A. Vaidyanathan. The State Government has also planned to work out strategy and roadmap for revival of the Long Term Cooperative credit Structure which will further help in revival of the ASCARD Bank Ltd.

As on 31<sup>st</sup> March 2015, the bank has 28 branches throughout Assam with more than 46 thousand members. The paid up share capital of the bank has decreased to Rs. 636.00 lakh in 2014-15 from Rs. 647.67 lakh in 2009-10. The working capital decreased from Rs. 4993.18 lakh in 2009-10 to Rs. 1307.00 lakh in 2013-14.

The deposit has also increased to Rs. 95.00 lakh in 2014-15 from Rs. 37.81 lakh in 2009-10. However, the amount of loans and advance of the bank has been increased to Rs.18.57 lakh during the year 2012-13 of the drastic fall of issued loans to the level as low as Rs.4.33 lakh in the year 2011-12. During the year 2013-14, the Bank has issued loan upto Rs.82.00 lakh which is about 342 percent higher than previous year's issues again issue of loan fall down to Rs. 36 lakh during the year 2014-15. The loan outstanding with the bank recorded continuous fall from Rs. 965.42 lakh in 2009-10 to Rs. 846.00 lakh in 2014-15.

The data containing important indicators of bank performance are presented in the Table below.

TABLE – 15.3  
PERFORMANCE OF A.S.C.A.R.D BANK

| Particulars           | Unit     | 2009- 10 | 2010-11 | 2011-12 | 2012- 13 | 2013-14 | 2014-15(P) |
|-----------------------|----------|----------|---------|---------|----------|---------|------------|
| Bank branches         | No       | 28       | 28      | 28      | 28       | 28      | 28         |
| Membership            | No       | 37372    | 30056   | 39106   | 44332    | 45886   | 46771      |
| Paid up Share Capital | Rs. Lakh | 641.67   | 636.95  | 633.75  | 633.50   | 636.00  | 636.00     |
| Working Capital       | -do-     | 4993.18  | 1702.32 | 1641.63 | 1322.83  | 1307.00 | 5078.00    |
| Deposits              | -do-     | 37.81    | 30.35   | 20.53   | 18.70    | 73.00   | 95.00      |
| Loans and Advances    | -do-     | 7.65     | 5.68    | 4.33    | 18.57    | 82.00   | 36.00      |
| Loan Outstanding      | -do-     | 965.42   | 922.16  | 877.51  | 842.12   | 865.00  | 846.00     |

Source: Registrar of Cooperative Societies, Assam.

**URBAN COOPERATIVE BANKS**

The State has a presence of 8 numbers of functioning Urban Cooperative Banks (UCBs) with 25 branches. Till recent past, multiplicity of command, absence of clear-cut demarcation between the functions of State Government and RBI, led to operational difficulties in implementing regulatory and supervisory measures pertaining to UCBs. To sort out the difficulty, an Memorandum of Understanding (MOU) between RBI and Government of Assam was signed in connection with regulatory control of RBI over UCBs during the year 2008 so that functioning of such banks can be improved and confidence of depositors can be restored.

As per available report, total membership of the functioning UCBs are more than 30 thousand in 2014-15 as against 29 thousand in 2012-13. The paid up share capital of UCBs has been increased to Rs. 7.26 crore in 2014-15 from Rs. 6.89 crore in 2013-14. The working capital of the banks on the other hand increased to Rs. 687.97 crore in 2014-15 from Rs. 348.24 crore in 2009-10.

The loans and advances issued by banks has decreased to Rs. 217.71 crore in 2014-15 from Rs. 233.94 crore during the previous year. During the year 2014-15, loan overdue remain higher with Rs. 21 crore compared to the previous year.

TABLE – 15.4  
STATISTICS RELATED TO PERFORMANCE OF URBAN COOPERATIVE BANKS

| Particulars      | Unit         | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|------------------|--------------|---------|---------|---------|---------|---------|---------|
| Bank Branches    | No           | 16      | 22      | 23      | 23      | 24      | 25      |
| Membership       | '000' No     | 15      | 28      | 29      | 29      | 31      | 30      |
| Paid up Capital  | Rs. in crore | 5.06    | 4.89    | 5.65    | 6.53    | 6.89    | 7.36    |
| Working Capital  | -do-         | 348.24  | 513.98  | 574.16  | 595.15  | 616.0   | 687.97  |
| Deposits         | -do-         | 315.04  | 446.31  | 492.28  | 522.49  | 602.92  | 604.89  |
| Loans/Advances   | -do-         | 275.24  | 393.85  | 307.38  | 199.59  | 233.04  | 217.71  |
| Loan Outstanding | -do-         | 163.27  | 179.85  | 223.98  | 239.45  | 239.10  | 236.24  |
| Loan Overdue     | -do-         | 45.83   | 10.43   | 16.80   | 13.89   | 18.07   | 21.00   |

NB. Total may not be equal due to rounding off.

Source: Registrar of Cooperative Societies, Assam.

#### EASTERN AGRO PROCESSING AND TEA WAREHOUSING CO-OPERATIVE SOCIETY LTD.

Eastern Agro Processing & Tea Warehousing Co-operative Society Ltd. was registered on 10<sup>TH</sup> of June 1971. The sole purpose of this co-operative organization was of helping in establishing the Tea Auction Center at Guwahati when the required infrastructure was not available, later on it diversify business activities like Tea Warehousing, Warehouse Rental, Weigh Bridge, Mustard Oil Packaging Unit and Ground Spices Packaging Unit Society, has grown manifold in the last 36 years and has emerged as a well managed co-operative society. The mustard Oil Packaging Unit was installed in the year 1995 with the idea of providing unadulterated mustard oil to the consumers at the most reasonable price.

The society was organized with 14 members as promoter during 1970-71 and 4 shareholders were enrolled during the 1<sup>ST</sup> year and the Share Capital contribution was only Rs 8,000/-. The society is managed strictly in accordance with the Byelaws of the society prepared under the Assam Co-operative Societies Act and Rules.

The society is rendering services to the Guwahati Tea auction Center by storing teas meant for sale in the said centre. The society has been classified as "A" Class society since 1983 considering its activities, accounts etc. The management of the society has been trying to spread the co-operative education and it keeps a separate fund for Co-operative Development while distributing its profit.

Hard work, earnestness, honesty, sincerity in service with devotion and also team work can achieve, the Eastern Agro Processing & Tea Warehousing Co-operative Society Ltd. is a unique example in the Co-operative sector of Assam.

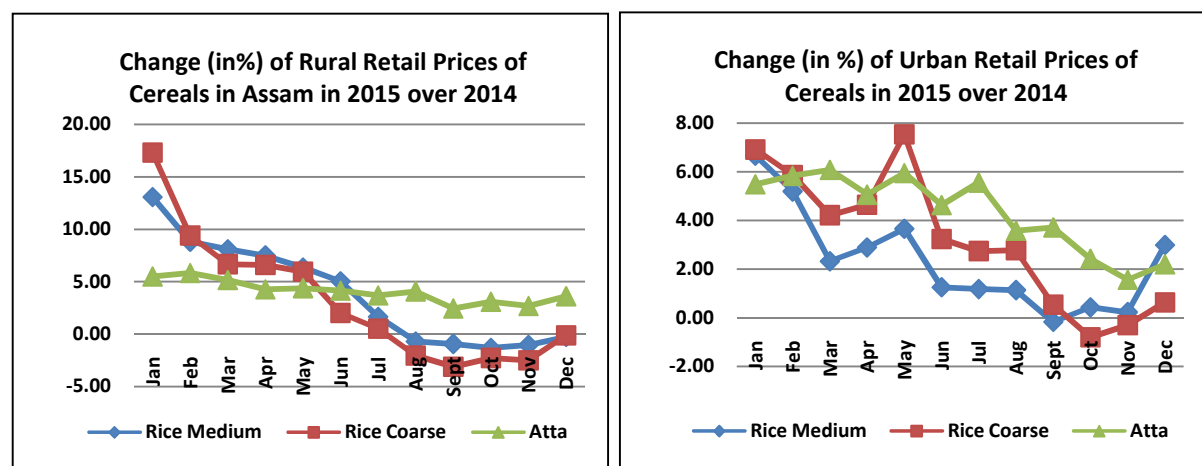
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## CHAPTER – XVI

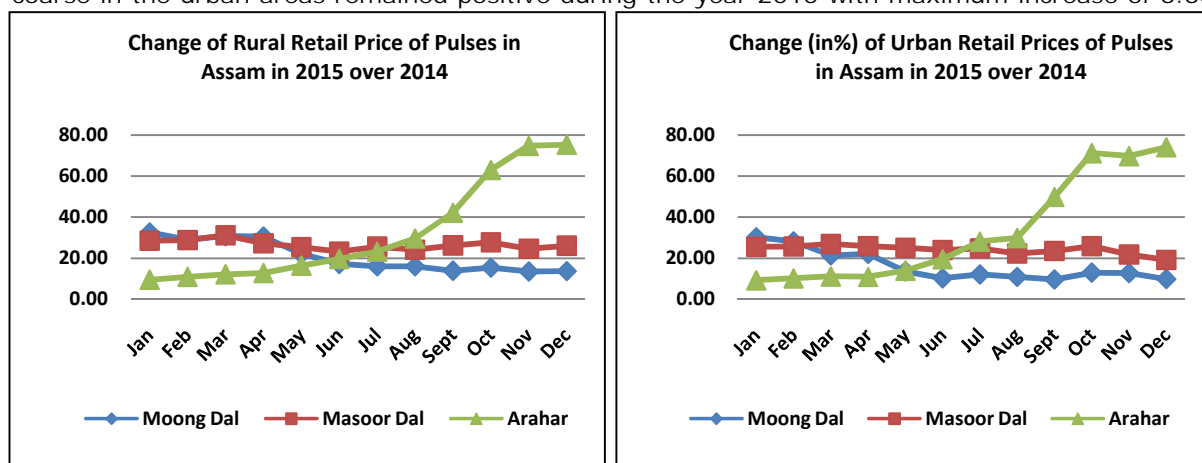
## PRICES AND PUBLIC DISTRIBUTION SYSTEM

The economic activities as well as the purchasing power of the people of a country are greatly influenced by the changes in commodity prices. Rising prices leads to increase in income inequality and also affects the fixed income groups of a country. It is crucial to have a continuous watch on the price behavior to regulate economic policies. The State of Assam in particular and the Country as a whole is experiencing price rise in varying degree in the last few years. The country is going through high inflation, at times hovering around the double digit forcing the Government to take various controlling measures. Inflation is measured by taking into account of the Wholesale Price Index (WPI) based on the prices in wholesale markets and the Consumer Price Index (CPI) based on the prices the consumer purchases from the retail trade market.

## PRICE SITUATION IN ASSAM



The above figure shows that the average retail prices of rice both medium and coarse in rural areas of the State after a high increase during the month of January, the prices gradually decreased though remained on the positive side upto July 2015. During the last five months of 2015, the prices of rice shows a decreased compared to prices of the same period during 2014. Prices of Atta in rural areas remained below 6 percent during the year 2015 over the corresponding months of 2014. The increase in average retail prices of rice both medium and coarse in the urban areas remained positive during the year 2015 with maximum increase of 6.65



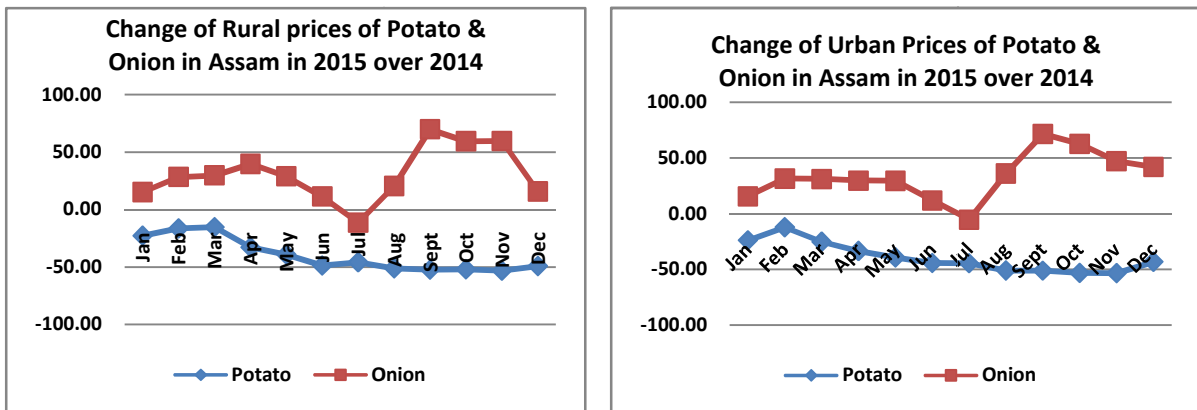
percent of Rice Medium price during January and maximum increase of 7.53 percent and 6.91 percent during May and January of Rice Coarse prices respectively except during the month of September for Rice Medium (-0.17%) and October (-0.80%) and November (-0.31%) for Rice Coarse over the prices of the corresponding month of 2014. Prices of Atta increased between 5 percent and 6 percent during the first seven months of 2015 and the increase in prices remained between 1 percent and 4 percent during the next five months of 2015 over the corresponding months of 2014.

The figure on change of prices of pulses shows that the average retail price of moong in rural areas of the State is on an increasing trend between 13 percent and 33 percent during the period January to December 2015 over the corresponding period of 2014. The increase in average retail price of masoor fluctuated between 23 percent and 31 percent in the rural areas of the State and in urban areas the increase of prices was between 19 percent and 27 percent during the year 2015 over 2014. A very high increase of prices of Arahar was noticed during the year 2015. Prices of Arahar increased by 9 percent during January and went on an increasing trend reaching a very high of 75 percent increase in the month of December, 2015. The average retail prices of arahar fluctuated between 4 percent and 6 percent during 2014 over the corresponding months of 2013.

The average retail prices of pulses in the urban areas of the State were on an increasing trend during 2015. Price of moong started with an increase of 30 percent in January 2015 and thereafter remained between 9 percent and 28 percent during the subsequent months ending with an increase of 10 percent during December 2015 over the corresponding period of 2014.

During the year 2015 prices of masoor dal in urban areas showed an increasing trend between 19 percent and 26 percent over the prices of corresponding months of 2014. The graph depicts an increase of 26 percent in January and ending with 19 percent in December. The maximum price rise of Masoor is 27 percent during the month of March, 2015. The price of Arahar started with an increase of 9 percent in January reaching its highest during the month of December of 2015 over 2014.

The graph below shows the percentage change of average retail prices of potato and onion in rural and urban areas of the State during 2015 over 2014.

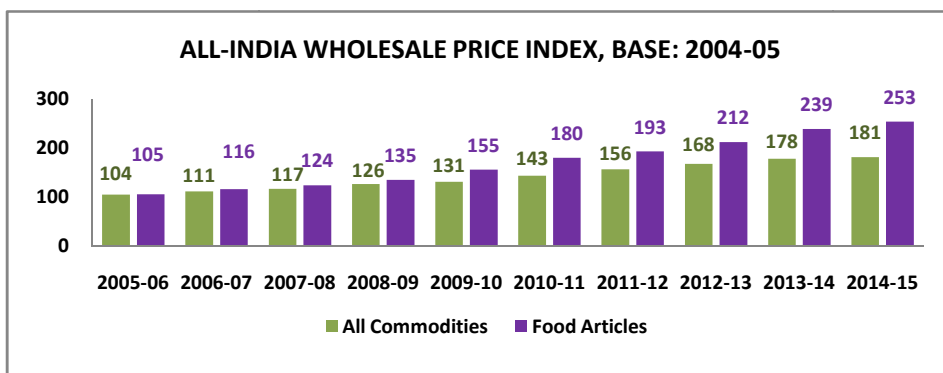


Source: Directorate of Economics and Statistics, Assam.

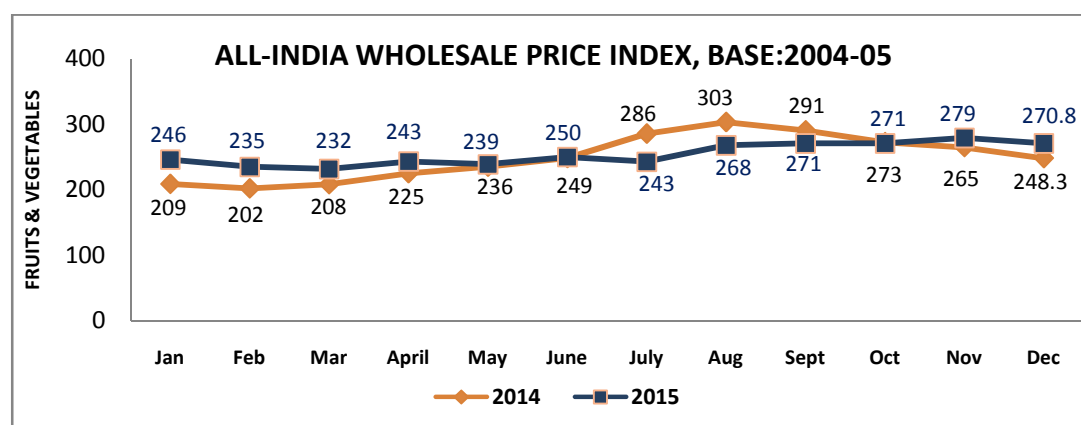
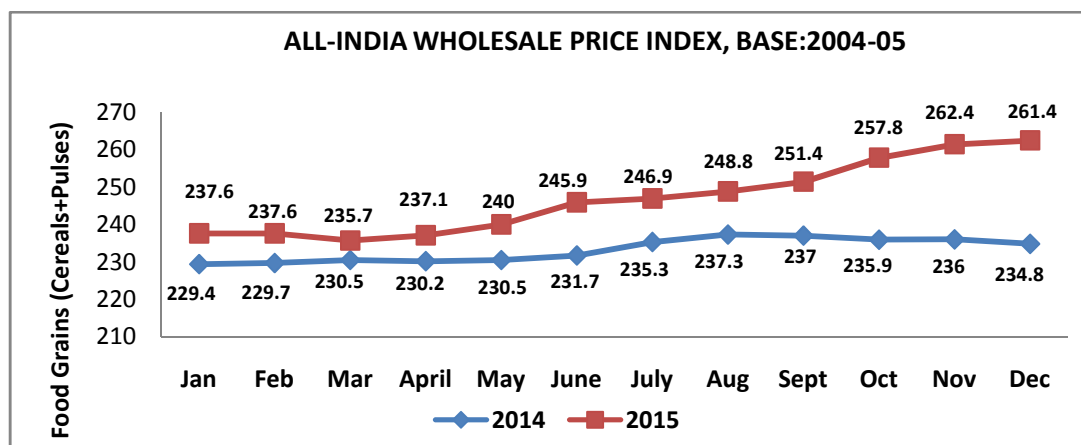
The above figure shows that the increase in prices of onion remained positive throughout the year except during the month of July which showed a decrease of prices by 11 percent in rural areas and 5 percent in urban areas. The price of potato depicts a decreasing trend throughout the year 2015 over the prices of 2014.

**WHOLESALE PRICE INDEX (WPI)**

The All India WPI for all commodities (Base: 2004-05) during 2014-15 was 181.2, showing an increase of 2.0 percent over 177.64 in 2013-14 against an increase of 5.98 percent in 2013-14 over 2012-13. The WPI for food articles was 253.4 percent in 2014-15, an increase of 6.1 percent over 238.9 in 2013-14 as against an increase of 12.8 percent in 2013-14 over the previous year.



WPI for cereals during 2014-15 was 233.64, an increase of 3.60 percent over 2013-14 as against an increase of 12.86 percent in 2013-14 over the previous year. During 2014-15, the WPI on pulses was 241.38, showing an increase of 5.87 percent over 2013-14 against a decrease of 5.52 percent during 2013-14 over the previous year. The Wholesale Price Index on vegetables depicted a decline of 6.06 percent during 2014-15 over 2013-14 against a sharp increase at all India level during 2013-14. During 2013-14, the index increased by 40.16 percent over 2012-13 as against an increase of 17.19 percent during 2012-13 over the previous year. The following graphs depict the monthly Wholesale Price Index of food grains and fruits and vegetables during the period January to December of 2014 and 2015.



The Directorate of Economics and Statistics, Assam compiles the Wholesale Price Index of Agricultural Commodities with base 1993-94=100 in Assam. The WPI of agricultural commodities during 2014-15 was 391 as compared to 336 in 2013-14 showing an increase of 16.37 percent against an increase of 13.51 percent in 2013-14 over the previous year. The table 16.2 depicts the Index from 2005-06 to 2013-14 and the percentage change of prices over the previous year.

TABLE – 16.1  
INDEX NUMBER OF WHOLESALE PRICES OF AGRICULTURAL  
COMMODITIES IN ASSAM  
BASE: 1993-94=100

| Year    | Index | Price Change over the year (in percentage) |
|---------|-------|--|
| 2005-06 | 176   | 3.53                                       |
| 2006-07 | 185   | 5.11                                       |
| 2007-08 | 204   | 10.27                                      |
| 2008-09 | 221   | 8.33                                       |
| 2009-10 | 249   | 12.67                                      |
| 2010-11 | 272   | 9.24                                       |
| 2011-12 | 287   | 5.51                                       |
| 2012-13 | 296   | 3.14                                       |
| 2013-14 | 336   | 13.51                                      |

Source: Directorate of Economics and Statistics, Assam.

## CONSUMER PRICE INDEX (CPI)

The analysis of different Consumer Price Indices is presented in the paragraphs given below.

## CONSUMER PRICE INDEX NUMBER (GENERAL) FOR RURAL, URBAN AND COMBINED

The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation publish Consumer Price Indices (CPI) on base 2010=100 for all-India and States/UTs separately for rural, urban and combined with effect from January, 2011. The base period has been changed to 2012 and accordingly Indices on the new base is being published for the year 2013 and onwards.

The annual average Consumer Price (General) Index on Base: 2012=100 of Assam for Rural, Urban and Combined in 2015 is calculated at 122.8, 121.1 and 122.4 against the National average of 124.3, 121.7 and 123.1 respectively. The increase in General Index for Rural, Urban and Combined in Assam during 2015 over 2014 is 4.42 percent, 3.15 percent and 4.17 percent respectively against an increase of 7.59 percent, 8.30 percent and 7.70 percent in 2014 respectively over the previous year. The table below shows the month wise Consumer Price Index (General) for rural, urban and combined in Assam.

TABLE – 16.2

CONSUMER PRICE INDEX (GENERAL) FOR RURAL, URBAN AND COMBINED IN ASSAM  
(Base 2012=100)

| Month          | 2014  |       |          | 2015  |       |          |
|----------------|-------|-------|----------|-------|-------|----------|
|                | Rural | Urban | Combined | Rural | Urban | Combined |
| January        | 115.0 | 112.9 | 114.6    | 117.3 | 117.8 | 117.4    |
| February       | 114.8 | 113.1 | 114.4    | 118.4 | 117.2 | 118.2    |
| March          | 115.1 | 114.3 | 114.9    | 118.6 | 118.0 | 118.5    |
| April          | 114.5 | 115.4 | 114.7    | 120.0 | 118.5 | 119.7    |
| May            | 115.2 | 116.4 | 115.4    | 121.8 | 119.2 | 121.3    |
| June           | 116.9 | 117.0 | 116.9    | 123.1 | 119.9 | 122.4    |
| July           | 118.6 | 118.7 | 118.6    | 123.2 | 121.4 | 122.8    |
| August         | 119.4 | 120.1 | 119.5    | 124.4 | 122.7 | 124.0    |
| September      | 121.0 | 120.3 | 120.9    | 126.1 | 124.4 | 125.7    |
| October        | 121.1 | 121.0 | 121.1    | 127.1 | 125.0 | 126.7    |
| November       | 120.6 | 120.7 | 120.6    | 127.2 | 125.1 | 126.8    |
| December       | 118.6 | 118.9 | 118.7    | 126.2 | 123.7 | 125.7    |
| Annual average | 117.6 | 117.4 | 117.5    | 122.8 | 121.1 | 122.4    |

Source: Central Statistics Office, MOSPI, Govt. of India.

## CONSUMER PRICE INDEX FOR WORKING CLASS POPULATION

The Consumer Price index number with base 2001=100 for working class population for the State is compiled by the Directorate of Economics and Statistics, Assam taking into account the weighted average of the indices of the three centres viz. Guwahati, Silchar and Tinsukia. The annual average of Consumer price Index for Working Class Population (Base 2001=100) in Assam increased by 5.38 percent in 2015 over 2014 as compared to 13.20 percent in 2014 over 2013. During 2015, the Centre-wise increase is comparatively high in Tinsukia (10.33%) followed by Guwahati (5.61%) and Silchar (1.65%).

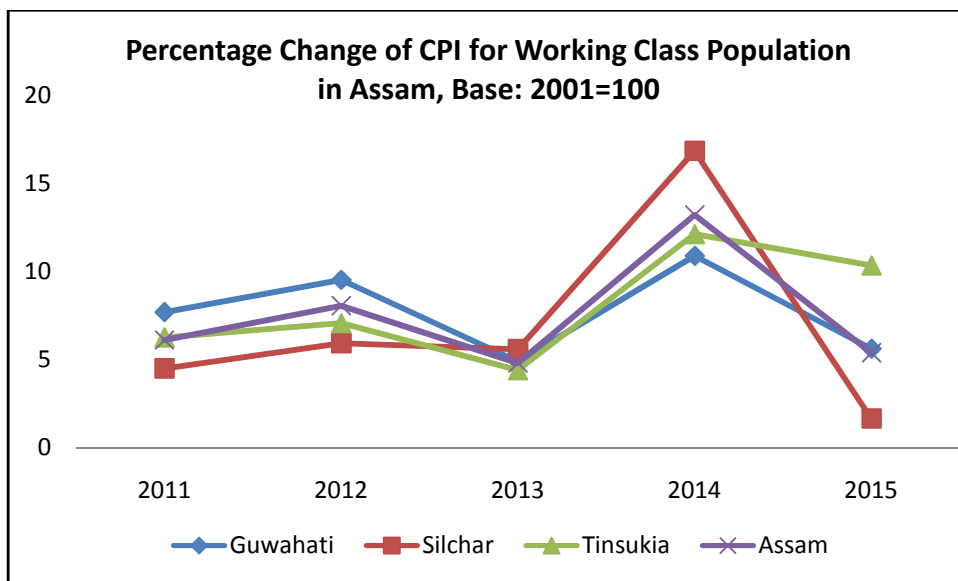
TABLE – 16.3

CONSUMER PRICE INDEX NUMBER FOR WORKING CLASS POPULATION IN ASSAM  
(Base: 2001=100)

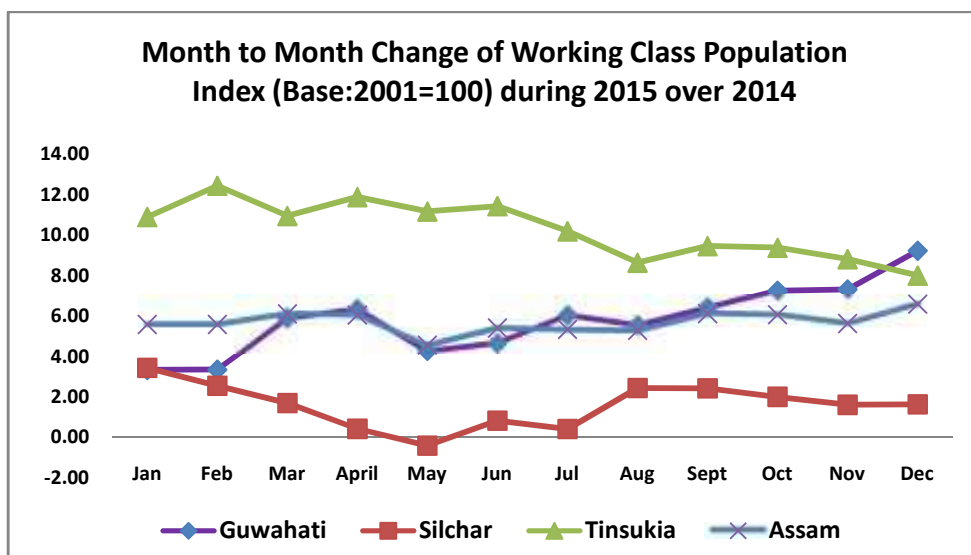
| Year | Guwahati       | Silchar        | Tinsukia       | Assam          |
|------|----------------|----------------|----------------|----------------|
| 2008 | 128<br>(6.67)  | 143<br>(10.00) | 133<br>(6.40)  | 134<br>(7.20)  |
| 2009 | 143<br>(11.72) | 155<br>(8.39)  | 147<br>(10.53) | 148<br>(10.45) |
| 2010 | 156<br>(9.09)  | 178<br>(14.84) | 160<br>(8.84)  | 164<br>(10.81) |
| 2011 | 168<br>(7.69)  | 186<br>(4.49)  | 170<br>(6.25)  | 174<br>(6.10)  |
| 2012 | 184<br>(9.52)  | 197<br>(5.91)  | 182<br>(7.06)  | 188<br>(8.05)  |
| 2013 | 193<br>(4.89)  | 208<br>(5.58)  | 190<br>(4.40)  | 197<br>(4.79)  |
| 2014 | 214<br>(10.88) | 243<br>(16.83) | 213<br>(12.11) | 223<br>(13.20) |
| 2015 | 226<br>(5.61)  | 247<br>(1.65)  | 235<br>(10.33) | 235<br>(5.38)  |

(Figures in bracket indicate the percentage change over the previous year)

Source: Directorate of Economics and Statistics, Assam



The graph given below depicts month to month change of consumer price index (Base: 2001=100) for working class population in various centres of the State during 2015 over 2014.

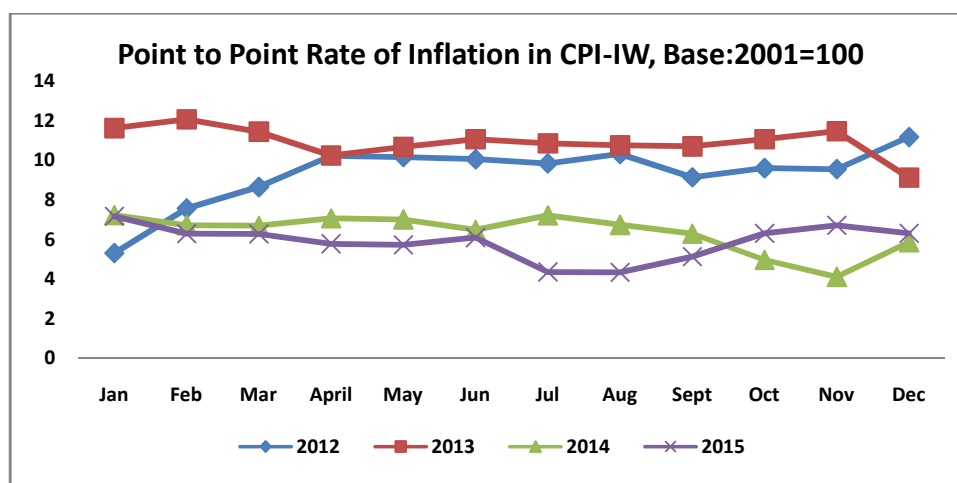


### CONSUMER PRICE INDEX FOR INDUSTRIAL WORKERS (CPI-IW)

CPI-IW is mainly used for the determination of Dearness Allowance (DA) and Variable Dearness Allowance (VDA) being paid to millions of public sector employees besides fixation and revision of minimum wages in scheduled private sector employees respectively. The CPI-IW is calculated based on the retail prices of essential commodities and services in industrially developed 78 selected centres in the country. In Assam, the Consumer Price Index for Industrial Workers with Base 2001=100 is constructed and compiled by taking weighted average of the indices for the five centres, namely Guwahati, Doomdooma (Tinsukia), Labac (Silchar), Morioni (Jorhat) and Rangapara (Tezpur).

The All-India Consumer Price Index (IW) with base: 2001 during 2015 is 261 compared to 247 in 2014 and 232 in 2013. The graph below depicts point to point rate of inflation in CPI-IW (Base: 2001=100) at all-India level.





During the year 2015, the CPI for Industrial Workers in Assam increased by 5.91 percent as against 5.67 percent at all India level over 2014. This increase during 2014 over the previous year in the State was 11.11 percent as against 6.47 percent at all India level. The rate of increase of the Index in different centres in 2015 over the previous year was recorded highest in Doomdooma (10.33%) followed by Rangapara (7.04%), Mariani (5.99%), Guwahati (5.61%) and Labac (1.65%).

The annual average Consumer Price Index for Industrial Workers from 2006 to 2015 is given in the Table - 16.4

TABLE – 16.4  
CONSUMER PRICE INDEX NUMBER FOR  
INDUSTRIAL WORKERS IN ASSAM AND INDIA  
(Base 2001=100)

| Year | Guwahati | Morioni | Doomdooma | Labac | Rangapara | Assam | All India |
|------|----------|---------|-----------|-------|-----------|-------|-----------|
| 2006 | 115      | 116     | 116       | 121   | 114       | 116   | 123       |
| 2007 | 120      | 127     | 125       | 130   | 126       | 125   | 131       |
| 2008 | 128      | 133     | 133       | 143   | 131       | 133   | 142       |
| 2009 | 143      | 147     | 147       | 155   | 144       | 147   | 157       |
| 2010 | 156      | 158     | 160       | 178   | 154       | 161   | 176       |
| 2011 | 168      | 171     | 170       | 186   | 163       | 174   | 192       |
| 2012 | 184      | 185     | 182       | 197   | 171       | 184   | 209       |
| 2013 | 198      | 195     | 196       | 216   | 186       | 198   | 232       |
| 2014 | 214      | 217     | 213       | 243   | 213       | 220   | 247       |
| 2015 | 226      | 230     | 235       | 247   | 228       | 233   | 261       |

Source: Directorate of Economics and Statistics, Assam and Labour Bureau, Govt. of India.

#### CONSUMER PRICE INDEX FOR AGRICULTURAL LABOUR (CPI-AL) AND RURAL LABOUR (CPI-RL)

The Consumer Price Index number for Agricultural and Rural Labour with base 1986-87 is compiled by the Labour Bureau, Government of India. During 2014-15 (Agricultural year), the annual average CPI-AL in Assam was 789 as against 740 in 2013-14, showing an increase of 6.62 percent against 8.50 percent increase during 2013-14 over 2012-13 in the General category. The CPI-AL

(Food) during 2014-15 was 778 with an increase of 5.71 percent over 736 in 2013-14. The increase CPI-AL (Food) during 2013-14 was 7.92 over the previous year.

The Consumer Price Index number (General) for Rural Labourers during the agricultural year, 2014-15 was 796 showing an increase of 6.70 percent over 746 in 2013-14 and CPI-RL (Food) during 2014-15 was 790 showing an increase of 5.90 percent over 746 in 2013-14.

### CONSUMER PRICE INDEX FOR RURAL POPULATION IN ASSAM

The Consumer Price Index number for Rural Population in Assam (Plain Districts) with base 1999-2000 during 2014-15 was calculated at 298 showing an increase of 11.19 percent over 243 in 2013-14 compared to 10.29 percent increase during 2013-14 over the previous year.

### PUBLIC DISTRIBUTION SYSTEM

Public Distribution System is a major instrument of the Government's economic policy for ensuring availability of food grains at affordable prices as well as to provide food security to the poor. It is an important component for poverty eradication and is intended to serve the poor who are nutritionally at risk. Public Distribution System with a network of about 5.07 lakh fair price shop in the country is perhaps the largest distribution system of its type in the world.

Public Distribution System is operated under the joint responsibility of the Central and the State governments. The Central Government has taken the responsibility for procurement, storage, transportation and bulk allocation of food grains etc. The responsibility of distribution food articles to the consumers through the network of fair price shop rests with the State governments. In Assam, the Food and Civil Supplies Department looks after the allocation and distribution of food grains, identification of families below poverty line, issue of ration cards and supervision and monitoring of stock position and distribution of food articles etc. by the fair price shops. The department is also entrusted with the responsibility of procurement of paddy and rice under 'Minimum Support Price' scheme under the 'The Food Management Policy' of the Ministry of Food and Public Distribution of Govt. of India to ensure remunerative price to the producers for their agricultural produce and to provide the procured food grains to the consumers fairly at reasonable and affordable price.

### NATIONAL FOOD SECURITY ACT 2013 (NFSA'13)

The Government of Assam has implemented the NFSA'13 in the state from December 2015. Under NFSA, 2.52 crore people covering 84.17 percent of rural areas and 60.35 percent of urban areas of the state are being covered for distribution of food grains at highly subsidized rate. The AAY beneficiaries of the previous TPDS have been included as AAY categories of beneficiaries under NFSA'13. The eligible families from the earlier BPL, APL, Mukhya Mantrir Anna Suraksha Yojana (MMASY) card holders have been included as Priority Household families under NFSA'13. The selected AAY families are getting 35 kg of rice per Ration Card per month while the selected Priority Household families are getting 5 kg of rice per member of the family per month.

### RANDHAN JYOTI SCHEME

The scheme is in implementation in the State since August 2003. The State has already implemented 1st, 2nd, 3rd, and 4th phase of the scheme by providing LPG connection at free of cost to 1,79,530 numbers of person selected from BPL families in order of preference of widow, women members of the Self-Help groups and any other female members of the BPL families of lower income groups. This scheme is sponsored by the State Government.

The scheme is modified during 2015-16 and as per revised guidelines each beneficiary will get double bottle connection free of cost and will be provided two 14.2 kg gas cylinders, ISI marked single burner, rubber tube, blue book and pressure regulator.

### AAMAR DUKAN

At present 2814 numbers of AAMAR DUKAN shops are functioning in the State that provides 23 essential commodities at much lesser price than the printed MRP. Out of the 23 items, 22 are

non-PDS items and one is PDS item i.e. iodized salt. Govt. has provided financial assistance to the tune of Rs.66,225.00 to the "AAMAR DUKAN" holder for development of infrastructure.

#### CREATION OF ASSAM FOOD AND CIVIL SUPPLIES CORPORATION LTD.

To streamline the Public Distribution System, effective computerization of PDS network, conduct of effective procurement of paddy and restoration of the distribution sugar under PDS, the State Govt. has created the "Assam Food and Civil Supplies Corporation Ltd." Under Company Act, 2013. The company has been registered with the Registrar of Co-operative Societies and has started functioning.

#### CONSUMER COURTS

Under the provisions of Consumer Protection Act 1986, the Food and Civil Supplies Department being the State Nodal Centre has one State level Consumer Redressal Forum at Guwahati and 23 District level Consumer Redressal Forums.

To create consumer awareness among the masses, the department has undertaken various activities such as advertisements through the print and electronic media, distribution of pamphlets, leaflets, organizing painting and essay competition among children and observance of National Consumers Day on 24<sup>th</sup> December and World Consumer Day on 15<sup>th</sup> March.

Under Confonet scheme, internet connectivity to the 23 District Consumer Fora and State Level Consumer Forum has been provided for easy access of case tests, judgements and to know the status of the cases.

#### TPDS COMPUTERISATION

Data of all the selected beneficiaries and GPSS/ Fair Price Shop have been digitized as a part of end to end computerization of supply chain management under NFSA, 2013. Internet connectivity is being provided up to GPSS level as part of Component-1 of the end to end computerization of TPDS. The State Transparency Portal [www.fcs.assam.gov.in](http://www.fcs.assam.gov.in) has been developed for the purpose.

#### ONLINE GRIEVANCE REDRESSAL SYSTEM

For redressing the grievances of common consumers, online Grievance Redressal System headed by an Additional Deputy Commissioner in each district of the State is being set up for speedy redressal of the grievances of the public.

APPENDIX – 16.1  
CONSUMER PRICE INDEX NUMBER FOR  
WORKING CLASS POPULATION IN ASSAM  
(Base 1982 = 100)

| Sl. No. | Period              | Guwahati | Silchar | Tinsukia | Assam |
|---------|---------------------|----------|---------|----------|-------|
| 1       | 2                   | 3        | 4       | 5        | 6     |
| 1       | 1991 Annual Average | 208      | 193     | 195      | 200   |
| 2       | 1992 Annual Average | 235      | 217     | 216      | 224   |
| 3       | 1993 Annual Average | 252      | 233     | 233      | 241   |
| 4       | 1994 Annual Average | 280      | 251     | 255      | 264   |
| 5       | 1995 Annual Average | 312      | 274     | 281      | 291   |
| 6       | 2000 Annual Average | 460      | 370     | 389      | 412   |
| 7       | 2001 Annual Average | 471      | 372     | 384      | 415   |
| 8       | 2002 Annual Average | 480      | 374     | 398      | 424   |
| 9       | 2003 Annual Average | 496      | 383     | 416      | 439   |
| 10      | 2004 Annual Average | 516      | 411     | 430      | 459   |
| 11      | 2005 Annual Average | 531      | 415     | 450      | 473   |
| 12      | 2006 Annual Average | 551      | 442     | 470      | 495   |
| 13      | 2007 Annual Average | 575      | 476     | 504      | 525   |
| 14      | 2008 Annual Average | 615      | 521     | 536      | 554   |
| 15      | 2009 Annual Average | 684      | 565     | 592      | 621   |
| 16      | 2010 Annual Average | 748      | 648     | 644      | 686   |
| 17      | 2011 Annual Average | 808      | 678     | 687      | 732   |
| 18      | 2012 Annual Average | 883      | 719     | 735      | 789   |
| 19      | 2013 Annual Average | 952      | 789     | 791      | 854   |
| 20      | 2014 Annual Average | 1025     | 886     | 861      | 932   |
| 21      | 2015 January        | 1042     | 880     | 905      | 952   |
| 22      | 2015 February       | 1037     | 883     | 913      | 954   |
| 23      | 2015 March          | 1037     | 876     | 901      | 948   |
| 24      | 2015 April          | 1051     | 876     | 913      | 958   |
| 25      | 2015 May            | 1051     | 880     | 925      | 963   |
| 26      | 2015 June           | 1075     | 898     | 945      | 984   |
| 27      | 2015 July           | 1099     | 898     | 962      | 999   |
| 28      | 2015 August         | 1099     | 920     | 966      | 1006  |
| 29      | 2015 September      | 1118     | 927     | 982      | 1021  |
| 30      | 2015 October        | 1138     | 931     | 990      | 1033  |
| 31      | 2015 November       | 1128     | 923     | 998      | 1030  |
| 32      | 2015 December       | 1138     | 909     | 982      | 1024  |

APPENDIX – 16.2  
CONSUMER PRICE INDEX NUMBER FOR  
WORKING CLASS POPULATION IN ASSAM  
(Base 2001 = 100)

| Sl. No. | Period              | Guwahati | Silchar | Tinsukia | Assam |
|---------|---------------------|----------|---------|----------|-------|
| 1       | 2                   | 3        | 4       | 5        | 6     |
| 1       | 2008 Annual Average | 128      | 143     | 133      | 134   |
| 2       | 2009 Annual Average | 143      | 155     | 147      | 148   |
| 3       | 2010 Annual Average | 156      | 178     | 160      | 164   |
| 4       | 2011 Annual Average | 168      | 186     | 170      | 174   |
| 5       | 2012 Annual Average | 184      | 197     | 182      | 188   |
| 6       | 2013 Annual Average | 193      | 208     | 190      | 197   |
| 7       | 2014 Annual Average | 214      | 243     | 213      | 223   |
| 8       | 2015 January        | 217      | 241     | 224      | 227   |
| 9       | 2015 February       | 216      | 242     | 226      | 227   |
| 10      | 2015 March          | 216      | 240     | 223      | 226   |
| 11      | 2015 April          | 219      | 240     | 226      | 228   |
| 12      | 2015 May            | 219      | 241     | 229      | 229   |
| 13      | 2015 June           | 224      | 246     | 234      | 234   |
| 14      | 2015 July           | 229      | 246     | 238      | 237   |
| 15      | 2015 August         | 229      | 252     | 239      | 239   |
| 16      | 2015 September      | 233      | 254     | 243      | 243   |
| 17      | 2015 October        | 237      | 255     | 245      | 245   |
| 18      | 2015 November       | 235      | 253     | 247      | 244   |
| 19      | 2015 December       | 237      | 249     | 243      | 243   |

Source : Directorate of Economics and Statistics, Assam

APPENDIX – 16.3  
CONSUMER PRICE INDEX NUMBER FOR  
INDUSTRIAL WORKERS IN ASSAM AND INDIA

| Sl. No. | Period               | Base 1982 = 100 |            |       |            |         |       |           |
|---------|----------------------|-----------------|------------|-------|------------|---------|-------|-----------|
|         |                      | Guwahati        | Doom-Dooma | Labac | Ranga-para | Mariani | Assam | All India |
| 1       | 2                    | 3               | 4          | 5     | 6          | 7       | 8     | 9         |
| 1       | 1991 Annual Average  | 208             | 195        | 193   | 209        | 205     | 203   | 212       |
| 2       | 1995 Annual Average  | 312             | 281        | 274   | 295        | 296     | 293   | 306       |
| 3       | 2000 Annual Average  | 460             | 389        | 370   | 408        | 418     | 412   | 441       |
| 4       | 2005 Annual Average  | 531             | 450        | 415   | 439        | 449     | 461   | 536       |
| 5       | 2006 Annual Average  | 551             | 470        | 442   | 476        | 464     | 485   | 569       |
| 6       | 2007 Annual Average  | 575             | 504        | 476   | 526        | 509     | 522   | 605       |
| 7       | 2008 Annual Average  | 615             | 536        | 521   | 548        | 532     | 554   | 656       |
| 8       | 2009 Annual Average  | 684             | 592        | 565   | 600        | 591     | 611   | 727       |
| 9       | 2010, Annual Average | 748             | 644        | 648   | 643        | 635     | 667   | 815       |
| 10      | 2011, Annual Average | 808             | 687        | 678   | 678        | 685     | 732   | 887       |
| 11      | 2012, Annual Average | 884             | 735        | 719   | 715        | 740     | 764   | 969       |
| 12      | 2013, Annual Average | 950             | 789        | 786   | 774        | 781     | 822   | 1071      |
| 13      | 2014, Annual Average | 1025            | 861        | 886   | 890        | 871     | 783   | 1143      |
| 14      | 2015 January         | 1042            | 905        | 880   | 926        | 898     | 753   | 1176      |
| 15      | 2015 February        | 1037            | 913        | 883   | 926        | 894     | 935   | 1171      |
| 16      | 2015 March           | 1037            | 901        | 876   | 930        | 890     | 936   | 1176      |
| 17      | 2015 April           | 1051            | 913        | 876   | 938        | 902     | 941   | 1185      |
| 18      | 2015 May             | 1051            | 925        | 880   | 926        | 910     | 943   | 1195      |
| 19      | 2015 June            | 1075            | 945        | 898   | 947        | 914     | 959   | 1208      |
| 20      | 2015 July            | 1099            | 962        | 898   | 955        | 934     | 974   | 1218      |
| 21      | 2015 August          | 1099            | 966        | 920   | 955        | 942     | 982   | 1222      |
| 22      | 2015 September       | 1118            | 982        | 927   | 963        | 942     | 991   | 1232      |
| 23      | 2015 October         | 1138            | 990        | 931   | 984        | 950     | 1005  | 1245      |
| 24      | 2015 November        | 1128            | 998        | 923   | 967        | 954     | 1000  | 1250      |
| 25      | 2015 December        | 1138            | 982        | 909   | 980        | 950     | 1004  | 1245      |

Source : Directorate of Economics and Statistics, Assam

APPENDIX 16.4  
CONSUMER PRICE INDEX NUMBER FOR  
INDUSTRIAL WORKERS IN ASSAM AND INDIA

| Sl. No. | Period              | Base 2001 = 100 |            |       |            |         |       |           |
|---------|---------------------|-----------------|------------|-------|------------|---------|-------|-----------|
|         |                     | Guwahati        | Doom-Dooma | Labac | Ranga-para | Mariani | Assam | All India |
| 1       | 2                   | 3               | 4          | 5     | 6          | 7       | 8     | 9         |
| 1.      | 2006 Annual Average | 115             | 116        | 121   | 114        | 116     | 116   | 123       |
| 2.      | 2007 Annual Average | 120             | 125        | 130   | 126        | 127     | 125   | 131       |
| 3.      | 2008 Annual Average | 128             | 133        | 143   | 131        | 133     | 133   | 142       |
| 4.      | 2009 Annual Average | 143             | 147        | 155   | 144        | 147     | 147   | 157       |
| 5.      | 2010 Annual Average | 156             | 160        | 178   | 154        | 158     | 161   | 176       |
| 6.      | 2011 Annual Average | 168             | 170        | 186   | 163        | 171     | 174   | 192       |
| 7.      | 2012 Annual Average | 184             | 182        | 197   | 171        | 185     | 184   | 209       |
| 8.      | 2013 Annual Average | 198             | 196        | 216   | 186        | 195     | 198   | 232       |
| 9.      | 2014 Annual Average | 214             | 213        | 243   | 213        | 217     | 220   | 247       |
| 10.     | 2015 January        | 217             | 224        | 241   | 222        | 224     | 225   | 254       |
| 11.     | 2015 February       | 216             | 226        | 242   | 222        | 223     | 225   | 253       |
| 12.     | 2015 March          | 216             | 223        | 240   | 223        | 222     | 224   | 254       |
| 13.     | 2015 April          | 219             | 226        | 240   | 225        | 225     | 227   | 256       |
| 14.     | 2015 May            | 219             | 229        | 241   | 222        | 227     | 227   | 258       |
| 15.     | 2015 June           | 224             | 234        | 246   | 227        | 228     | 232   | 261       |
| 16.     | 2015 July           | 229             | 238        | 246   | 229        | 233     | 235   | 263       |
| 17.     | 2015 August         | 229             | 239        | 252   | 229        | 235     | 237   | 264       |
| 18.     | 2015 September      | 233             | 243        | 254   | 231        | 235     | 239   | 266       |
| 19.     | 2015 October        | 237             | 245        | 255   | 236        | 237     | 242   | 269       |
| 20.     | 2015 November       | 235             | 247        | 253   | 232        | 238     | 241   | 270       |
| 21.     | 2015 December       | 237             | 243        | 249   | 235        | 237     | 240   | 269       |

Source : Directorate of Economics and Statistics, Assam.



## APPENDIX – 16.5

CONSUMER PRICE INDEX NUMBER FOR RURAL POPULATION IN ASSAM  
(Plain Districts)

| Sl. No. | Period              | Consumer Price Index Number<br>(Base 1944=100) |
|---------|---------------------|--|
| 1       | 2                   | 3  |
| 1.      | 1991 Annual Average | 1735   |
| 2.      | 1992 Annual Average | 1962   |
| 3.      | 1993 Annual Average | 2112   |
| 4.      | 1994 Annual Average | 2309   |
| 5.      | 1995 Annual Average | 2505   |
| 6.      | 1996 Annual Average | 2709   |
| 7.      | 1997 Annual Average | 2748   |
| 8.      | 1998 Annual Average | 3046   |
| 9.      | 1999 Annual Average | 3278   |

| Sl. No. | Period                 | Consumer Price Index Number<br>(New Base 1999-2000=100) |
|---------|------------------------|---|
| 1       | 2                      | 3   |
| 2       | 2000-01 Annual Average | 104   |
| 3       | 2008-09 Annual Average | 177   |
| 4       | 2009-10 Annual Average | 194   |
| 5       | 2010-11 Annual Average | 205   |
| 6       | 2011-12 Annual Average | 220   |
| 7       | 2012-13 Annual Average | 243   |
| 8       | 2013-14 Annual average | 268   |
| 9       | 2014-15 Annual average | 298   |
|         | 2014-15                |   |
| 1       | April                  | 283   |
| 2       | May                    | 287   |
| 3       | June                   | 291   |
| 4       | July                   | 296   |
| 5       | August                 | 300   |
| 6       | September              | 303   |
| 7       | October                | 303   |
| 8       | November               | 302   |
| 9       | December               | 298   |
| 10      | January                | 301   |
| 11      | February               | 302   |
| 12      | March                  | 304   |

Source: Directorate of Economics and Statistics, Assam

APPENDIX -16.6  
 CONSUMER PRICE INDEX NUMBER FOR AGRICULTURAL AND  
 RURAL LABOURERS  
 (Base 1986-87=100)

| MONTH / YEAR        | AGRICULTURAL LABOURERS |      | RURAL LABOURERS |      |
|---------------------|------------------------|------|-----------------|------|
|                     | General                | Food | General         | Food |
| 2011 Annual average | 600                    | 602  | 603             | 609  |
| 2012 Annual average | 654                    | 653  | 657             | 661  |
| 2013 Annual average | 708                    | 706  | 713             | 716  |
| 2014 Annual average | 776                    | 770  | 782             | 781  |
| 2015 January        | 789                    | 778  | 796             | 790  |
| 2015 February       | 774                    | 754  | 780             | 765  |
| 2015 March          | 772                    | 751  | 779             | 762  |
| 2015 April          | 775                    | 753  | 783             | 767  |
| 2015 May            | 779                    | 757  | 788             | 771  |
| 2015 June           | 788                    | 769  | 797             | 784  |
| 2015 July           | 793                    | 777  | 802             | 792  |
| 2015 August         | 807                    | 795  | 816             | 811  |
| 2015 September      | 816                    | 807  | 825             | 823  |
| 2015 October        | 818                    | 808  | 826             | 823  |
| 2015 November       | 819                    | 807  | 827             | 823  |
| 2015 December       | 817                    | 804  | 827             | 820  |

\* \* \*

## CHAPTER – XVII

## LABOUR, EMPLOYMENT AND WAGES

The objective of economic policy planning in India is to achieve high rates of growth of economy and sustained improvement in the standards of living of people. To achieve the objective, it is essential to absorb the growing labour force to generate productive and gainful employment, on a sufficient scale.

The State Government besides implementing various national employment programmes has initiated various programmes to lessen the burden of unemployment by creating and utilizing the potential employment avenues available in the state. The population censuses, different quinquennial rounds of National sample Survey on employment data, Employment and Unemployment Surveys conducted by the Labour Bureau and Economic Census provides data on employment structure and workforce as well as involvement of human resources in economic activity, employment etc. On the other hand, the data available from the Employment Exchanges does not give a clear picture on unemployment as a large number of unemployed people either did not register their names with Employment Exchanges or those who secure employment through other channels do not delete their names from the records of Employment Exchanges.

## EMPLOYMENT SCENARIO

The Census of India defines all persons engaged in 'work' as participation in any economically productive activity with or without compensation, wages or profits are workers. The year preceding the date of enumeration is taken as the reference period for determining a person as worker or non-worker. The Census of India collects information on economic activity of an individual and classifies workers into two groups namely, Main workers who had worked for the major part of the reference period i.e. 6 months or more and Marginal workers who had worked less than six months. The table below shows the trend of Main workers, Marginal workers and Non-workers in Assam as per the last three censuses.

TABLE 17.1  
DISTRIBUTION OF TOTAL WORKERS, MAIN WORKERS,  
MARGINAL WORKERS AND NON-WORKERS IN ASSAM

| Year | Population | Total Workers | Main Workers |             |                      |                            | Marginal Workers | Non-Workers |               |
|------|------------|---------------|--------------|-------------|----------------------|----------------------------|------------------|-------------|---------------|
|      |            |               | Total        | Cultivators | Agricultural Labours | Household Industry Workers |                  |             | Other Workers |
| 1991 | 22414322   | 8088935       | 6992056      | 3559117     | 844964               | 61455                      | 2526520          | 1096879     | 14325387      |
| 2001 | 26655528   | 9538591       | 7114097      | 2680092     | 636351               | 178082                     | 3619572          | 2424494     | 17116937      |
| 2011 | 31205576   | 11969690      | 8687123      | 3138554     | 903294               | 242071                     | 4403204          | 3282567     | 19235886      |

The Fig.I shows that proportion of main workers to total population in Assam has decreased from 31 percent in 1991 to 28 percent in 2011 although the figures in absolute number has increased by 24 percent between the period 1991 to 2011. On the other hand, the proportion of marginal workers shows an increasing trend both in percentage share and absolute number during the period. The proportion of non-workers to total population although remained more or less at the same level (about 64 percent) in 1991 and 2001, it showed a slight decline in 2011.

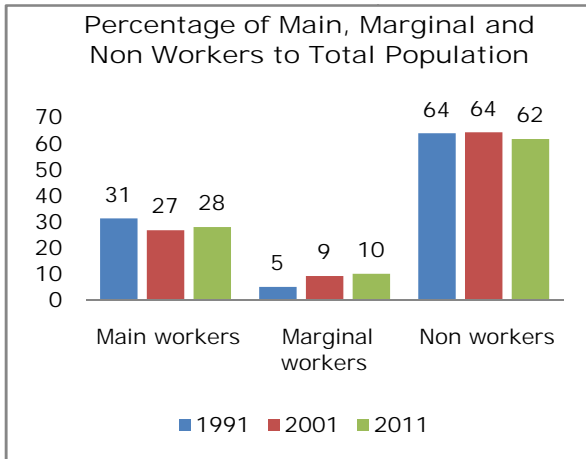


Fig. I

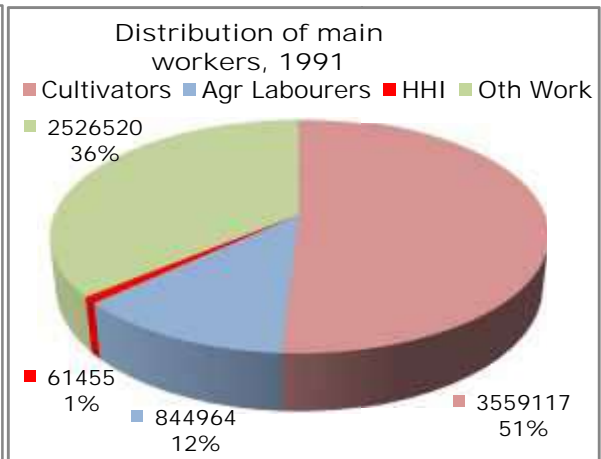


Fig. II

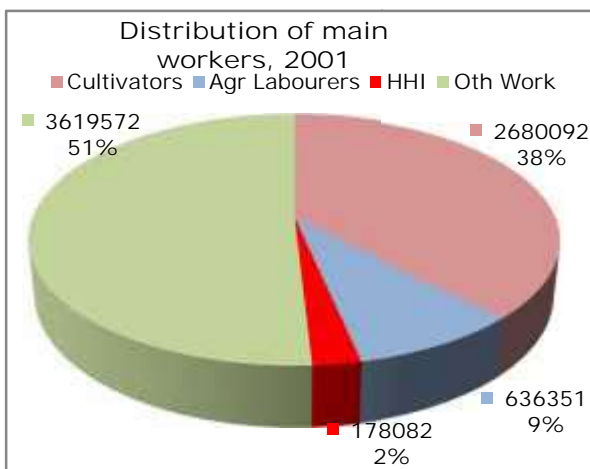


Fig. III

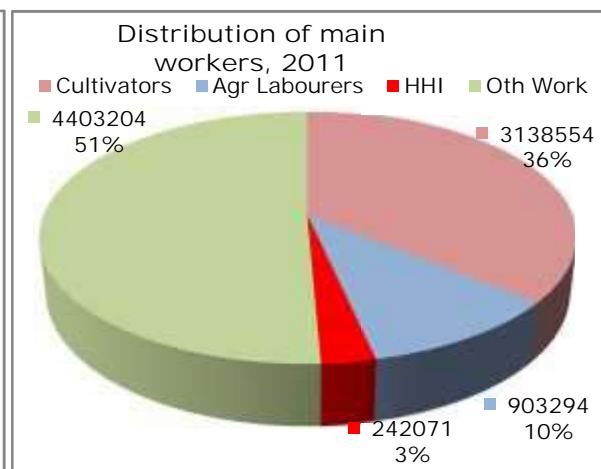
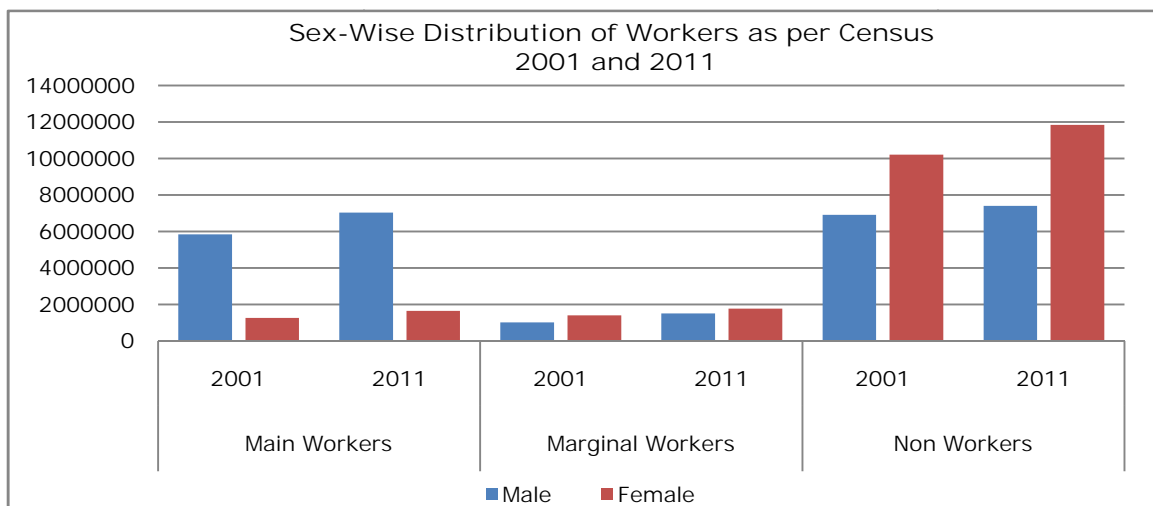


Fig. II

The Fig.II, Fig.III and Fig.IV, shows that there is a shift in the composition of total main workers from agricultural sector to non-agricultural sector. During 2001 and 2011, of the total main workers, proportion of workers in agricultural sector was 46 percent as against 62 percent in 1991. On the other hand, the proportion of other workers to total main workers depicts an increasing trend from 36 percent in 1991 to 51 percent in 2011 and proportion of workforce engaged in household industry increased from 1 percent in 1991 to 3 percent in 2011.

The sex-wise distribution of main workers, marginal workers and non-workers is depicted in the figures given below:



The percentage share of male and female main workers is 44 percent and 11 percent respectively as per Census 2011 shows a slight increase over the composition of male (42%) and female (10%) main workers as per Census 2001.

#### EMPLOYMENT – UNEMPLOYMENT SURVEY

The employment-unemployment surveys conducted by the National Sample Survey Organisation (NSSO) in various rounds gives a glimpse on various characteristics of employment and unemployment situation in the country as well as in the states. The result of the 68th round of the NSSO survey conducted during the year July 2011-June 2012 is presented in the table 17.1. The table below shows the Worker Population Ratio (WPR) i.e. number of persons/ person-days employed per 1000 in usual status [principal status (ps) and subsidiary status (ss)] in Assam and India.

TABLE – 17.2  
WORKER POPULATION RATIO (PER 1000) IN USUAL STATUS (PS+SS)  
AS PER 68<sup>TH</sup> ROUND NSS (JULY 2011-JUNE 2012)

|       | Rural |        |        | Urban |        |        | Rural+Urban |        |        |
|-------|-------|--------|--------|-------|--------|--------|-------------|--------|--------|
|       | Male  | Female | Person | Male  | Female | Person | Male        | Female | Person |
| Assam | 540   | 122    | 343    | 542   | 90     | 329    | 540         | 119    | 341    |
| India | 543   | 248    | 399    | 546   | 147    | 355    | 544         | 219    | 386    |

Source: Employment and Unemployment Situation of India, 68<sup>th</sup> Round, NSSO, MOSPI, Govt. of India.

The Worker Population Ratio (WPR) according to usual status (PS+SS) in Assam was about 34 percent as against 39 percent at the all-India level. WPR in rural areas in Assam was 34 percent and in urban areas 33 percent as against 40 percent and 36 percent at the all-India level. The female ratio both in rural and urban areas showed significantly low than the WPR for males. In the rural areas, WPR for males and females in Assam was about 54 percent and 12 percent respectively as against an all-India percentage of about 54 and 25 respectively while in the urban areas, WPR for males and females in Assam was about 54 percent and 9 percent respectively as against 55 percent and 22 percent at the all-India level.

The Labour Force Participation Rate (number of persons in the labour force per 1000 persons/ person days) for persons of age 15 years and above according to usual status (both principal and subsidiary status) approach in Assam were 82 percent male, 17 percent female and 51 percent both for male and female and at the all-India level the males, females and both were 80 percent, 31 percent and 56 percent respectively.

TABLE-17.3  
UNEMPLOYMENT RATE (PER 1000) ACCORDING TO  
USUAL STATUS (ADJUSTED) DURING 2011-12

|           | Rural |        |         | Urban |        |         | Rural + Urban |        |         |
|-----------|-------|--------|---------|-------|--------|---------|---------------|--------|---------|
|           | Male  | Female | Persons | Male  | Female | Persons | Male          | Female | Persons |
| Assam     | 43    | 57     | 45      | 54    | 70     | 56      | 44            | 56     | 47      |
| All-India | 17    | 17     | 17      | 30    | 52     | 34      | 22            | 22     | 23      |

Source: Employment and Unemployment Situation of India, 68<sup>th</sup> Round, NSSO, MOSPI, Govt. of India.

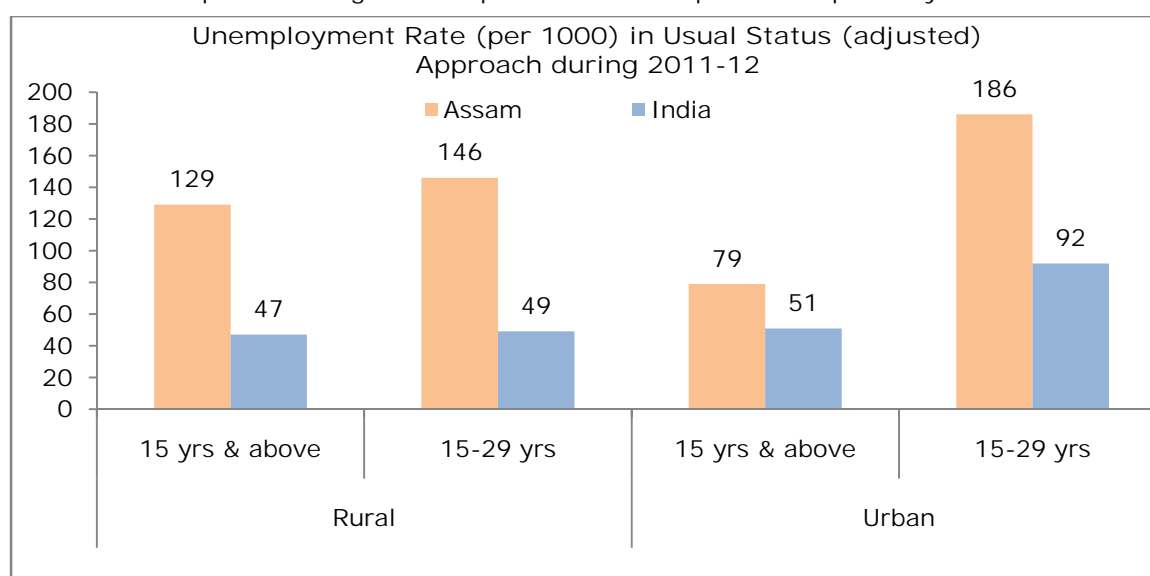
The study of the 68<sup>th</sup> round NSS reveals that the unemployment rate i.e. the number of persons unemployed per 1000 persons in the labour force (labour force includes both the employed and unemployed) according to the usual status (adjusted) approach for both rural and urban (combined) shows that as against all India figures of 22 males, 22 females and 23 males and females (combined) there is 44 males, 56 females and 47 combined (males and females) in Assam. The unemployment rate for rural and urban areas of Assam [both for male and female together] has been calculated at 45 and 56 per 1000 persons compared to 17 and 34 at all India level.

TABLE-17.4  
UNEMPLOYMENT RATE AMONG THE YOUTH (15-29 YEARS)  
IN USUAL STATUS (ADJUSTED) DURING 2011-12

|           | Rural |        |         | Urban |        |         |
|-----------|-------|--------|---------|-------|--------|---------|
|           | Male  | Female | Persons | Male  | Female | Persons |
| Assam     | 148   | 142    | 146     | 187   | 180    | 186     |
| All-India | 50    | 48     | 49      | 81    | 131    | 92      |

Source: Employment and Unemployment Situation of India, 68<sup>th</sup> Round, NSSO, MOSPI, Govt. of India.

The report on 68<sup>th</sup> round NSS reveals that almost 26 percent of the total population belongs to the age group 15-29 years in Assam. It also reveals that during 2011-12, the unemployment rate among the youths of Assam was much higher as compared to the overall workforce population of the State. Table-17.4 shows that the unemployment rates as per usual status (adjusted) approach in the age group 15-29 years for males and females in rural areas of Assam were 14.8 percent and 14.2 percent respectively compared to 5.0 percent and 4.8 percent at all India level. The table also shows that the unemployment rate for males and females in urban areas of the State were 18.7 percent and 18.0 percent as against 8.1 percent and 13.1 percent respectively at all India level.



Source: Employment and Unemployment Situation of India, 68<sup>th</sup> Round, NSSO, MOSPI, Govt. of India.

#### RESULTS OF FOURTH ANNUAL EMPLOYMENT-UNEMPLOYMENT SURVEY, 2013-14

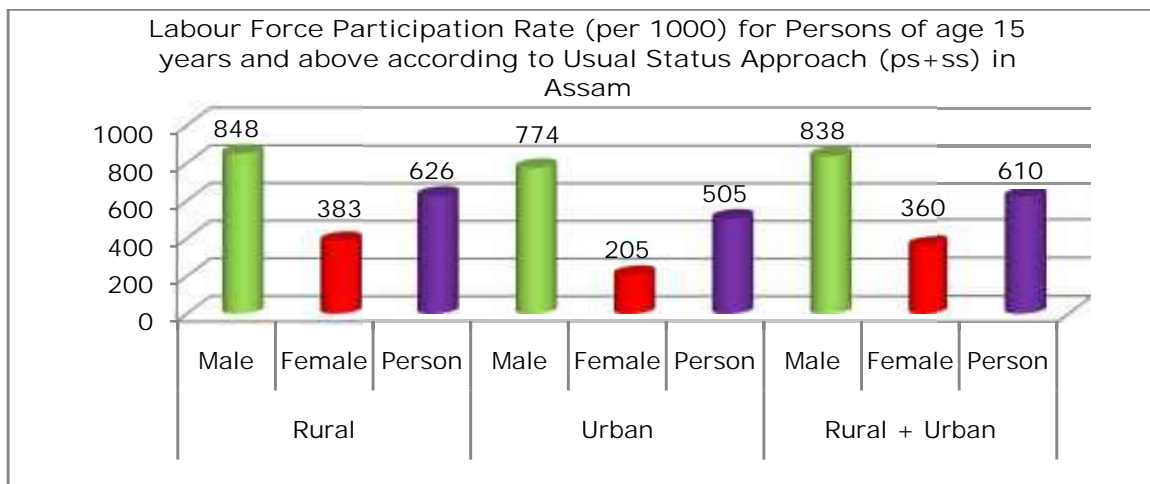
The Ministry of Labour and Employment, Govt. of India has entrusted the task of conducting Employment and Unemployment surveys on regular basis to the Labour Bureau, Govt. of India. The fourth annual Employment and Unemployment survey was conducted throughout the country during the period January 2013 to July 2014. A brief analysis on the estimates of some labour parameters in the context of Assam State is discussed in the paragraphs below.

The study reveals that as per Usual Principal and Subsidiary status approach (ps+ss) 61 percent of employed persons in the age group 15-17 years in the State are self employed against 53 percent at the All India level. The percentage of self employed in the age group 18-29 years and 30 years and above in the State is 56 percent and 62 percent respectively in the State as against 44 percent and 53 percent at all India level respectively. The distribution of wage/ salaried employees in the age group 15-17 years, 18-29 years and 30 years and above in the State is 7 percent, 17 percent and 21 percent respectively as against 5 percent, 17 percent and 15 percent respectively at all India level.

The report shows that in rural areas of the State there are 61 percent, 57 percent and 63 percent self employed persons in the age group 15-17 years, 18-29 years and 30 years and above as against 52 percent, 50 percent and 49 percent in the urban areas respectively. In the same age groups in rural areas there are 8 percent, 15 percent and 18 percent wage/ salaried persons in comparison to 3 percent, 33 percent and 42 percent in the urban areas of the State.

### LABOUR FORCE PARTICIPATION RATE

The result of the Fourth Annual Employment Unemployment Survey, 2013-14 conducted by the Labour Bureau reveals that the Labour Force Participation rate in respect of the age-group 15 years and above according to usual status approach for both principal status (ps) and subsidiary status (ss) in Assam is 63 percent in rural areas, 51 percent in urban areas and 61 percent taking urban and rural areas as a whole against the all India rate of 59 percent, 48 percent and 56 percent respectively. The figure given below shows the Labour Force Participation Rate (per 1000) for persons aged 15 years and above in the State.



Source: 4<sup>th</sup> Employment Unemployment Report, 2013-14, Labour Bureau, Govt. of India.

### YOUTH LABOUR FORCE PARTICIPATION RATE (LFPR)

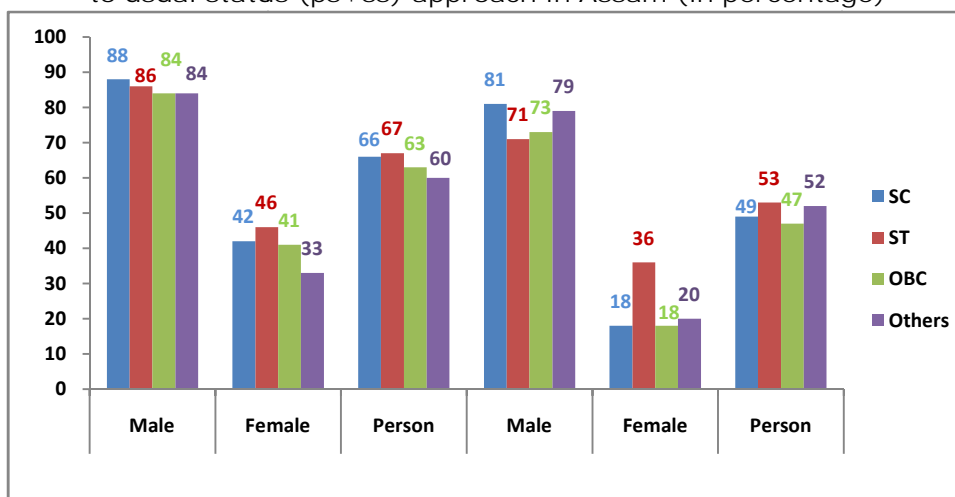
The LFPR of the State in the age group 18-29 years is 60.2 percent of which 78.9 percent are male and 39.7 percent are female which is higher than the All-India rate of 52.0 percent of which 70.1 percent for male and 29.4 percent for female.

In rural areas of the State, the youth population in the same age group had a higher participation rate than the urban areas. The survey reveals that the LFPR for person, male and female for rural areas of the State was 62.2 percent, 81.0 percent and 41.7 percent respectively against 46.1 percent, 64.0 percent and 24.5 percent in the urban areas.

### LABOUR FORCE PARTICIPATION RATE (LFPR) OF SOCIAL GROUPS IN ASSAM

Out of the overall LFPR of 61 percent, the Scheduled caste participation rate is 63 percent, Scheduled tribe is 66 percent, Other backward classes are 62 percent and others 58 percent. The graph below shows social group-wise LFPR in rural and urban areas of the State.

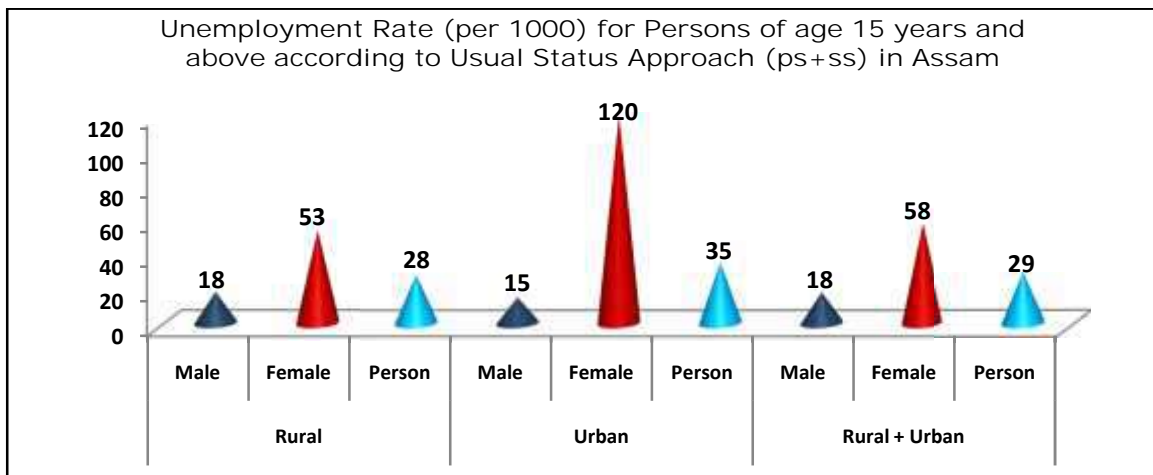
LFPR among social groups for persons 15 years and above according to usual status (ps+ss) approach in Assam (in percentage)



## UNEMPLOYMENT RATE

The Unemployment Rate is estimated to be 2.9 percent in the State under the usual principal and subsidiary status or about 3 percent of the persons aged 15 years and above who were available for work could not get work during the reference period. In rural areas the unemployment rate is 2.8 percent whereas in urban areas the unemployment rate is 3.5 percent under the same approach. The unemployment rate at all India level under the same approach is 3.4 percent in both rural and urban, 2.9 percent in rural areas and 4.9 percent in urban areas. In the State, the female unemployment rate is 5.8 percent which is 4 percent higher than the male rate of 1.8 percent.

The study reveals that the female unemployment rate in urban areas of the State under the usual principal and subsidiary status approach during the reference period is 12 percent which is significantly higher than the unemployment rate of 5.3 percent in rural areas.

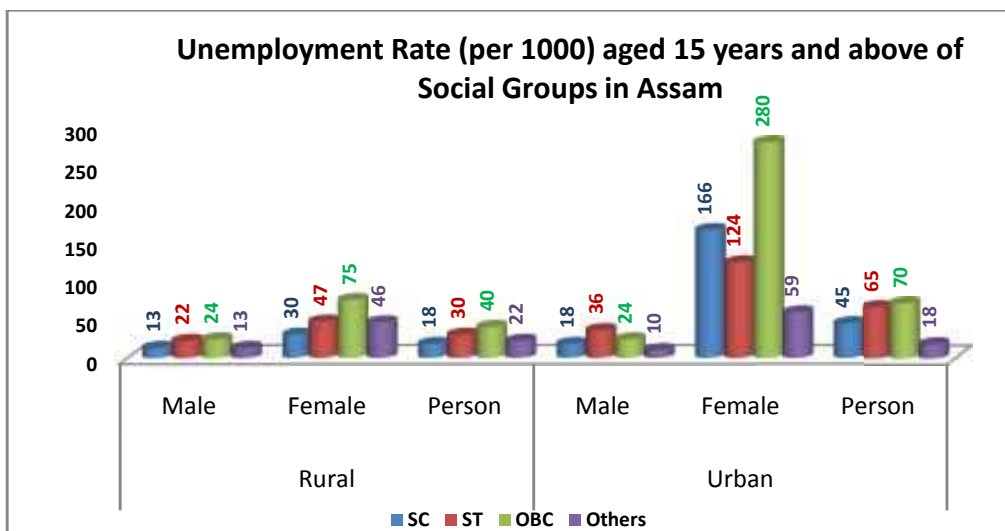


Source: 3rd Employment Unemployment Report, 2012-13, Labour Bureau, Govt. of India.

## UNEMPLOYMENT RATE OF SOCIAL GROUPS IN ASSAM

The Unemployment Rate according to Employment-Unemployment Survey, 2013-14 based on usual status (ps+ss) approach for the Other Backward Classes category is 4.2 percent which is highest among the social groups followed by 3.2 percent for the Scheduled Tribe and 2.1 percent each for Scheduled Caste and Others category.

In both rural and urban areas, female Unemployment Rate is higher as compared to the male Unemployment Rate under all the four social groups based on the same approach. The difference in the unemployment rate between male and female is reflected in the graph given below.





## EMPLOYMENT IN SHOPS AND COMMERCIAL ESTABLISHMENTS

The Labour Bureau, Ministry of Labour and Employment, Govt. of India publishes report on employment in shops and commercial establishments covered by the various Central and State Acts on the basis of returns or reports submitted by the States and Union Territories. The report on Shops and establishment in Assam is prepared on the areas covered under the Assam Shops and Establishment Act, 1971. The report published by the Labour Bureau shows that the total number of establishments in Assam covered under the Act and persons employed therein during 2012 were 88 thousand and 1.2 lakh respectively. Out of these 88 thousand establishment, 70 thousand (79 percent) were shops, 13 thousand (15 percent) were commercial establishments and 5 thousand (6 percent) were Cinemas, theatres, Hotels and Restaurants that employed 65 thousand (54 percent), 39 thousand (32 percent) and 17 thousand (14 percent) persons respectively. A comparison of number of shops and establishment in Assam during 2008, 2009, 2010, 2011 and 2012 is shown in Table 17.5.

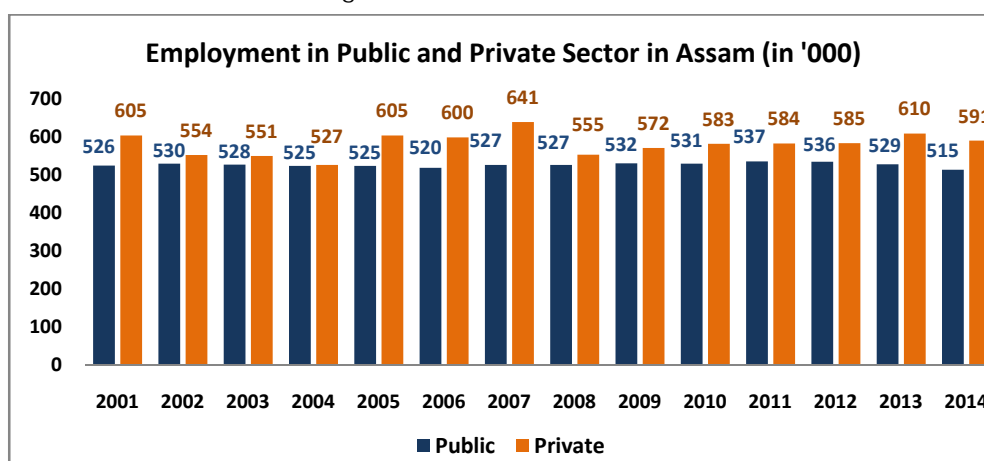
TABLE – 17.5  
EMPLOYMENT IN SHOPS AND COMMERCIAL ESTABLISHMENTS IN ASSAM  
(‘000 number)

| Year | Shops  |         | Commercial Establishment |         | Restaurants, Theatres etc. |         | All Establishment |         |
|------|--------|---------|--------------------------|---------|----------------------------|---------|-------------------|---------|
|      | Number | Workers | Number                   | Workers | Number                     | Workers | Number            | Workers |
| 2008 | 61     | 55      | 10                       | 29      | 5                          | 14      | 76                | 98      |
| 2009 | 57     | 53      | 10                       | 30      | 4                          | 13      | 71                | 96      |
| 2010 | 61     | 57      | 10                       | 32      | 4                          | 14      | 75                | 102     |
| 2011 | 56     | 57      | 11                       | 33      | 4                          | 14      | 71                | 104     |
| 2012 | 70     | 65      | 13                       | 39      | 5                          | 17      | 88                | 120     |

Source: Indian Labour Journal, Labour Bureau, Shimla, Ministry of Labour and Employment, Govt. of India.

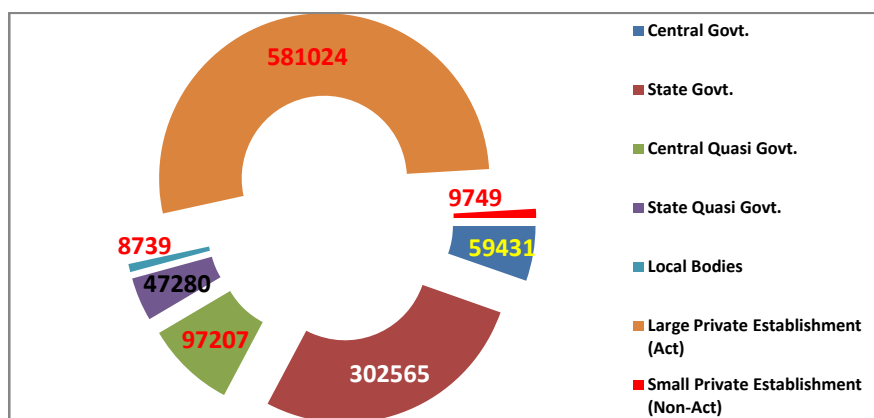
## EMPLOYMENT MARKET INFORMATION (EMI) PROGRAMME

The EMI programme gives information about the level of employment in the organised sector of the economy, which covers all establishments in the public sector and non-agricultural establishments employing 10 or more persons in the private sector. Collection of data under the EMI programme is reported through an ‘Establishment Reporting System’. The trend of employment in public and private sector from 2001 to 2014 as per data collected through Employment Market Information Programme is shown below.



The total employment in the public and private sector establishments under EMI programme in 2014 was 11.06 lakh (in public sector 5.15 lakh and in private sector 5.91 lakh) compared to 11.39 lakh (in public sector 5.29 lakh and in private sector 6.10 lakh) in 2013 and thus slid down by 2.90 percent in 2014 over 2013. During 2014, female employment was 35 percent of the total employment. Out of the total 5.15 lakh employment in public sector, share of local bodies was 1.70 percent and share of State Quasi Government was 9.18 percent during the year. The pie, given below shows the composition of public and private sector employment in Assam during 2014.

## Employment in Public and Private Sectors in Assam, 2014



## WOMEN EMPLOYMENT IN ORGANISED SECTOR

The employment of women in organised sector of the State was 383 thousand during 2014 which is 34.6 percent of the total employment. During the same year, percentage share of women employees in public sector and private sector to the total employment was 8.5 percent and 26.1 percent respectively.

TABLE – 17.6  
EMPLOYMENT OF WOMEN IN ORGANISED SECTOR

(In thousand nos.)

| Year | Public Sector |       | Private Sector |       | Public and Private Sector |        | Percentage Share of Women in Organised sector |
|------|---------------|-------|----------------|-------|---------------------------|--------|---|
|      | Women         | Total | Women          | Total | Women                     | Total  |   |
| 2003 | 77.4          | 528.0 | 241.1          | 551.1 | 318.5                     | 1079.2 | 30.0  |
| 2004 | 77.3          | 525.1 | 255.6          | 572.0 | 332.9                     | 1097.2 | 30.0  |
| 2005 | 81.5          | 524.5 | 268.4          | 605.2 | 350.0                     | 1140.0 | 30.7  |
| 2006 | 81.8          | 519.7 | 299.0          | 599.7 | 380.7                     | 1119.4 | 34.0  |
| 2007 | 84.9          | 527.0 | 310.8          | 640.5 | 395.7                     | 1167.5 | 33.9  |
| 2008 | 85.6          | 527.3 | 266.5          | 554.6 | 352.1                     | 1081.9 | 32.5  |
| 2009 | 87.3          | 531.7 | 273.0          | 571.7 | 360.3                     | 1103.4 | 32.7  |
| 2010 | 87.0          | 531.1 | 279.7          | 583.0 | 366.7                     | 1114.1 | 32.9  |
| 2011 | 89.0          | 537.0 | 279.9          | 583.5 | 369.0                     | 1120.6 | 32.9  |
| 2012 | 90.1          | 535.7 | 280.5          | 584.8 | 371.0                     | 1120.5 | 33.1  |
| 2013 | 90.5          | 529.3 | 294.9          | 609.5 | 385.4                     | 1138.8 | 33.8  |
| 2014 | 94.4          | 515.2 | 288.8          | 590.8 | 383.2                     | 1106.0 | 34.6  |

Source: Directorate of Employment and Craftsmen Training, Assam.

## UN-EMPLOYMENT SCENARIO IN THE STATE

The State has 53 employment exchanges comprising of 49 general, 1(one) special and 3 Employment Information and Guidance Bureau. Moreover, there are 29 Employment Information and Assistance Bureau to guide the unemployed youths for employment. Two Districts of BTAD, Baksa and Chirang have no Employment exchange. The table below shows that the number of unemployed as per Live Register increased by 4.13 percent in 2014 over 2013. During 2014, total placement was 39 percent against the number of notified vacancies through Employment Exchanges.

TABLE – 17.7  
EMPLOYMENT THROUGH EMPLOYMENT EXCHANGES

| YEAR | No. in Live Register | Percentage increase in Live register | No. of Vacancies Notified | No. of Placement Against Vacancies |
|------|----------------------|--------------------------------------|---------------------------|------------------------------------|
| 2004 | 1631216              | 4.02                                 | 703                       | 253                                |
| 2005 | 1763430              | 8.01                                 | 2380                      | 148                                |
| 2006 | 1827149              | 3.61                                 | 3170                      | 551                                |
| 2007 | 1921563              | 5.17                                 | 2023                      | 540                                |
| 2008 | 2006389              | 4.41                                 | 2383                      | 628                                |
| 2009 | 2079558              | 3.65                                 | 2506                      | 501                                |
| 2010 | 1911431              | (-)0.08                              | 2606                      | 455                                |
| 2011 | 1729029              | (-)9.54                              | 1401                      | 436                                |
| 2012 | 1622729              | (-)6.15                              | 2632                      | 394                                |
| 2013 | 1677192              | 3.36                                 | 4204                      | 745                                |
| 2014 | 1746520              | 4.13                                 | 2829                      | 1099                               |

Source: Directorate of Employment and Craftsmen training, Assam.

The size of the educated job seekers is considerably high, which is a challenge before the growing economy of the State. From the records of the live register of Employment Exchanges, the registered educated job seekers stood at 1387465 during 2014 against 1472859 during 2013 thereby showing a decrease of only 5.80 percent during 2014. The percentage of educated job seekers constitutes about 79 percent of the total job-seekers.

The overall registration of educated job seekers as per record of Employment Exchanges has increased by 89 percent in 2014 over the previous year. During 2014, there is a decline in registration of Engineering, Medical, Agriculture and Veterinary Graduates over the previous year. Decline of registration is also noticed of ITI Trainees, Post Graduates, Diploma Holders (Engineering) and others over the previous year. One reason for decrease in registration of HSLC passed may be attributed to pursuing further studies. The year, 2014 depicts an increase in registration of Graduates (130%), HSSLC passed (65%), and HSLC passed(165%). The detail distributions of the educated job seekers are shown in the table below.

TABLE – 17.8  
DISTRIBUTION OF EDUCATED JOB-SEEKERS

| Level of Education        | Registration |        | Percentage Increase/ Decrease in Registration | Placement |      | Numbers in live register |         |
|---------------------------|--------------|--------|---|-----------|------|--------------------------|---------|
|                           | 2013         | 2014   |   | 2013      | 2014 | 2013                     | 2014    |
| Engineering Graduate      | 1372         | 898    | (-)34.55                                      | 66        | 45   | 5058                     | 7333    |
| Medical Graduate          | 622          | 76     | (-)87.78                                      | 0         | 5    | 505                      | 279     |
| Agriculture Graduate      | 34           | 5      | (-)85.29                                      | 1         | 2    | 1077                     | 245     |
| Veterinary Graduate       | 14           | 3      | (-)78.57                                      | 3         | 2    | 385                      | 289     |
| Passed out Trainees (ITI) | 3260         | 2929   | (-)10.15                                      | 9         | 87   | 23155                    | 24919   |
| Post Graduates            | 1145         | 982    | (-)14.24                                      | 148       | 24   | 16179                    | 11465   |
| Graduates                 | 18774        | 43108  | 129.62  | 47        | 116  | 267951                   | 261490  |
| H.S.S.L.C.                | 39072        | 64478  | 65.02   | 63        | 63   | 514309                   | 533901  |
| H.S.L.C.                  | 22587        | 59955  | 165.44  | 18        | 738  | 596476                   | 529739  |
| Diploma Holders(Eng.)     | 1000         | 664    | (-)33.60                                      | 4         | 9    | 9763                     | 8216    |
| Others                    | 4049         | 567    | (-)86.00                                      | 54        | 8    | 38001                    | 9589    |
| Total                     | 91929        | 173665 | 88.91   | 413       | 1099 | 1472859                  | 1387465 |

Source: Directorate of Employment and Craftsmen Training, Assam.

## ASSAM GOVT. EMPLOYEES CENSUS

The Assam Govt. Employees Census is conducted quinquennially by the Directorate of Economics and Statistics, Assam. The last census was conducted with reference year 2009 and the report has been published. The table below shows the trend of sex-wise distribution of Assam Govt. Employees as per the last four consecutive censuses.

TABLE-17.9  
SEX-WISE DISTRIBUTION OF ASSAM GOVT. EMPLOYEES

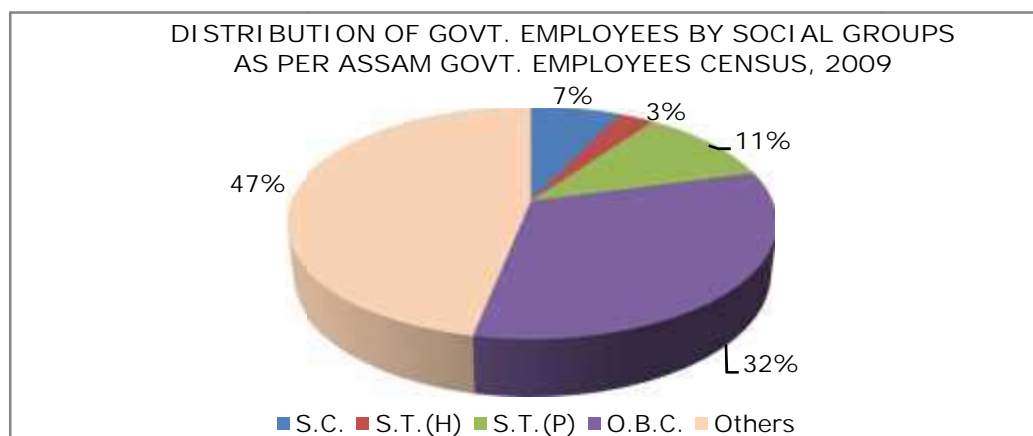
| Year | Male   | Female | Total  |
|------|--------|--------|--------|
| 1989 | 239117 | 31822  | 270939 |
| 1994 | 259141 | 45694  | 304835 |
| 1999 | 269555 | 56516  | 326071 |
| 2004 | 264924 | 59254  | 324178 |
| 2009 | 318457 | 74508  | 392965 |

Source: Assam Govt. Employees Census, 2009, Directorate of Economics and Statistics, Assam.

The Assam Govt. Employees Census, 2009 report reveals that the total Govt. employees has increased by 21.22 percent over the census figure of 2004 wherein number of male employees have increased by 20.21 percent and number of female employees have increased by 25.74 percent compared to a decrease of total employees by 0.58 percent in 2004 where number of male employees have decreased by 1.72 percent whereas number of female employees increased by 4.84 percent over the census figure of 1999.

The census report shows that the total number of Govt. employees in 2009 comprises of 18.96 percent female employees and 81.04 percent male employees. The male and female Govt. employees as per Census, 1989 was 88.25 percent and 11.75 percent respectively.

The distribution of Assam Govt. employees as per Census, 2009 shows that there are 4.28 percent Class-1 employees, 2.15 percent Class-II employees, 69.43 percent Class-III employees, 19.69 percent Class-IV employees and 4.45 percent are employees with fixed or consolidated pay. The graph below depicts the composition of social group wise number of Govt. employees in the State.



## AVERAGE DAILY WAGE RATE IN RURAL AREAS

As per data collected by the Directorate of Economics and Statistics, Assam, the Average Daily Wage Rate of skilled, unskilled and other agricultural labours shows a more or less steady upward trend. The wage rate in rural areas shows that under skilled labour, wage rate of Carpenter and Blacksmith increased by 39 percent and 15 percent respectively during 2014-15 over 2013-14 and under unskilled labour, wage rate of male ploughman, herdsman and Reaper and Harvester increased by 11 percent, 14 percent and 10 percent respectively during 2014-15 over 2013-14. During 2014-15, the female wage rate for Reaper and Harvester increased by 9 percent over the previous year. The wage rate (other agricultural labour) for male and female increased by 14 percent and 8 percent respectively during 2014-15 over the previous year.

TABLE – 17.10

AVERAGE DAILY WAGE RATE IN RURAL AREAS IN ASSAM (in Rupees)

| Year    | Skilled Labour Wage |             | Un-skilled Labour Wage |          |                      |       | Other Agricultural Labour |       |
|---------|---------------------|-------------|------------------------|----------|----------------------|-------|---------------------------|-------|
|         | Carpenter           | Black-smith | Ploughman              | Herdsman | Reaper and Harvester |       | Man                       | Women |
|         | Man                 | Man         | Man                    | Man      | Man                  | Women |                           |       |
| 2002-03 | 93                  | 68          | 52                     | 49       | 52                   | 47    | 49                        | 48    |
| 2003-04 | 102                 | 85          | 58                     | 52       | 60                   | 42    | 55                        | 49    |
| 2004-05 | 109                 | 88          | 62                     | 55       | 64                   | 49    | 59                        | 49    |
| 2005-06 | 114                 | 95          | 64                     | 63       | 65                   | 49    | 61                        | 48    |
| 2006-07 | 121                 | 101         | 71                     | 63       | 68                   | 53    | 65                        | 54    |
| 2007-08 | 124                 | 97          | 76                     | 72       | 74                   | 60    | 72                        | 58    |
| 2008-09 | 134                 | 105         | 85                     | 83       | 83                   | 67    | 83                        | 67    |
| 2009-10 | 147                 | 121         | 93                     | 92       | 93                   | 74    | 103                       | 87    |
| 2010-11 | 150                 | 131         | 120                    | 117      | 112                  | 87    | 137                       | 92    |
| 2011-12 | 155                 | 133         | 125                    | 120      | 119                  | 93    | 137                       | 98    |
| 2012-13 | 196                 | 189         | 18                     | 164      | 164                  | 135   | 169                       | 126   |
| 2013-14 | 220                 | 217         | 220                    | 172      | 204                  | 173   | 206                       | 174   |
| 2014-15 | 305                 | 249         | 244                    | 196      | 225                  | 189   | 234                       | 188   |

Source: Directorate of Economics and Statistics, Assam.

## EMPLOYMENT GENERATION PROGRAMME

Our economy is developing at a fast pace but still a major part of the population who are poverty ridden, illiterate and lack of skill needs support to earn. Keeping this in mind the Central Government and the State Government has initiated and implemented many programmes for self and wage employment generation as well as for creation of production of assets through various organisations like, the Panchayat and Rural Development Department, Directorate of Industries and Commerce, Agriculture Department, etc. The achievements of some of these programmes are briefly discussed as follows:

### NATIONAL RURAL LIVELIHOOD MISSION

The Ministry of Rural Development, Govt. of India has launched National Rural Livelihood Mission (NRLM) by restructuring the SGSY scheme and started its effective implementation in the State since 1<sup>st</sup> April, 2013. One of the important components of NRLM is interest subvention to the women SHGs. NRLM is a flagship program of Govt. of India for promoting poverty reduction through building strong institutions of the poor, particularly women, and enabling these institutions to access a range of financial services and livelihood services. During 2014-15, number of women SHG formed was 5195 against the target of 4800 SHGs and 6924 SHGs received revolving fund during the year against the target of 3040. During 2013-14, 8269 women SHGs were formed and 2792 SHGs were provided with revolving fund. Number of village organizations formed during 2014-15 is 515 against 663 village organizations formed during 2013-14. During 2014-15, 1642 village organizations received community investment fund against the target of 76.

National Rural Livelihood Project (NRLP) under National Rural Livelihood Mission (NRLM) is an intensive strategy with investment support from the World Bank. Under the project, 5340 numbers of women SHGs were formed during 2014-15 against 11308 numbers in 2013-14. During 2014-15, number of SHGs provided with revolving fund was 9346 against 5254 in 2013-14. Under NRLP, 468 village organizations were formed during 2014-15 and 2216 numbers received community investment fund during the same year.

### MAHATMA GANDHI NATIONAL EMPLOYMENT GUARANTEE ACT (MGNREGA)

The Mahatma Gandhi National Employment Guarantee Programme was introduced during the 11<sup>th</sup> five year Plan for giving wage employment opportunities to the rural poor during the lean agricultural season when they require wage employment for boosting their purchasing power to supplement their income requirement for livelihood. The other objective of the Act is to create

durable community assets for development of rural infrastructure for upliftment of quality of the rural people.

During the year 2014-15, a total of 208.17 lakh mandays were generated against 299.16 lakh mandays in 2013-14 and 314.24 mandays in 2012-13. Since inception up to March 2015, more than 42.02 lakh numbers of rural households have been provided with job card as compared to the cumulative total of 41.48 lakh during 2013-14 and 39.79 lakh in 2012-13. Out of the total, 32 percent of jobs were provided to women during 2014-15 against 29 percent and 26 percent during 2014-15 and 2012-13 respectively. During 2014-15 1452 numbers of physically challenged persons from BPL households were provided with employment. An amount of Rs.583 crores have been utilized during 2013-14 compared to Rs,700.70 crore in 2013-14 and Rs.651.70 crore in 2012-13.

#### PRIME MINISTER EMPLOYMENT GENERATION PROGRAMME (PMEGP)

The Prime Minister Employment Generation Program (PMEGP) has been introduced by merging the PMRY and REGP with the objective of providing employment to the educated unemployed youth. The scheme facilitates self-employment through setting up of industries/service and business ventures with a limited amount of Bank loan with subsidy on the recommendation of Task Force Committees constituted for the purpose. The KVIC is the nodal agency for implementing the PMEGP scheme at the national level and at the State level the scheme is implemented by the state KVIC Directorate, State KVIB and the District Industries and Commerce Centers and Banks. The Government subsidy under the scheme is being routed through the KVIC to the identified Banks. The target and achievement under PMEGP from 2008-09 to 2014-15 is reflected in the table below.

TABLE – 17.11

#### TARGET AND ACHIEVEMENT OF PMEGP DURING THE YEAR 2008-09 TO 2014-15

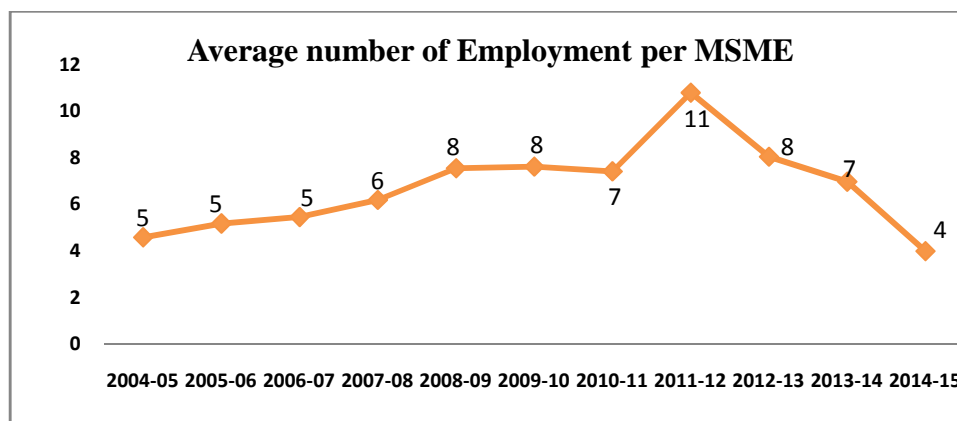
| Year    | Physical target (In nos.) | Financial Target (margin Money) (Rs. in Lakh) | Total Cases sanctioned (In nos.) | Physical achievement (In no.) | Financial achievement (Rs. in lakh.) | P.C. of Physical achievement |
|---------|---------------------------|---|----------------------------------|-------------------------------|--------------------------------------|------------------------------|
| 2008-09 | 685                       | 820.22  | 861                              | 617                           | 676.95                               | 90                           |
| 2009-10 | 1292                      | 1550.00                                       | 2440                             | 2440                          | 1899.71                              | 189                          |
| 2010-11 | 3193                      | 4469.66                                       | 4756                             | 4756                          | 4801.10                              | 149                          |
| 2011-12 | 5047                      | 7065.80                                       | 5280                             | 5280                          | 5544.99                              | 105                          |
| 2012-13 | 4644                      | 6500.20                                       | 7336                             | 7336                          | 5801.15                              | 158                          |
| 2013-14 | 4588                      | 6210.97                                       | 8049                             | 8049                          | 7219.90                              | 175                          |
| 2014-15 | 5101                      | 7238.82                                       | 5584                             | 5584                          | 5042.41                              | 109                          |

Source: Directorate of Industries and Commerce, Assam.

#### SMALL SCALE INDUSTRIES/MICRO, SMALL AND MEDIUM ENTERPRISE (MSME)

The small scale industries sectors have a major contribution towards creating employment in the State. Presently the small-scale industries have been sub-divided into Micro, Small and Medium Enterprise under the Micro, Small and Medium Enterprises Development (MSMED) Act 2006. There are 41434 numbers of SSI/ MSME units in Assam providing employment to 225297 number of persons till the end of 2014-15 compared to 39028 units giving employment to 215574 persons in 2013-14. The graph below depicts the average number of employment per SSI/MSME unit.

| NO. OF SSI & MSME UNIT AND EMPLOYMENT |                      |            |
|---------------------------------------|----------------------|------------|
| Year                                  | No. of SSI/MSME Unit | Employment |
| Upto March/2009                       | 31315                | 154484     |
| 2009-10                               | 1678                 | 12787      |
| 2010-11                               | 1214                 | 9002       |
| 2011-12                               | 1287                 | 13886      |
| 2012-13                               | 1451                 | 11671      |
| 2013-14                               | 1860                 | 12971      |
| 2014-15                               | 2629                 | 20496      |



Source: Directorate of Industries and Commerce, Assam.

### MULTI DISCIPLINARY SKILL DEVELOPMENT PROGRAMME

The Multi Disciplinary skill Development Programme is a flagship programme taken up by the Department of Industries and commerce for the Twelfth Five Year Plan to create skilled manpower and employment for the rural youth. The scheme also has provision for training of entrepreneurs to enhance their skills. Construction of Multi Disciplinary skill Development centre has been started at several locations of the State. Till the construction of the training centres are completed, the Department has initiated to provide training at few recognized national institutes of repute within and outside the State. During the year 2014-15, the Department sponsored 680 persons against which 100 numbers have completed their training against physical target of 1250 and a financial target of Rs.400.00 lakh.

### MUKHYA MANTRIR KARMAJYOTI AACHANI

The basic objective of the scheme is to supply machinery and equipment to trained individual beneficiaries along with Self Help Groups (SHGs) to start self employment ventures. The scheme is under implementation from the year 2005-06 under the sponsorship of the Government of Assam. During the year 2014-15, 508 artisans were benefited with a financial assistance of Rs.85.00 lakh against 5825 number of artisans being benefitted with an assistance of Rs.704.96 lakh in 2013-14.

### VOCATIONAL TRAINING

The Vocational Training Programmed is being continued by the Department of Industries and Commerce, Assam to provide assistance to the interested unemployed youth of the State for self employment. The programme taken up during 2014-15 is under implementation though it has been discontinued from 2014-15.

### FACTORY EMPLOYMENT

During 2014, there were 5537 number of factories (registered under Factory Act, 1948) employing 210119 number of persons in the State showing an increase of 5 percent in the number of factories employing 4 percent more than that of 2013. The maximum number of workers were engaged in manufacturing of food products (36%) followed by manufacturing of other non-metallic mineral products (32%), manufacturing of coke and refined petroleum products (5%) and the rest distributed amongst of factories as per NIC-2008.

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## APPENDIX-17.1

## DISTRICTWISE NUMBER OF EMPLOYMENT EXCHANGES IN ASSAM, 2014

| Sl. No. | District      | General | Special | Employment Information & Guidance Bureau (EI GB) | Total | Employment Information & Assistance Bureau (EIAB) |
|---------|---------------|---------|---------|--|-------|---|
| 1       | Kokrajhar     | 2       | Nil     | Nil  | 2     | 1   |
| 2       | Dhubri        | 2       | Nil     | Nil  | 2     | 1   |
| 3       | Goalpara      | 1       | Nil     | Nil  | 1     | 1   |
| 4       | Barpeta       | 1       | Nil     | Nil  | 1     | 1   |
| 5       | Morigaon      | 2       | Nil     | Nil  | 2     | 1   |
| 6       | Nagaon        | 3       | Nil     | Nil  | 3     | 1   |
| 7       | Sonitpur      | 2       | Nil     | Nil  | 2     | 1   |
| 8       | Lakhimpur     | 1       | Nil     | Nil  | 1     | 2   |
| 9       | Dhemaji       | 2       | Nil     | Nil  | 2     | 0   |
| 10      | Tinsukia      | 4       | Nil     | Nil  | 4     | 0   |
| 11      | Dibrugarh     | 3       | 1       | 1  | 5     | 1   |
| 12      | Sivasagar     | 4       | Nil     | Nil  | 4     | 2   |
| 13      | Jorhat        | 2       | Nil     | 1  | 3     | 2   |
| 14      | Golaghat      | 2       | Nil     | Nil  | 2     | 2   |
| 15      | Karbi Anglong | 3       | Nil     | Nil  | 3     | 2   |
| 16      | Dima Hasao    | 2       | Nil     | Nil  | 2     | 3   |
| 17      | Cachar        | 1       | Nil     | Nil  | 1     | 2   |
| 18      | Karimganj     | 2       | Nil     | Nil  | 2     | 1   |
| 19      | Hailakandi    | 1       | Nil     | Nil  | 1     | 1   |
| 20      | Bongaigaon    | 1       | Nil     | Nil  | 1     | 1   |
| 21      | Chirang       | 0       | Nil     | Nil  | 0     | 0   |
| 22      | Kamrup        | 5       | Nil     | 1  | 6     | 1   |
| 23      | Nalbari       | 1       | Nil     | Nil  | 1     | 2   |
| 24      | Baksa         | 0       | Nil     | Nil  | 0     | 0   |
| 25      | Darrang       | 1       | Nil     | Nil  | 1     | 1   |
| 26      | Udalguri      | 1       | Nil     | Nil  | 1     | 0   |
|         | ASSAM         | 49      | 1       | 3  | 53    | 30  |

Source: Directorate of Craftsmen &amp; Employment Training, Assam



## APPENDIX-17.2

## EMPLOYMENT THROUGH EMPLOYMENT EXCHANGES IN ASSAM, 2014

| Sl. No. | District      | No. of Registration | No. In Live Register | No. of Vacancies Notified | No. of placement |
|---------|---------------|---------------------|----------------------|---------------------------|------------------|
| 1       | Dhubri        | 22997               | 68233                | 31                        | 91               |
| 2       | Kokrajhar     | 36078               | 39922                | 197                       | 127              |
| 3       | Bongaion      | 4117                | 42796                | 8                         | 2                |
| 4       | Goalpara      | 9827                | 46035                | 1                         | 1                |
| 5       | Barpeta       | 20950               | 65203                | 33                        | 0                |
| 6       | Nalbari       | 18839               | 86738                | 34                        | 2                |
| 7       | Kamrup        | 41397               | 361340               | 1633                      | 319              |
| 8       | Darrang       | 10869               | 45012                | 28                        | 9                |
| 9       | Sonitpur      | 12248               | 82690                | 76                        | 22               |
| 10      | Lakhimpur     | 11317               | 47013                | 20                        | 1                |
| 11      | Dhemaji       | 5495                | 24036                | 11                        | 1                |
| 12      | Morigaon      | 4560                | 43552                | 0                         | 1                |
| 13      | Nagaon        | 14664               | 129155               | 80                        | 3                |
| 14      | Golaghat      | 11860               | 100386               | 16                        | 57               |
| 15      | Jorhat        | 15637               | 70123                | 76                        | 73               |
| 16      | Sivsagar      | 14274               | 111079               | 34                        | 13               |
| 17      | Dibrugarh     | 14362               | 121414               | 382                       | 203              |
| 18      | Tinsukia      | 12880               | 47304                | 63                        | 135              |
| 19      | Karbi-Anglong | 6362                | 50528                | 2                         | 1                |
| 20      | Dima Hasao    | 2828                | 26177                | 0                         | 14               |
| 21      | Karimganj     | 7938                | 31715                | 52                        | 24               |
| 22      | Hailakandi    | 6712                | 23696                | 24                        | 0                |
| 24      | Cachar        | 13394               | 56166                | 28                        | 0                |
| 25      | Chirang       | 0                   | 0                    | 0                         | 0                |
| 26      | Baksa         | 0                   | 0                    | 0                         | 0                |
| 27      | Udalguri      | 1835                | 26207                | 0                         | 0                |
| ASSAM   |               | 321440              | 1746520              | 2829                      | 1099             |

Source: Directorate of Craftsmen &amp; Employment Training, Assam

## CHAPTER – XVIII

## PANCHAYAT AND RURAL DEVELOPMENT

The responsibility of the Panchayat and Rural Development Department includes alleviation of rural poverty, enhancement of rural livelihoods by providing self-employment to the people living below poverty line as defined by the Planning Commission from time to time through implementing variety of programmes and to strengthen the Panchayati Raj Institution (PRI). The Department is concerned to empower PRIs increase the capability of poor through self employment programme and by developing the critical infrastructures in the rural areas. At present, there are 21 Zila Parisads, 189 Anchalik Parisads and 2202 Gram Panchayats in the State under three tier PRI systems in 21 plain districts excluding the 6<sup>th</sup> Scheduled districts viz., 2 Hill districts - Karbi-Anglong, Dima-Hasao and 4 BTAD districts under BTC where PRI system is not in existence. Moreover, there are District Rural Development Agency one in each district and 219 Community Development Blocks to look after the implementation of the programmes/schemes of the Department.

#### SCHEMES IMPLEMENTED BY THE PANCHAYAT AND RURAL DEVELOPMENT DEPARTMENT

Department is implementing MGNREGA, Indira Awas Yojana (IAY) National Social Assistance Programme (NSAP) District Development Plan, 13<sup>th</sup> Finance Commission Grant, 4<sup>th</sup> State Finance Commission etc.

#### (COST SHARING BASIS WITH THE CENTRAL AND STATE GOVERNMENT 90:10)

#### MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT GUARANTEE ACT (MGNREGA)

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has been implemented since February, 2006. This programme were covered to all Districts from 2008-09. MGNREGA is a Primary Flagship Programme of Ministry of Rural development. The Primary objectives of the programme is to provide at least 100 days employment Guarantee to the job Card Holders demanding for work and creation of permanent assets. The programme provides employment to the adult members of a family having a job card volunteer to do unskilled manual labour in every financial year. The other objective of the act to create durable community assets for development of rural infrastructure for upliftment of quality of life of the rural people. In Assam, MGNREGA has been empowered millions of lives in Assam penetrating even in inaccessible and difficult areas. The enhanced income help the rural poor to come out from the vicious cycle of poverty and able to afford better education and health care for their children and families.

At present, the convergence of MGNREGA work has been taken up with the line Departments like Water Resources, PWD, Irrigation, sericulture, Handloom and Textile, Agriculture etc. in Assam. Further, the department has started implementation of few schemes like Dr. Bhupen Hazarika Open stage and Garden, Pt. Jawaharlal Neheru Gramin Sports Complex, Indira Gandhi Adarsha Gramin Paki Path, Sishu Seuj Prakalpa under CM's Dream Project in MGNREGA.

During the period 2014-15, over 208.17 lakh mandays have been generated as against 299.16 lakh mandays during 2013-14 and 314.24 mandays in 2012-13. More than 42.20 lakh (cumulative) nos. of rural households have been provided job cards as compared to 41.48 lakh during 2013-14 and 39.79 lakh in 2012-13. Similarly, 1452 nos. of disabled person from BPL households have been provided employment during the year 2014-15 in comparison to 2372 nos. of 2013-14 and 2239 nos. In 2012-13. An amount of Rs.583 crore have been utilised during 2014-15 as compared to the utilisation of Rs.651.70 crore during 2012-13 and Rs.700.70 crore during 2013-14. Assam has become pioneer to roll out mobile based software for capturing demand, recording attendance, taking photographs, muster roll etc. And updating this information on the national server of MGNREGA through mobile network. Moreover, during the financial year 2014-15, e-FMS has been rolled out in the State and 530 dongles have been issued to all DC (DPC), PD and BDO and almost 25 lakh transactions of about Rs.507.00 crore was made through e-FMS under

this programme, out of the job provided, 32 percent have gone to women during 2014-15 while it was 26 percent and 29 percent during the year 2012-13 and 2013-14 respectively.

#### INDIRA AWAS YOJANA (IAY):

The programme is basically implemented for providing dwelling houses to the houseless and shelterless people living below the poverty line in the rural areas. During the year 2014-15, 105572 nos. of IAY houses were constructed against the annual target of 183171 nos. of houses which includes more than 11442 nos. of incomplete IAY houses under construction in the previous year completed in 2014-15. The Department has completed 83148 nos. of IAY houses during 2013-14 against the annual target of 138695 nos. Similarly more than 162697 nos. of IAY houses have been completed against the annual target of 183781 nos. during 2012-13. Provisions of sanitary toilets to each sanctioned IAY houses has been made mandatory enhanced quality of life of the beneficiary. Funds are also released to each beneficiaries in their single beneficiary Bank Account. For smooth monitoring of the programme, Awaasoft, a MIS for IAY programme has been rolled out in each district, Block, and GP. Steps have been taken for convergence between IAY and MGNREGA.

As far as financial achievement is concerned an amount of Rs.1229.67 crore has been utilised during 2014-15 as compared to the utilisation of Rs.712.08 core and Rs.587.31 crore during 2012-13 and 2013-14 respectively.

#### NATIONAL SOCIAL ASSISTANCE PROGRAMME (NSAP):

Article 41 of the constitution of India directs the states to provide public assistance to all citizens. National Social Assistance Programme (NSAP) is a social welfare programme for BPL people. Economic assistance is given to socially disadvantaged people of BPL families. It consists of five sub components viz. IGNOAPS (Indira Gandhi National Old Age Pension Scheme), IGWPS (Indira Gandhi National Widow Pension Scheme), IGNDPS (Indira Gandhi National Disabled Pension Scheme), NFBS (National Family Benefit Scheme) & Annapurna. In case of unemployment, old age, sickness and disablement and in other cases of undeserved want within the limit of its economic capability and development. It is in accordance with these noble principles that the GOI on 15<sup>th</sup> Aug., 1995 included the National Social assistance programme in the Central Budget from 1995-96, which was implemented by the state Social Welfare Department and from 2003-04 implemented by the State Panchayat and Rural Development Department. It comprises of five components- Indira Gandhi National Old Age Pension (IGNOAPS), Indira Gandhi National Widows Pension Scheme (IGWPS), Indira Gandhi National Disable Pension Scheme (IGNDPS), National Family Benefit Scheme (NFBS) and Annapurna. These Components were meant for providing social assistance benefit to the aged, the BPL households in the case of death of the primary bread earner and for maternity. Under the Annapurna component, 10 Kg. of foodgrains/ rice per month are provided free of cost to those beneficiaries who attain 60 years and above but not covered under (IGNOAPS).

During the year 2014-15, an amount of Rs.237.46 crore were utilised as against utilisation of Rs.156.13 crore and Rs.194.58 crore during 2012-13 and 2013-14 respectively.

The financial entitlement of various benefits are such that under IGNOAPS, the beneficiaries at the age group of 60-79 years and 80 years and above are provided @ Rs.200/- p. m. (ACA) and Rs.500/- p. m. (ACA) with Rs.50/- as Minimum Mandatory Provision (MMP) provided from the State Govt. respectively. Accordingly, 772714 no. of beneficiaries covering both the categories were benefited during the year 2014-15 as against 78,5836 nos. and 78,5836 nos. during 2012-13 and 2013-14 respectively. Similarly, 1,11,325 nos. of widow beneficiaries were covered during 2014-15 as against 63,810 nos. and 64,686 nos. during 2012-13 and 2013-14 respectively under the IGWPS. During the year under reference, number of beneficiaries provided pension under IGNDPS were 42264 as against 24383 nos. and the equal no. during 2012-13 and 2013-14 respectively across the State. Similarly, about 7458 nos. of BPL families have been provided one time financial assistance @Rs .20,000/- during 2014-15 as against 10471 nos. and 1344 nos. during 2012-13 and 2013-14 respectively. Under, Annapurna during the year 2012-13, 25308 nos.

of families got assistance and equal nos. of beneficiaries were also assisted during 2013-14. As the ministry of Rural Development, Govt. of India has not released allocation of Annapurna Rice during the year 2014-15 as such no physical and financial achievement could be recorded for the year.

## STATE PLAN SCHEME

### DISTRICT DEVELOPMENT PLAN (DDP)

District Development Plan (DDP) is the process for preparing an integrated plan for the local govt. section in the district taking into account the resources (National, Human & Financial) available and covering the sectoral activities and schemes assigned to the district level and below and those implemented through local Govt. in the State. The document that embodied the statement of resources and their allocation for various purposes is known as District Plan. It has been implemented by the Panchayat and Rural Development Department through PRIs and ULBs since 2007-08. More than `69.84 crore have been utilised and 2045 number of schemes completed during the year 2013-14 as against the utilisation of amount of `113.16 crore in respect of more than 2579 number of schemes during 2012-13.

As such, 2202 GPs, 185 APs and 21 ZPs including the Urban areas in general in the State are being involve in preparation and implementation of the schemes under DDP.

Small nature of schemes under this plan are implemented by the Urban Local Bodies and Rural Local Bodies in the State. Hence during the year 2014-15, 5349 nos. of schemes have been implemented while 7598 nos. of schemes have implemented during the previous year. Similarly, 8362 scheme have been implemented in 2012-13. As regards, financial achievement an amount of Rs.122.04 crore has been allocated for implementation of the plan to the Districts during 2014-15. Similarly, during the year 2012-13 and 2013-14 an amount of Rs.115.46 crore and Rs.109.95 crore have been utilised respectively by the districts.

### 13<sup>TH</sup> FINANCE COMMISSION AWARD

Under this programme, an amount of Rs.264.89 crore has been released during 2014-15 to the district and the districts have also started its implementation taking various schemes under performance grants and Basic grants and till date completed 1707 nos. of schemes as against 4273 schemes taken up across the State. Similarly, during the year 2012-13 and 2013-14 about 13920 schemes and 3360 schemes have been completed utilising an amount of Rs.254.47 crore and Rs.90.52 crore respectively.

### 4<sup>TH</sup> STATE FINANCE COMMISSION

The award period of this programme is 2011-12 to 2015-16 and funded by the State Govt. Under this programme the construction of Zila Parishad office building, multipurpose hall and office building of Anchalik Panchayats, Gaon Panchayats, residential quarter of BDOs/EOs/Grade-III, IV staff and for Anchalik Panchayats and for Gaon Panchayat Secretaries etc., followed by the implementation of visible schemes like construction of roads, drains, park etc. are also implemented by the Zila Parisads of the districts. Under this programme , an amount of Rs.298.81 crore has been released under the component of Grants in Aid and Non-Salary which is presently under utilisation and more than 1407 nos. of schemes out of 3647 schemes taken up have been completed during 2014-15. No fund have been released by the state Government during 2013-14.

### BACKWARD REGION GRANT FUND (BRGF)

Backward Regional Grant Fund (BRGF) is designed to redress regional imbalances in development. The financial resources provided to supplement and converging existing developmental inflows into 13 districts of the state of Assam identified by the Planning Commission, Government of India. It has two funding wings – (1) Development Grant, and (2) Capacity Building. The Govt. of India allocates the fund to the BRGF districts under the components like –

- i) Special component plan for SC (SCPSC);
- ii) Special component plan for ST Sub Plan (STSP); and
- iii) Non SCPSC/STSP category.

During the year 2014-15, an amount of Rs. 108.53 crore have been utilised where more than 2806 various schemes have been already implemented by the BRGF District and about 3210 nos. of schemes are now in ongoing stage. Similarly, during the year 2012-13 and 2013-14 Rs.119.73 crore and Rs.87.91 crore have been utilised and 1837 and 2150 nos. of schemes have been implemented respectively.

#### OTHER STATE PLAN SCHEME:

#### CM'S JEEVAN JYOTI SWANIYOJAN YOJANA/CM'S SPECIAL EMPLOYMENT GENERATION SCHEME

A self employment generation programme under CM's special employment generation programme under State Plan Scheme has been implemented during the 11<sup>TH</sup> Five Year Plan period for imparting training and providing materials for self employment among the rural BPL families. This programme is continuing. The SIRD has set a target of 10,000 persons to be assisted with training along with Government subsidy and support services. The amount of credit to be provided with 50 percent Govt. subsidy for Employment Generation is Rs.73.10 crore.

#### SKILL DEVELOPMENT TRAINING/STRENGTHENING OF EXTENSION TRAINING CENTRES PROGRAMME UNDER SIRD

The State Institute of Rural Development (SIRD), Assam has been organising skill development training programmes on different activities for providing self employment avenues for unemployed youths, farmers, weavers, artisans, entrepreneurs etc., as well as given thrust for upgrading the skill of traditional activities for income generation and livelihood promotion. The Government of India has been providing 100 percent grant for strengthening the infrastructure of SIRD and the State Government also borne its share of 10 percent of total recurring grant. Moreover, the Government of Assam has set up the Resource Centre in IT and Skill Development at Kahikuchi with a view to transfer the benefit of technology development directly to the communities at the grass root level to uplift life and livelihood of rural poor.

Since 2001-2013, the Extension Centre has provided managerial and skill development training to 1.6 lakh persons comprising youths, women, farmers, weavers, artisans etc., for livelihood. During 2015-16 about 4700 persons have to be assisted skill development training on various activities.

## APPENDIX 18.1

## DISTRICT WISE PHYSICAL ACHIEVEMENT UNDER MGNREGA IN ASSAM 2014-15

| Sl | Name of District | EMPLOYMENT GENERATED (Lakh Mandays) |         |          |          |         |
|----|------------------|-------------------------------------|---------|----------|----------|---------|
|    |                  | SC                                  | ST      | OTHERS   | TOTAL    | WOMEN   |
| 1  | 2                | 3                                   | 4       | 5        | 6        | 7       |
| 1  | Kokrajhar        | 5490                                | 136884  | 175051   | 317425   | 102062  |
| 2  | Dhubri           | 13072                               | 698     | 896124   | 909894   | 333330  |
| 3  | Goalpara         | 24380                               | 154869  | 422227   | 601476   | 225043  |
| 4  | Barpeta          | 21336                               | 10920   | 747971   | 780227   | 276797  |
| 5  | Morigaon         | 199049                              | 163610  | 1408066  | 1770725  | 451074  |
| 6  | Nagaon           | 323314                              | 128209  | 3438391  | 3889914  | 738088  |
| 7  | Sonitpur         | 19754                               | 25586   | 259630   | 304970   | 98164   |
| 8  | Lakhimpur        | 63714                               | 351265  | 902925   | 1317904  | 422575  |
| 9  | Dhemaji          | 4006                                | 70397   | 129304   | 203707   | 84093   |
| 10 | Tinsukia         | 8848                                | 56000   | 534362   | 599210   | 172667  |
| 11 | Dibrugarh        | 28741                               | 88877   | 649462   | 767080   | 287231  |
| 12 | Sivasagar        | 29806                               | 45749   | 861984   | 937539   | 320100  |
| 13 | Jorhat           | 45942                               | 123540  | 438750   | 608232   | 163475  |
| 14 | Golaghat         | 20353                               | 52467   | 414094   | 486914   | 143759  |
| 15 | K. Anglong       | 23838                               | 595465  | 137593   | 756896   | 269086  |
| 16 | Dima Hasao       | 1333                                | 79406   | 7732     | 88471    | 32776   |
| 17 | Cachar           | 92519                               | 15792   | 1329262  | 1437573  | 215564  |
| 18 | Karimganj        | 40475                               | 645     | 191187   | 232307   | 28925   |
| 19 | Hailakandi       | 19782                               | 3303    | 200381   | 223466   | 42710   |
| 20 | Bongaigaon       | 24682                               | 3726    | 364869   | 393277   | 148348  |
| 21 | Chirang          | 52587                               | 533215  | 463596   | 1049398  | 417273  |
| 22 | Kamrup           | 77751                               | 100586  | 994426   | 1172763  | 334593  |
| 23 | Kamrup(M)        | 18236                               | 30977   | 50321    | 99534    | 47202   |
| 24 | Nalbari          | 10490                               | 7637    | 217508   | 235635   | 40470   |
| 25 | Baksa            | 70537                               | 344711  | 396987   | 812235   | 292716  |
| 26 | Darrang          | 16743                               | 2810    | 688913   | 708466   | 154742  |
| 27 | Udalguri         | 4683                                | 48978   | 58669    | 112330   | 30506   |
|    | ASSAM            | 1261461                             | 3176322 | 16379785 | 20817568 | 5873369 |

Source: Office of the Commissioner of Panchayat and Rural Development, Assam

APPENDIX-18.2  
DISTRICT-WISE JOB CARDS ISSUED AND EMPLOYMENT GENERATED IN ASSAM  
DURING 2014-15

| Sl. No. | District      | Total no. of Job Cards Issued | No. of Households demanded Employment | No. of Households provided Employment | No. of Households provided 100 days employment | No. of Disabled persons provided employment |
|---------|---------------|-------------------------------|---------------------------------------|---------------------------------------|--|---|
| 1       | 2             | 3                             | 4                                     | 5                                     | 6  | 7   |
| 1       | Kokrajhar     | 180537                        | 13015                                 | 12722                                 | 54   | 19  |
| 2       | Dhubri        | 200383                        | 29561                                 | 27426                                 | 517  | 6   |
| 3       | Goalpara      | 146457                        | 43858                                 | 39561                                 | 182  | 45  |
| 4       | Barpeta       | 249665                        | 29811                                 | 25952                                 | 906  | 280   |
| 5       | Morigaon      | 165691                        | 90845                                 | 71232                                 | 520  | 56  |
| 6       | Nagaon        | 239066                        | 129306                                | 118210                                | 3168   | 94  |
| 7       | Sonitpur      | 246236                        | 32910                                 | 28022                                 | 8  | 164   |
| 8       | Lakhimpur     | 168698                        | 45193                                 | 42169                                 | 1118   | 80  |
| 9       | Dhemaji       | 118470                        | 11935                                 | 10448                                 | 18   | 9   |
| 10      | Tinsukia      | 131160                        | 37291                                 | 33076                                 | 51   | 18  |
| 11      | Dibrugarh     | 150510                        | 61803                                 | 55392                                 | 121  | 137   |
| 12      | Sivasagar     | 141304                        | 55021                                 | 50492                                 | 182  | 130   |
| 13      | Jorhat        | 132839                        | 43511                                 | 36562                                 | 71   | 11  |
| 14      | Golaghat      | 138100                        | 37021                                 | 31013                                 | 26   | 32  |
| 15      | Karbi-Anglong | 212946                        | 71761                                 | 69066                                 | 17   | 19  |
| 16      | Dima-Hasao    | 40595                         | 5816                                  | 5790                                  | 33   | 2   |
| 17      | Cachar        | 210557                        | 65598                                 | 52843                                 | 1069   | 29  |
| 18      | Karimganj     | 172613                        | 17066                                 | 15985                                 | 15   | 19  |
| 19      | Hailakandi    | 116306                        | 28518                                 | 22776                                 | 0  | 19  |
| 20      | Bongaigaon    | 115584                        | 25272                                 | 21751                                 | 146  | 55  |
| 21      | Chirang       | 94035                         | 34791                                 | 32395                                 | 894  | 17  |
| 22      | Kamrup        | 201145                        | 49312                                 | 42830                                 | 905  | 71  |
| 23      | Kamrup (M)    | 8469                          | 8469                                  | 7721                                  | 8  | 5   |
| 24      | Nalbari       | 107507                        | 14713                                 | 12604                                 | 24   | 4   |
| 25      | Baksa         | 186294                        | 49461                                 | 43896                                 | 35   | 59  |
| 26      | Darrang       | 158052                        | 48293                                 | 40363                                 | 153  | 58  |
| 27      | Udalguri      | 119093                        | 13461                                 | 9265                                  | 0  | 3   |
|         | ASSAM         | 4183913                       | 1083612                               | 959562                                | 10241  | 1441  |

Source: Office of the Commissioner of Panchayat and Rural Development, Assam

## APPENDIX-18.3

## DISTRICT WISE PHYSICAL PROGRESS UNDER NATIONAL SOCIAL ASSISTANCE PROGRAMME IN ASSAM, 2014-15

| Sl. No. | Indira Gandhi National Old Age Pension Scheme |        |             |                    |             |
|---------|---|--------|-------------|--------------------|-------------|
|         | Age Group of 60-79 Years                      |        |             | 80 Years and above |             |
|         | District                                      | Target | Achievement | Target             | Achievement |
| 1       | 2   | 3      | 4           | 5                  | 6           |
| 1.      | Kokrajhar                                     | 26483  | 26483       | 1589               | 1589        |
| 2.      | Dhubri  | 31793  | 31793       | 2814               | 2814        |
| 3.      | Goalpara                                      | 21960  | 21960       | 1482               | 1482        |
| 4.      | Barpeta                                       | 19307  | 19307       | 2204               | 2204        |
| 5.      | Morigaon                                      | 27002  | 27002       | 1575               | 1575        |
| 6.      | Nagaon  | 82631  | 82631       | 4078               | 4078        |
| 7.      | Sonitpur                                      | 53279  | 53279       | 2644               | 2644        |
| 8.      | Lakhimpur                                     | 26093  | 26093       | 1556               | 1556        |
| 9.      | Dhemaji                                       | 17031  | 17031       | 1088               | 1088        |
| 10.     | Tinsukia                                      | 23808  | 23808       | 1697               | 1697        |
| 1.      | Dibrugarh                                     | 22403  | 22403       | 1433               | 1433        |
| 12.     | Sivasagar                                     | 30637  | 30637       | 2053               | 2053        |
| 13.     | Jorhat  | 41997  | 41997       | 1394               | 1394        |
| 14.     | Golaghat                                      | 22057  | 22057       | 1339               | 1339        |
| 15.     | Karbi-Anglong                                 | 12350  | 12350       | 514                | 514         |
| 16.     | Dima-Hasao                                    | 9084   | 9084        | 265                | 265         |
| 17.     | Cachar  | 29263  | 29263       | 2463               | 2463        |
| 18.     | Karimganj                                     | 21122  | 21122       | 1687               | 1687        |
| 19.     | Hailakandi                                    | 19955  | 19955       | 1010               | 1010        |
| 20.     | Bongaigaon                                    | 14119  | 14119       | 1057               | 1057        |
| 21.     | Chirang                                       | 7500   | 7500        | 803                | 803         |
| 22.     | Kamrup  | 60568  | 60568       | 1839               | 1839        |
| 23.     | Kamrup (M)                                    | 16475  | 16475       | 323                | 323         |
| 24.     | Nalbari                                       | 33752  | 33752       | 1345               | 1345        |
| 25.     | Baksa   | 26118  | 26118       | 1577               | 1577        |
| 26.     | Darrang                                       | 18490  | 18490       | 1340               | 1340        |
| 27.     | Udalguri                                      | 14928  | 14928       | 1340               | 1340        |
|         | ASSAM   | 730205 | 730205      | 42509              | 42509       |

Source: Office of the Commissioner of Panchayat and Rural Development, Assam



## APPENDIX-18.4

DISTRICT WISE TARGET AND PHYSICAL ACHIEVEMENT UNDER IAY IN ASSAM  
DURING 2014-15

| Sl. No. | District      | Annual Target (No. of houses) | Houses completed against Target | Under construction (sanction before 2014-15) | Percentage of achievement against |
|---------|---------------|-------------------------------|---------------------------------|--|-----------------------------------|
| 1       | 2             | 3                             | 4                               | 5  | 6                                 |
| 1.      | Kokrajhar     | 7265                          | 4170                            | 14024  | 57.40                             |
| 2.      | Dhubri        | 12040                         | 5793                            | 22515  | 48.11                             |
| 3.      | Goalpara      | 7131                          | 5490                            | 12306  | 76.99                             |
| 4.      | Barpeta       | 10813                         | 5271                            | 16435  | 48.25                             |
| 5.      | Morigaon      | 6585                          | 5473                            | 7142   | 83.11                             |
| 6.      | Nagaon        | 16378                         | 9870                            | 39410  | 60.26                             |
| 7.      | Sonitpur      | 10066                         | 4072                            | 16023  | 40.45                             |
| 8.      | Lakhimpur     | 6647                          | 5600                            | 10664  | 84.25                             |
| 9.      | Dhemaji       | 5036                          | 11004                           | 6998   | 19.94                             |
| 10.     | Tinsukia      | 5109                          | 4008                            | 8289   | 78.45                             |
| 1.      | Dibrugarh     | 5461                          | 734                             | 10384  | 13.44                             |
| 12.     | Sivasagar     | 5000                          | 3389                            | 11675  | 67.78                             |
| 13.     | Jorhat        | 5284                          | 1255                            | 7667   | 23.75                             |
| 14.     | Golaghat      | 5308                          | 2589                            | 10742  | 48.78                             |
| 15.     | Karbi-Anglong | 8220                          | 6410                            | 14304  | 77.98                             |
| 16.     | Dima-Hasao    | 2318                          | 1713                            | 3362   | 73.90                             |
| 17.     | Cachar        | 9128                          | 8356                            | 17095  | 91.54                             |
| 18.     | Karimganj     | 7229                          | 5704                            | 11294  | 78.90                             |
| 19.     | Hailakandi    | 3962                          | 1957                            | 527  | 49.39                             |
| 20.     | Bongaigaon    | 4513                          | 554                             | 7782   | 12.28                             |
| 21.     | Chirang       | 3795                          | 2430                            | 6467   | 64.03                             |
| 22.     | Kamrup        | 10459                         | 23                              | 17657  | 0.22                              |
| 23.     | Kamrup (M)    | 1423                          | 565                             | 1205   | 39.70                             |
| 24.     | Nalbari       | 4383                          | 4237                            | 4265   | 96.67                             |
| 25.     | Baksa         | 7993                          | 1543                            | 12257  | 19.30                             |
| 26.     | Darrang       | 5101                          | 3116                            | 4732   | 61.09                             |
| 27.     | Udalguri      | 6524                          | 300                             | 12509  | 4.60                              |
|         | ASSAM         | 183171                        | 105572                          | 307730                                       | 57.64                             |

Source: Office of the Commissioner of Panchayat and Rural Development, Assam

APPENDIX-18.5  
NRLM (CENTRALLY SPONSORED SCHEMES, MORD)  
DISTRICT-WISE NO. OF SELF HELP GROUP IN ASSAM

| Sl. No. | District   | No. of Women SHG Formed |         |             |         | No. of SHG Provided with Revolving Fund |         |             |         |
|---------|------------|-------------------------|---------|-------------|---------|---|---------|-------------|---------|
|         |            | Target                  |         | Achievement |         | Target                                  |         | Achievement |         |
|         |            | 2013-14                 | 2014-15 | 2013-14     | 2014-15 | 2013-14                                 | 2014-15 | 2013-14     | 2014-15 |
| 1.      | Baksa      | 400                     | 252     | 387         | 240     | 160                                     | 160     | 100         | 255     |
| 2.      | Barpeta    | 622                     | 264     | 414         | 489     | 160                                     | 160     | 184         | 330     |
| 3.      | Bongaigaon | 650                     | 252     | 582         | 313     | 160                                     | 160     | 172         | 504     |
| 4.      | Cachar     | 550                     | 252     | 332         | 143     | 160                                     | 160     | 80          | 336     |
| 5.      | Darrang    | 550                     | 252     | 376         | 131     | 160                                     | 160     | 192         | 369     |
| 6.      | Dhubri     | 600                     | 252     | 438         | 247     | 160                                     | 160     | 85          | 464     |
| 7.      | Dibrugarh  | 550                     | 252     | 393         | 332     | 160                                     | 160     | 176         | 227     |
| 8.      | Dima Hasao | 450                     | 126     | 384         | 87      | 160                                     | 160     | 109         | 210     |
| 9.      | Goalpara   | 600                     | 252     | 478         | 256     | 160                                     | 160     | 93          | 427     |
| 10.     | Golaghat   | 600                     | 252     | 388         | 203     | 160                                     | 160     | 271         | 186     |
| 11.     | Kamrup (M) | 500                     | 252     | 422         | 236     | 160                                     | 160     | 308         | 363     |
| 12.     | Kamrup     | 500                     | 252     | 438         | 171     | 160                                     | 160     | 75          | 637     |
| 13.     | Karimganj  | 550                     | 252     | 440         | 250     | 160                                     | 160     | 70          | 295     |
| 14.     | Kokrajhar  | 450                     | 252     | 400         | 203     | 160                                     | 160     | 75          | 585     |
| 15.     | Lakhimpur  | 600                     | 252     | 412         | 643     | 160                                     | 160     | 145         | 510     |
| 16.     | Morigaon   | 800                     | 252     | 715         | 115     | 160                                     | 160     | 150         | 463     |
| 17.     | Nalbari    | 600                     | 252     | 430         | 604     | 160                                     | 160     | 50          | 245     |
| 18.     | Sivasagar  | 500                     | 378     | 455         | 87      | 160                                     | 160     | 291         | 218     |
| 19.     | Udalguri   | 400                     | 252     | 385         | 445     | 160                                     | 160     | 166         | 300     |
|         | Assam      | 10472                   | 4800    | 8269        | 5195    | 3040                                    | 3040    | 2792        | 6924    |

APPENDIX-18.6  
NRLM (CENTRALLY SPONSORED SCHEMES, MORD)  
DISTRICT-WISE INFORMATION OF VILLAGE ORGANISATION, IN ASSAM

| Sl. No. | District   | No. of Village Organisation Formed |         |             |         | No. of Village Organisation's Provided with Community Investment Fund |         |             |         |
|---------|------------|------------------------------------|---------|-------------|---------|---|---------|-------------|---------|
|         |            | Target                             |         | Achievement |         | Target  |         | Achievement |         |
|         |            | 2013-14                            | 2014-15 | 2013-14     | 2014-15 | 2013-14   | 2014-15 | 2013-14     | 2014-15 |
| 1.      | Baksa      | 80                                 | 50      | 19          | 15      | 10  | 4       | 10          | 90      |
| 2.      | Barpeta    | 100                                | 50      | 38          | 25      | 10  | 4       | 10          | 100     |
| 3.      | Bongaigaon | 80                                 | 50      | 32          | 33      | 10  | 4       | 10          | 88      |
| 4.      | Cachar     | 75                                 | 50      | 23          | 18      | 10  | 4       | 0           | 100     |
| 5.      | Darrang    | 75                                 | 50      | 17          | 32      | 10  | 4       | 10          | 90      |
| 6.      | Dhubri     | 75                                 | 50      | 29          | 10      | 10  | 4       | 10          | 70      |
| 7.      | Dibrugarh  | 75                                 | 50      | 26          | 33      | 10  | 4       | 10          | 90      |
| 8.      | Dima Hasao | 55                                 | 50      | 30          | 8       | 10  | 4       | 8           | 93      |
| 9.      | Goalpara   | 75                                 | 50      | 32          | 21      | 10  | 4       | 9           | 90      |
| 10.     | Golaghat   | 75                                 | 50      | 25          | 38      | 10  | 4       | 10          | 90      |
| 11.     | Kamrup (M) | 60                                 | 50      | 41          | 54      | 10  | 4       | 10          | 85      |
| 12.     | Kamrup     | 60                                 | 50      | 49          | 44      | 10  | 4       | 10          | 90      |
| 13.     | Karimganj  | 60                                 | 50      | 23          | 19      | 10  | 4       | 10          | 50      |
| 14.     | Kokrajhar  | 80                                 | 50      | 34          | 33      | 10  | 4       | 10          | 90      |
| 15.     | Lakhimpur  | 60                                 | 50      | 62          | 33      | 10  | 4       | 10          | 100     |
| 16.     | Morigaon   | 100                                | 50      | 82          | 0       | 10  | 4       | 10          | 106     |
| 17.     | Nalbari    | 60                                 | 50      | 35          | 73      | 10  | 4       | 10          | 100     |
| 18.     | Sivasagar  | 50                                 | 50      | 31          | 8       | 10  | 4       | 10          | 30      |
| 19.     | Udalguri   | 80                                 | 50      | 35          | 18      | 10  | 4       | 10          | 90      |
| Assam   |            | 1375                               | 950     | 663         | 515     | 190   | 76      | 177         | 1642    |

APPENDIX-18.7  
WORLD BANK SPONSORED PROJECT (NRLP)  
DISTRICT-WISE NO. OF SELF HELP GROUP IN ASSAM

| Sl. No. | District      | No. of Women SHG Formed |         |             |         | No. of SHG Provided with Revolving Fund |             |             |         |
|---------|---------------|-------------------------|---------|-------------|---------|---|-------------|-------------|---------|
|         |               | Target                  |         | Achievement |         | Target                                  |             | Achievement |         |
|         |               | 2013-14                 | 2014-15 | 2013-14     | 2014-15 | 2013-14                                 | 2014-15     | 2013-14     | 2014-15 |
| 1.      | Chirang       | 850                     | 292     | 730         | 595     | 320                                     | 320         | 454         | 565     |
| 2.      | Dhemaji       | 1050                    | 292     | 985         | 516     | 320                                     | 320         | 887         | 535     |
| 3.      | Hailakandi    | 1200                    | 292     | 1083        | 294     | 320                                     | 320         | 173         | 635     |
| 4.      | Jorhat        | 1830                    | 438     | 1576        | 656     | 480                                     | 480         | 853         | 1070    |
| 5.      | Karbi Anglong | 1360                    | 438     | 984         | 645     | 480                                     | 480         | 175         | 972     |
| 6.      | Nagaon        | 3560                    | 876     | 3269        | 761     | 960                                     | 960         | 1521        | 2628    |
| 7.      | Sonitpur      | 2230                    | 584     | 1696        | 1194    | 640                                     | 640         | 533         | 2102    |
| 8.      | Tinsukia      | 1500                    | 438     | 985         | 679     | 480                                     | 480         | 658         | 839     |
| Assam   |               | 13580                   | 3650    | 11308       | 5340    | <b>4000</b>                             | <b>4000</b> | 5254        | 9346    |

APPENDIX-18.8  
WORLD BANK SPONSORED PROJECT (NRLP)  
DISTRICT-WISE NO. OF SELF HELP GROUP IN ASSAM

| Sl. No. | District      | No. of Village Organisation Formed |         |             |         | No. of Village Organisation's Provided with Community Investment Fund |         |             |         |
|---------|---------------|------------------------------------|---------|-------------|---------|---|---------|-------------|---------|
|         |               | Target                             |         | Achievement |         | Target  |         | Achievement |         |
|         |               | 2013-14                            | 2014-15 | 2013-14     | 2014-15 | 2013-14   | 2014-15 | 2013-14     | 2014-15 |
| 1.      | Chirang       | 100                                | 100     | 33          | 39      | 20  | 8       | 20          | 181     |
| 2.      | Dhemaji       | 150                                | 100     | 123         | 43      | 20  | 8       | 18          | 187     |
| 3.      | Hailakandi    | 150                                | 100     | 43          | 36      | 20  | 8       | 20          | 98      |
| 4.      | Jorhat        | 200                                | 150     | 127         | 70      | 30  | 12      | 30          | 252     |
| 5.      | Karbi Anglong | 150                                | 150     | 98          | 41      | 30  | 12      | 29          | 277     |
| 6.      | Nagaon        | 450                                | 200     | 292         | 52      | 60  | 24      | 59          | 541     |
| 7.      | Sonitpur      | 250                                | 223     | 143         | 149     | 40  | 16      | 38          | 350     |
| 8.      | Tinsukia      | 175                                | 150     | 105         | 38      | 30  | 12      | 30          | 330     |
| Assam   |               | 1625                               | 1173    | 964         | 468     | 250   | 100     | 244         | 2216    |

Source: Table- 18.5 to 18.8, Assam State Rural Livelihoods Mission Society.

\* \* \*

## CHAPTER – XIX

## SOCIAL SECTOR

In the past few decades the focus of development has shifted from economic growth to human development. World wide development of social sectors has and plays a crucial role for improving human development indicators and attainment of Millennium Development Goals (MDG). In Assam, social sector development bears the essence of overall economic development and human development in the State. These sectors includes the State education, health and family welfare, safe drinking water, sanitation, welfare programme for women, children, SC & ST sub sectors, development of marginalized groups and backward regions. Development in these sectors has build up strong edifice of a stimulating economy in terms of rising income and employment opportunities, productivity, technology advancement and finally has enhanced the quality of life in the State. The state Government has been according high priority to these social sectors over the successive plans with positive outcomes thereby.

## EDUCATION

Education is the mirror which reflects the social and economic status of a State. it strengthens the fabric of all round development, economic, social, technical, environmental and scientific areas in the State. It is a distinctive investment that will ensure better access to a progressive future generation. It will help in creating an environment for improvement of the quality of life.

Education is the key development input, a fundamental requirement for human resource development, not only for an individual in particular, but for the society, nation, as a whole. Education not only removes ignorance, it helps in boosting the moral values of individuals by enhancing their skills, efficiency, productivity and overall quality of life. It provides the skill to become more self-reliance, ability to be better informed, be more responsible, have better ability to exercise wide choices in activities of day to day lives, thereby being more productive and also have better standards of living. Education is very important and has been accepted as one of the most crucial inputs required for nation building. Keeping in view the goal of nation building, India has and is committed for the provision of free and compulsory elementary education to all children. Towards achievement of this end, Indian Parliament has enacted a legislation making education free and compulsory for every child in the age group 6 to 14 years of age, which has come in force since 1<sup>st</sup> April 2010. Rashtriya Madhyamik Siksha Abhiyan has been launched, as a step to universalise secondary education. Simultaneously, efforts were also made for the creation of a strong and vast system of higher and technical education.

## LITERACY RATE IN ASSAM

Literacy has both economic and social motives of an individual wellbeing. It improves self esteem, enhances social status, decision making and thereby enhances the confidence level of an individual in the society. It impacts human development outcomes, both as an input and output creating lasting benefits.

Thus literacy rates is the most important indicator that has the ability to reveal the overall human resource quality of a nation Census data reveals that the literacy rates in Assam has grown encouragingly as per Table-19.1 shown below

TABLE-19.1  
LITERACY RATES, ASSAM AND INDIA

| State | 1991   |       |        | 2001   |       |        | 2011   |       |        |
|-------|--------|-------|--------|--------|-------|--------|--------|-------|--------|
|       | Person | Male  | Female | Person | Male  | Female | Person | Male  | Female |
| Assam | 52.89  | 61.87 | 43.03  | 63.25  | 71.28 | 54.61  | 72.19  | 77.85 | 66.27  |
| India | 52.21  | 64.13 | 39.28  | 64.83  | 75.26 | 53.67  | 72.99  | 80.89 | 64.64  |

Source : Registrar General of India

As per Census 2011, the literacy rate of Assam is 72.19, with male literacy rate 77.85, which is behind the national rate 72.99 and female literacy rate 66.27, which is below the national rate of 64.64. The literacy rates for rural and urban areas were calculated at 69.34 percent and 88.47 percent respectively. For the achievement of the goal of Universal Elementary Education, educational programmes of Sarva Siksha Abhijan (SSA) have been implemented along with various innovative schemes by the State Government. The State Government also equally gives emphasis in providing qualitative technical education to build technical skills to cater to the needs of the economy. In view of the importance of education and its impact on socio-economic development, the state government has also been implementing various educational programmes from time to time.

#### ELEMENTARY EDUCATION

Universalisation of primary education addresses two major groups, the out of school children during the primary school going age and the children who were forced to drop out even before completion of primary grade classes due to social and economic impediments. For the provision of free and compulsory education to all children upto the age of 14 years the state Government is implementing the 'Right to Education Act 2009' as "Assam Right of Children to Free and Compulsory Education Rules, 2011" in Assam. The Directorate of Elementary Education (DEE), Assam is functioning under the act to achieve the goal of universalisation of Elementary Education in the State to provide useful and relevant elementary education to all children in the age group of 6-14 years of age. It aims in bridging all gender and social category gaps at primary stage with focus on elementary education of satisfactory quality. All schemes for elementary education are implemented through SSA. The table below shows the numbers of Government/ provisioned schools functioning under DEE.

|          | Lower Primary | Upper Primary | Upper Primary with high schools |
|----------|---------------|---------------|---------------------------------|
| Schools  | 40017         | 7775          | 1662                            |
| Teachers | 112398        | 55093         | 12932                           |

The State Government in order to provide and promote quality education, to attract children of all social groups, and also see to the implementation of various Central Government schemes and programmes. The Directorate of Elementary Education (DEE) provides the following incentives-

Mid-day Meal for students of primary and upper primary schools.

Teaching Learning materials (TLM) to Government and Provisional Schools.

Provision of free text books upto Class VIII to all categories of schools including institutions not receiving financial assistance.

Provisions of scholarship to SC, ST, disabled children and meritorious students.

Provision of uniform to students upto Class VIII level

Provision of other incentives namely bicycles, umbrella, etc.

Provision of special scholarship to 1 lakh students.

#### OVER VIEW OF 10<sup>TH</sup> AND 11<sup>TH</sup> FIVE YEAR PLAN

| Plan Period           | Outlay (Rupees in lakh) | Expenditure (Rupees in lakh) |
|-----------------------|-------------------------|------------------------------|
| 10 <sup>th</sup> Plan | 72852.45                | 74129.68                     |
| 11 <sup>th</sup> Plan | 66813.00                | 90997.00                     |

Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1), Planning and Development Department, Assam.

The Budget Outlay in 11<sup>th</sup> Five year Plan was Rs.66813.00 lakh against which expenditure incurred during the period was Rs. 90997.00 lakh, an excess of Rs. 24184.00 lakh which had been met by re-appropriation from the non-plan head. The major part of expenditure has been incurred for releasing the State share for implementation of SSA and Mid-Day Meal schemes. The major achievement of the 10<sup>th</sup> Five Year Plan is conversion of the liabilities of salaries from plan to non-plan.

## KEY ACHIEVEMENTS IN ELEMENTARY EDUCATION DURING 11<sup>TH</sup> FIVE YEAR PLAN (2007-2012)

During the Eleventh Five Year Plan the State has achieved a lot at the lower primary and upper primary level. Some of the key achievements during this period are as follows:

- ❖ During the Plan period, 5015 Education Guarantee Scheme (EGS) centers have been upgraded to Govt. Lower Primary Schools.
- ❖ To make the Elementary Cycle of eight years, Class-V has been amalgamated to Lower Primary and Class-VIII to Upper Primary as like the rest of the Country.
- ❖ State curriculum has been reformed in the light of National Curriculum Framework (NCF), 2005 for class-I to VIII and new text books are introduced accordingly from January, 2011. The NCERT text books for core subjects-Maths, Science, English and Hindi are being introduced in the State.
- ❖ During the period, 135301 girl students were provided Bi-cycle under Chief Minister's Special Scheme, "Assam Bikash Yojana".
- ❖ Free uniform and textbooks were provided to elementary school students.
- ❖ Girl students of Class I and Class II of primary schools in rural areas were provided footwear.
- ❖ 6555 numbers of lower primary and upper primary were provincialised w.e.f 1<sup>st</sup> January 2013.

### DROP-OUT RATES

The average annual drop-out rate at Primary level in the State during 2014-15 as per DISE, 2014-15 was 7.44 against the all India drop-out rates of 4.34. At the Upper Primary level the average drop out rate in the State during 2014-15 was 7.05 against the all India rate of 3.77. The drop-out rate at the Elementary Level (Class- I to Class-VIII) in the age group 6 years to 14 years in the State was 7.32 as against the all India rate of 4.15 in 2014-15.

The table below shows the drop-out rates during 2014-15 in the NE States and at all India level.

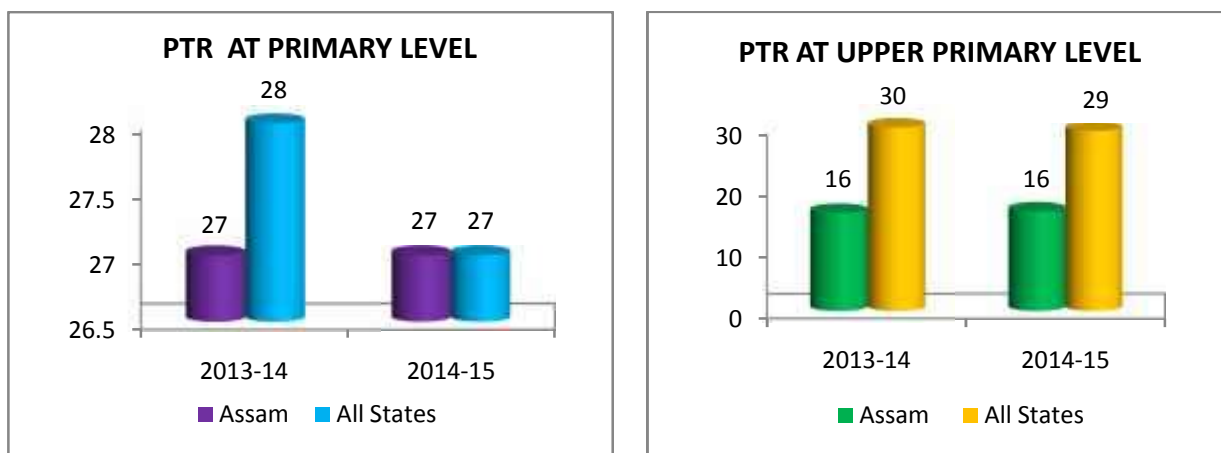
TABLE-19.2  
AVERAGE ANNUAL - DROP OUT RATES IN NORTH-  
EASTERN STATES AND ALL INDIA, 2014-15

| States            | Primary Level | Upper Primary Level | Elementary Level<br>(Class I to Class-VIII) |
|-------------------|---------------|---------------------|---|
| Arunachal Pradesh | 10.89         | 5.59                | 4.15  |
| Assam             | 7.44          | 7.05                | 7.32  |
| Manipur           | 18.00         | 7.02                | 14.91                                       |
| Meghalaya         | 10.34         | 6.84                | 9.34  |
| Mizoram           | 12.96         | 6.02                | 6.02  |
| Nagaland          | 19.41         | 17.86               | 18.93                                       |
| Sikkim            | 4.57          | 5.14                | 4.79  |
| Tripura           | 3.58          | 2.72                | 3.28  |
| India             | 4.34          | 3.77                | 4.15  |

Source: Flash Statistics, DISE-2014-15.

### PUPIL-TEACHER RATIO (PTR)

The Pupil-Teacher Ratio in the Primary and Upper Primary Levels of the State during the year 2014-15 was 27 and 16 respectively as against the all States ratio of 27 and 29 respectively. The graph below the PRT of Primary and Upper Primary in the State and at All State level during 2013-14 and 2014-15 as per Flash statistics: Elementary Education in India Progress towards UEE, 2014-15.



### ENROLMENT RATIO

The Gross Enrolment Ratio (GER) at Primary Level during 2013-14 and 2014-15 in Assam is 113.43 and 144.96 against 101.36 and 100.08 respectively for all States. The GER at Upper Primary Level during 2013-14 and 2014-15 in Assam was 93.13 and 95.86 compared to 89.33 and 91.24 for all States respectively.

### EDUCATION DEVELOPMENT INDEX

The National University of Educational Planning and Administration (NUEPA) and the Ministry of Human Resource and Development (Department of School Education and Literacy), Govt. of India computes the Education Development Index (EDI) for primary and upper primary and composite index for the entire elementary education based on the District Information System for Education (DISE). To compute EDI, 24 indicators are regrouped into four sub groups viz. access, infrastructure, teacher and outcome.

According to DISE 2014-15-Flash Statistics, the State is ranked 35 at primary level, 32 at upper primary level and 33 at composite level with EDI 0.473, 0.511 and 0.492 respectively. The all India ranking of the State as per DISE 2014-15 for access to primary schools is 7, for infrastructure is 32, for teacher is 34 and for outcome is 6. The EDI rank of the State in respect of access, infrastructure, teacher and outcome at upper primary level is 34, 36, 29 and 9 respectively.

### MID DAY MEAL (MDM)

The Mid Day Meal, a Centrally Sponsored Scheme (CSS) programme has been started in Assam with effect from January 2005 and the State is providing cooked meal to the students of class I to Class VIII since 2005-06 to achieve the objectives like increasing enrolment and regularity of attendance, reducing dropouts and sustaining retention and improving level of learning and self esteem impact on nutrition of students. The total plan fund allocation for the programme in 2015-16 is Rs. 596.83 crore which includes central share and the mandatory state share of 10 percent. The state share for Mid Day Meal for the year 2015-16 is Rs.59.68 crore.

### ANNUAL PLAN 2015-16

An amount of Rs.312782.05 was provided in the State Budget for implementation of various programmes for General Education under Sectoral Allocation for Annual Plan 2015-16. The details of the same are given in Table -19.3 below:



TABLE – 19.3  
SECTORAL ALLOCATION FOR ANNUAL PLAN 2015-16

(Rs. in lakhs)

| Departments/<br>Sectors             | Salary &<br>Works | Grants<br>in Aid | Normal<br>Work | Chief<br>Minister's<br>Special<br>Package &<br>ABY | Scheme<br>Announced<br>in Budget<br>speech,<br>2013-14 | CM's<br>Dhemaji<br>Package | CM's<br>Dhakuakhana<br>package |
|-------------------------------------|-------------------|------------------|----------------|--|--|----------------------------|--------------------------------|
| 1                                   | 2                 | 3                | 4              | 5  | 6  | 7                          | 8                              |
| Social Services                     |                   |                  |                |  |  |                            |                                |
| General Education                   |                   |                  |                |  |  |                            |                                |
| (i) Elementary<br>Education         | 0.0               | 0.0              | 500.00         | 5000.00  |  |                            |                                |
| (ii) Adult<br>Education             |                   |                  | 100.00         |  |  |                            | 92.00                          |
| (iii) Secondary<br>Education        |                   |                  | 300.00         | 11600.00   | 10855.00   | 36.00                      |                                |
| (iv) Madrassa<br>Education          |                   |                  | 350.00         |  |  |                            |                                |
| (v) SCERT                           | 42.13             | 2.50             | 150.00         |  |  |                            |                                |
| (vi) Higher<br>Education            |                   | 67.00            | 500.00         | 550.00   |  |                            |                                |
| Sub-Total<br>(General<br>Education) | 42.13             | 69.50            | 1900.00        | 17150.00   | 10855.00   | 36.00                      | 92.00                          |
| Technical<br>Education              | 150.00            | 100.00           | 300.00         |  | 1300.00  |                            |                                |

TABLE – 19.3(Contd.)

| Departments/<br>Sectors             | RIDF/<br>TFC | State<br>Specific | United<br>SCA | Tied<br>ACA/SPA | Scheme<br>Announced<br>by CM's on<br>01-01-2015 | State share | Central<br>Assistance to<br>State plan<br>(Block Grant<br>& CS) | Total     |
|-------------------------------------|--------------|-------------------|---------------|-----------------|---|-------------|---|-----------|
|                                     | 9            | 10                | 11            | 12              | 13  | 14          | 15  | 16        |
| Social Services                     |              |                   |               |                 |   |             |   |           |
| General<br>Education                |              |                   |               |                 |   |             |   |           |
| (i) Elementary<br>Education         | 11092.00     | 1500.00           | 500.00        |                 |   | 22480.00    | 194231.00   | 235303.00 |
| (ii) Adult<br>Education             |              |                   |               |                 |   | 101.00      | 913.50  | 1206.50   |
| (iii) Secondary<br>Education        |              | 2190.00           | 15500.00      |                 | 4000.00   | 608.00      | 6475.00   | 51564.00  |
| (iv) Madrassa<br>Education          |              | 50.00             | 2.00          |                 |   | 55.00       | 500.00  | 957.00    |
| (v) SCERT                           |              |                   |               |                 |   | 427.79      | 3850.13   | 4472.55   |
| (vi) Higher<br>Education            |              | 362.00            | 6700.00       |                 | 100.00  | 0.00        | 11000.00  | 19279.00  |
| Sub-Total<br>(General<br>Education) | 11092.00     | 4102.00           | 22702.00      | 0.00            | 4100.00   | 23671.79    | 216969.63   | 312782.05 |
| Technical<br>Education              |              | 20.00             | 2570.00       | 1033.33         |   |             |   | 5473.33   |

Source : Govt. of Assam, Planning and Development Department. Sectoral Allocation for Annual Plan 2015-16.

## SECONDARY EDUCATION

The secondary education is a crucial stage after passing out the stage of elementary education to prepare the student with higher level of knowledge and skills for higher education. In Assam, Secondary Education covers Class IX to Class X for the age group of 14 years to 16 years and Higher Secondary stage covers Class XI to Class XII for the age group 17 years to 18 years. However, amalgamated Secondary Schools are imparting education from Class VI onwards. During 2014-15, there were 7657 numbers of Secondary Schools and 1728 numbers of Higher Secondary Schools as per flash Statistics, DISE 2014-15.

The State Secondary Report Card, 2014-15 prepared by National University of Educational Planning and Administration (NUEPA) reveals that the ratio of upper Primary Schools to Secondary Schools/sections in the State is 2.18 and the ratio of Secondary schools to Higher Secondary schools/sections is 4.43. The report further shows that the total dropout ratio for Secondary level during 2013-14 in Assam was 30.43 of which 28.59 and 32.10 were for Boys and Girls respectively against total average of 17.86 at national level during 2013-14. However, at Higher Secondary level the Annual average dropout rate in Assam during 2013-14 was 7.24 of which Boys were 7.62 and Girls 6.83 respectively against the national rate of 1.54.

TABLE-19.4  
ENROLMENT BY CASTE IN SECONDARY SCHOOLS IN ASSAM  
(IN PERCENTAGE)

| Caste  | Secondary |       | Higher Secondary |       |
|--------|-----------|-------|------------------|-------|
|        | Total     | Girls | Total            | Girls |
| SC     | 10.42     | 52.00 | 8.53             | 46.85 |
| ST     | 17.59     | 50.53 | 18.11            | 48.36 |
| OBC    | 30.49     | 50.83 | 29.24            | 49.38 |
| Muslim | 24.53     | 55.60 | 20.30            | 49.11 |

Source: Secondary Education: State Report Cards, NUEPA

## ACHIEVEMENTS OF ELEVENTH FIVE YEAR PLAN

The total allocation for improvement of secondary education in the State during the 11<sup>th</sup> Five year Plan was Rs.951.11 crore against which an amount of Rs.892.31 crore has been utilised. The total expenditure during the annual plan 2012-13 was Rs.360.52 lakh against an allocation of Rs.372.63 lakh. Few achievements during the plan period are given as follows.

- Anundoram Baruah Award to 86266 students.
- Financial grant to 36 numbers of Secondary Schools attaining 100 years or above.
- Grant to 166 numbers of Secondary schools for distinguished performance.
- Scholarship to 25113 numbers of BPL students.
- Repair and renovation grant to 1016 numbers of secondary schools at the rate of Rs.5.00 lakh.
- Financial assistance to 2021 numbers of recognized HS and HM, 185 permitted HSS and 199 numbers of Junior colleges receiving Govt. concurrence.
- Launching of Rajiv Gandhi Computer Literacy Programme.
- Study tour to NASA.
- Grant to RMSA for taking innovative schemes under Secondary Education and for providing quality education.
- Grant to Mobile Science Laboratory.
- Vocational Education through National Vocational Education Qualification Framework (NVEQF).
- Establishment of Model schools and Girls' hostel.
- Dropout rate at the Secondary level reduced to a great extent.

## AIMS AND OBJECTIVES FOR TWELFTH FIVE YEAR PLAN

The following are the thrust area for development of Secondary education in the State.

- Recruitment of quality teachers through TET examination.
- Engagement and maintenance of contractual teachers.
- Improvement of infrastructure of Secondary Schools.
- Providing scholarship of various kinds to students.
- Running of ICT in Secondary Schools (Rajiv Gandhi Computer Literacy Programme).
- Tour of top position holders to NASA.
- Providing assistance to Secondary Schools for publication of magazines, hoisting of youth festival and sports festival.
- Tour of teachers to places of repute.
- Vocationalisation of secondary education.
- Maintaining the existing vocational stream in secondary schools.
- Establishment of Model Schools and Girls' hostel.
- Implementation of RMSA schemes.
- Establishment of digital rooms in Secondary Schools.
- Reduction of school dropouts in Secondary Schools.
- Improvement in English teaching by introducing spoken English in Secondary Schools.

Total fund allocation for Secondary Education in Assam for the Annual Plan during 2015-16 is Rs.515.64 crore.

### RASHTRIYA MADHYAMIK SHIKSHA ABHIYAN (RMSA)

The Rashtriya Madhyamik Shiksha Abhiyan, Assam has taken up various activities such as infrastructure development, teacher's recruitment, establishment of model schools, establishment of girls' hostel and teachers in service training to uplift Secondary Education in Assam. All the scheme of RMSA is centrally sponsored and the State has to provide only 10 percent matching share to the RMSA.

The RMSA has taken up establishment of 24 model schools and will implement the National Vocational Education Qualification Frame Work with 10 percent State share in the State.

### MAJOR ACTIVITIES OF RMSA DURING TWELFTH FIVE YEAR PLAN

- Establishment of new school and up gradation of Upper Primary School to Secondary School. The total requirement in the State is 3957 schools of which 2607 already exists.
- Establishment of new Higher Secondary School and up gradation of existing Upper Primary School to Higher Secondary School. The total requirement in the State is 3100 schools of which 645 already exists.
- To establish 23623 Additional Classrooms as per population projection at Secondary level in the State of which 2204 has already been approved by the Govt. of India.
- To establish 19293 Additional Classrooms as per population projection at Higher Secondary level in the State of. The total requirement is 31000 classrooms of which 1887 already exist and 9820 rooms of new school.
- Integrated Science Laboratory. The total requirement is 2607 of which 149 laboratories exist and 1038 has already been approved by the Govt. of India. The target to achieve is 1420 Science laboratories in the Secondary section.
- Subject wise 3 Science Laboratory per school for Higher Secondary sections.
- Lab equipments for all 7057 Secondary and Higher Secondary Schools of which approval for 1038 schools is being granted by the Govt. of India.
- Construction of Headmaster and Principal room.

For construction of Model School, Girls' Hostel, NVEQF through RMSA Rs. 52682.77 lakh is proposed for the 12<sup>th</sup> Five Year Plan 2012-17.

## MADRASSA EDUCATION

A separate Directorate of Madrassa Education was created in 2005; earlier it was a part of Directorate of Secondary Education. At present, there are as many as 524 pre-senior Madrassas, 164 Senior Madrassas, 5 Arabic Colleges and 14 Title Madrassas continuing Madrassa education in the State. During the Eleventh Five Year Plan, 327 numbers of venture Madrassa of various categories have been provincialised.

Achievements during the Eleventh Five Year Plan were as follows:

Establishment of the Directorate of Madrassa Education, 700 Khariji Madrassa have been provided with financial assistance for infrastructure development, the Govt. of India has released an amount of Rs.1498.53 lakh as 100 percent Central assistance under the 'Scheme for Providing Quality Education in Madrassa (SPQEM)', a Centrally Sponsored Scheme. Under the provincialisation Act, 327 venture Madrassa of various categories have been provincialised.

### NEW INITIATIVES FOR 12<sup>TH</sup> FIVE YEAR PLAN

- Establishment of Madrassa University and Training College.
- Establishment of six Zonal Offices.
- Construction of Hostel for Boys and Girls.

Both the Central and State Government are equally concerned for upliftment of Madrassa Education in the State. The Govt. of India has taken up the Prime Minister's New 15 Point Programme for the 12<sup>th</sup> Five Year Plan for posting of urdu teachers, modernisation of Madrassa (SPQEM & IDMI) and infrastructure development through Moulana Azad Education Foundation. The total amount of plan proposal for development of Madrassa Education in Assam for the 12<sup>th</sup> Five Year Plan (2012-17) is Rs.71350.00 lakh.

## ADULT EDUCATION

Adult Education programme was started all over the nation in the year 1978-79. Subsequently after constitution of National Literacy Mission (NLM) in 1988, the total literacy campaign came into being. During the year 2009 the Sakshar Bharat Mission was launched by the Government of India to achieve 80 percent literacy level by 2012 at national level, by focusing on adult women literacy to reduce the gap between male and female literacy. The mission has four broader objectives, viz. imparting functional system and numeracy to non-literates; acquiring equivalency to formal educational system; imparting relevant skill development programme; and promote a leaning society by providing opportunities for continuing education. The Adult Literacy Programme is implemented to eradicate illiteracy of the age group 15 years and above in the population.

The strategic primary focus of the programme is on women, Scheduled Castes, Scheduled Tribes, Backward Communities, Char Areas, Hill Areas and Tea Tribes to achieve 80 percent literacy within 2012 as stipulated in Sakshar Bharat Mission. The 11<sup>th</sup> Five Year Plan targeted to cover 12 districts in Slot-I and Slot-II of the programme namely Dhemaji, Sonitpur, Darrang, Bongaigaon, Karbi-Anglong, Dhubri, Kokrajhar, Goalpara, Barpeta, Morigaon, Hailakandi and Tinsukia.

The Twelfth Five Year Plan targets to cover 28.48 lakh non-literates of age 15 years and above and SBM will pursue the literacy movement in the 12 districts having female literacy less than 50 percent. The total fund allocation for the Annual Plan 2015-16 is Rs.12.06 crore.

### STATE COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING (SCERT)

State Council of Educational Research and Training (SCERT), Assam is the State Academic Authority engaged in academic resource development through various programmes such as organizing long and short term training, workshops, seminars and research and evaluation activities for teachers and teacher educators to make them professionally competent for effective teaching. The present picture of trained teachers as per DISE 2013-14 is shown in the table below.

ABLE-19.5  
PERCENTAGE OF TEACHERS RECEIVED IN-SERVICE TRAINING  
DURING PREVIOUS ACADEMIC YEAR IN ASSAM

| Year    | All Schools | All Govt. Schools | All Aided Schools | All Unaided Schools |
|---------|-------------|-------------------|-------------------|---------------------|
| 2011-12 | 33.71       | 44.27             | 28.23             | 2.02                |
| 2012-13 | 24.20       | 30.16             | 22.84             | 0.90                |
| 2013-14 | 16.44       | 20.72             | 12.34             | 0.89                |

Source: Flash Statistics, DISE-2013-14.

The percentage distribution of professionally trained regular teachers in the State is presented in the table below.

TABLE-19.6

## PERCENTAGE OF PROFESSIONALLY TRAINED REGULAR TEACHERS IN ASSAM

| Year    | All Schools | Govt. Managements | Private Aided Managements | Private Unaided Managements | Unrecognised Schools |
|---------|-------------|-------------------|---------------------------|-----------------------------|----------------------|
| 2012-13 | 36.52       | 52.34             | 6.34                      | 9.63                        | -                    |
| 2013-14 | 38.68       | 51.17             | 5.90                      | 10.92                       | 3.71                 |

Source: Flash Statistics, DISE-2013-14.

During the Eleventh Five Year Plan (2007-12), an amount of Rs.3.38 crore was utilised against the revised allocation of Rs.4.67 crore on training of teachers, development of textbook, seminar/workshop, research and action research, publication and State level science exhibition.

The main objective of the Twelfth Five Year Plan for teacher education is to strengthen capacity building of teachers and teacher educators through intensive training, school visit and spot academic support programme, increase of intake capacity and strengthening of TEIs.

To create infrastructure facilities for teacher training an amount of Rs.84.40 crore is proposed for the Twelfth Five Year Plan (2012-17) and the fund allocation for annual plan 2015-16 is Rs.44.72 crore.

### HIGHER EDUCATION

The Directorate of Higher Education and Directorate of Secondary Education is established to give primary focus on expansion and promotion of Higher Education by granting financial assistance to the needy educational institutions besides implementing various programmes for development of general education and assisting for infrastructure development in general with special focus to rural and backward areas.

The numbers of Higher Educational institutions in Assam is given in Table-19.7 below:

TABLE- 19.7

## NUMBER OF HIGHER EDUCATIONAL INSTITUTIONS IN ASSAM AS ON 2014-15

| Institutions                        | Numbers |
|-------------------------------------|---------|
| Universities                        | 10      |
| Government Colleges                 | 5       |
| Provincialised Colleges             | 295     |
| Non-Govt. Colleges                  | 100     |
| Provincialised Sanskrit & Pali Tols | 97      |
| Non-Govt. Sanskrit Tols             | 96      |
| Literary & Voluntary Organisation   | 19      |
| Govt. Law College                   | 1       |
| Non-Govt Law Collges                | 20      |

Source : Higher Education, Assam, Kahilipara, Guwahati-19

The year wise approved allocation and expenditure for development of higher education during the Eleventh Five Year Plan (2007-12) is as follows-

TABLE-19.8

ALLOCATION AND EXPENDITURE DURING 11<sup>TH</sup> FIVE YEAR PLAN

(Rupees in crore)

| Year    | Allocation | Expenditure |
|---------|------------|-------------|
| 2007-08 | 15.50      | 13.79       |
| 2008-09 | 9.90       | 9.63        |
| 2009-10 | 36.38      | 34.28       |
| 2010-11 | 90.03      | 80.33       |
| 2011-12 | 130.77     | 116.83      |

Source: Draft Twelfth Five Year Plan and Annual Plan, 2014-15 (Vol-1), Planning and Development Department, Assam.

Few major achievements during 11<sup>th</sup> Five Year Plan:

- Provided Rs. 490.00 lakh for Gauhati University, Rs. 975.00 lakh for Dibrugarh University and Rs. 49.00 lakh for Cotton College for infrastructure development.
- Private University Act and Rules passed.
- Don Bosco University and Down Town University formed.
- Kokrajhar College has been taken over as Govt. College.
- K.K. Handique State Open University established.
- 5 year LLB course in B.R.M. Govt. Law College and 4 whole times and 4 part time lecturer post created.
- The Bodo Land University Act passed.

During the Twelfth Five year Plan (2012-17) an amount of Rs.1031.00 crore is proposed for the development of Higher education. The fund allocation for the year 2015-16 is Rs. 192.79 crore.

### TECHNICAL EDUCATION

The Directorate of Technical Education, Assam prepares, supervises and implements the plans and schemes for overall development of Technical Education in the State. A brief review about allocation of fund for State Plan and centrally sponsored schemes during the 11<sup>th</sup> Five Year Plan and physical achievement is presented through the tables below.

TABLE-19.9  
YEAR WISE APPROVED ALLOCATION OF FUND FOR TECHNICAL  
EDUCATION DURING THE 11<sup>TH</sup> FIVE YEAR PLAN  
(Rupees in crore)

| Year    | State Plan Fund |                     | Centrally Sponsored Scheme |                     |
|---------|-----------------|---------------------|----------------------------|---------------------|
|         | Allocation      | Utilisation of fund | Allocation                 | Utilisation of fund |
| 2007-08 | 2.00            | 0.42                | 0.40                       | 0.40                |
| 2008-09 | 10.78           | 5.56                | 0.46                       | 0.46                |
| 2009-10 | 23.38           | 9.67                | 1.06                       | 1.06                |
| 2010-11 | 42.92           | 30.40               | 9.28                       | 9.28                |
| 2011-12 | 40.19           | 38.70               | 15.11                      | 13.97               |

Source: Draft Twelfth Five Year Plan and Annual Plan, 2014-15 (Vol-1),  
Planning and Development Department, Assam.

To implement various programmes for overall development of Higher Education in the State an amount of Rs. 434.00 lakh is proposed for the 12<sup>th</sup> Five Year Plan period which includes a proposal of Rs.10000 lakh under the scheme, 'Chief Minister's Mission for Technical Education'. The approved allocation for the Annual Plan 2012-13 under the State Plan was Rs. 39.90 crore of which Rs. 21.07 crore was utilised. During 2013-14, approved allocation of State Plan Fund was Rs. 53.15 crore. The approved allocation of fund for the Centrally Sponsored Schemes for development of higher education in the State during 2012-13 was Rs. 282.30 crore of which an amount of Rs. 1.80 crore was utilised and during 2013-14 the approved allocation was Rs. 285.50 crore.

Few Major Achievements during the Twelfth Five Year Plan including Fund from Non-Plan:

- Construction of new engineering colleges at Kokrajhar, Barak Valley, Golaghat and Dhemaji is going on.
- Permanent campus of Diphu Polytechnic completed.
- Establishment of 21 numbers of new polytechnics under CSS fund is going on.
- Women University Act has been enacted.
- Admission of 1<sup>st</sup> batch of students and starting of classes of Indian Institute of Information and Technology (IIIT), Assam at temporary campus of Assam Textile Institute, Guwahati.

## MEDICAL EDUCATION

The Directorate of Medical Education, Assam is entrusted with the task of generating human resources like Doctors, Nurses, Technicians, Physiotherapists, Pharmacists and other Health personnel to meet the growing needs of not only the State but the entire North Eastern region.

The Directorate has a host of institutes under its control that is Assam Medical College(AMC) & Hospital, Gauhati Medical College(GMC) & Hospital, Silchar Medical College (SMC) & Hospital, Jorhat Medical College, Regional Dental College, Guwahati; Regional Nursing College, Guwahati; Govt. Ayurvedic College, Guwahati; S.J.N. Homeopathic Medical College, Guwahati; Dr. J.K. Saikia Homeopathic Medical College, Jorhat; Assam Homeopathic Medical College, Nagaon, three pharmacist institutes associated with AMC, GMC and SMC, Medical Institute at Jorhat and three Institute of Paramedical Sciences at Guwahati, Dibrugarh and Silchar. The Srimanta Sankaradeva University of Health Services, Assam and Jorhat Medical College & Hospital have started functioning from 2009-10.

Besides the above institutes, the State has added three more medical college's viz. Fakaruddin Ali Ahmed Medical College, Barpeta; Tezpur Medical College Tezpur; Assam Hills Medical College and Research Institute, Diphu. Steps have also been taken to establish three more medical colleges at Lakhimpur, Kokrajhar and Dhubri.

### PHYSICAL ACHIEVEMENT DURING THE 11<sup>TH</sup> FIVE YEAR PLAN (2007-12)

- Jorhat Medical College has started functioning from the session 2010 with an intake capacity of 100 students. Hospital section of Fakaruddin Ali Ahmed Medical College and Hospital started functioning from February 2011.
- The Srimanta Sankaradeva University of Health Science has started functioning fully from 2009-10.
- Three new institutes of Para medical sciences have been established at GMCH, AMCH and SMCH and the courses have already been started from the session 2008.
- A new Directorate of AYUSH has been established during 2010-11.
- Two new Nursing Colleges at AMCH and GMCH has been established.

### TWELFTH FIVE YEAR PLAN

Director of Medical Education with a mission to accomplish accelerated development and to carry out the processes, an amount of Rs. 780.00 crore including Rs. 45.00crore under ACA for establishing another three new institutes for opening of Diploma in Medical Rural Health Care course at AMCH, GMCH and SMCH is proposed for the Twelfth Five Year Plan. Under ACA during the Annual Plan 2012-13 steps were taken to construct building for opening of Diploma in Medical Rural Health Care course at AMCH, GMCH and SMCH.

TABLE-19.10  
COMPARATIVE STATEMENT OF PLAN ALLOCATIONS DURING 10<sup>TH</sup>, 11<sup>TH</sup>  
AND PROPOSED OUTLAY DURING 12<sup>TH</sup> FIVE YEAR PLAN  
(Rupees in crore)

| Plan Period                     | Plan allocation/ Proposed Outlay | Actual Expenditure/ Anticipated Expenditure |
|---------------------------------|----------------------------------|---|
| 10 <sup>th</sup> Five Year Plan | 59.60                            | 66.61                                       |
| 11 <sup>th</sup> Five Year Plan | 750.14                           | 697.93                                      |
| 12 <sup>th</sup> Five Year Plan | 780.00                           | 780.00                                      |

Source: Draft Twelfth Five Year Plan and Annual Plan, 2014-15 (Vol-1),  
Planning and Development Department, Assam.

### ACHIEVEMENTS ON STUDENTS AND EDUCATION

1. Major chunk of funds has been allocated for education at all levels from Primary to higher and technical education and Universities. Education has been made accessible is remorte parts of the state. The services of 20,874 has been provincialised of 6,802 venture LP and recognised



UP schools. Six rounds of Teacher Eligibility Tests (TET) were conducted so far where 88,571 candidates have successfully qualified. As many as 52,748 Elementary Teachers have been appointed.

2. During 2014-15, as many as 8,913 regular vacant posts of Astd. Teachers of LP schools are being filled up from TET qualified teachers, establishment of 21 new Lower Primary Schools, under SSA and construction of 6,488 girls toilets.
3. As many as 1,554 Educational Institutions were provincialised along with servicers of 16,109 employeeed under Secondary Education. Financial assistance was provided to 958 venture Educational Institutions and assistane to 867 more under process.
4. Fourteen Model School have started functioning from 1st January, 2015.
5. A total of 12 rank holders of HSLC, High Madrasa and HSSLC examination visited NASA, USA during 2014, under "Late Debakumar Borah Memorial NASA Tour 2014" .
6. A few scheme "Moulana Azad Taleem-e-Balighan" is being introduced in eight districts for promoting literacy, basic and vocational education among adults of minority communities.
7. In Higher Education Sector, during 2014-15, services of 57 venture colleges have been provincialised creating 1,100 new posts of different catagories. Infrustructure development grants were provided to the six States Universities, 102 rural area colleges and 45 provincialised colleges. Establishment of 12 new Government Model Degree Colleges have been taken up. The Assam State Higher Education Council under Rastriya Uccharat Siksha Abhijan has been formally constituted.
8. In Technical Education sector to meet the growing aspirations of new generation, three new engineering are being established at Golaghat, Karimganj and Dhemaji.
9. Three more engineering colleges are proposed to be established at Nalbari, Nagaon and Udalguri.
10. The newly upgraded Jorhat Science Colleges is being developed into Jorhat Institute of Science & Technology. Upgradation of infrastructure of existing nine polytechnics have also been taken up.
11. New Polytechniques in 21 districts are being established and works are in progress.
12. The academic session of the Women University at Jorhat has started in the temporary campus in Assam Agricultural University.
13. All Engineering Colleges will be provided Rs. 2.00 crores each for upgradation of infrastructure.
14. For upliftment of rural education existing rural libraries would be provided with annual funds towards procurement of important books and periodicals from the current year onwards.

Budget Speech of Finance Minister, 2015-16.

## HEALTH AND FAMILY WELFARE

Health care performance in Assam exhibits sustained improvements over the years. These improvements are the outcomes of concentrated and continued efforts of the Government towards establishing an efficient system of health care and family welfare through effective planning, financing, human, resources management, infrastructure and supply chain management. The State Government has taken consistent initiatives to reduce prevailing regional disparities and gaps in the access to safe drinking water, sanitation facilities, public and private health care infrastructure, rural infrastructure, access to preventive and medical care, public hygiene, information system on health care and nutrition, skilled manpower etc.

### GENERAL HEALTH

Quality and adequate health care services has lead to better learning ability, nutritional retention, capability enhancement and standard of living of people. It has also helped in limiting family size, improving basic amenities and reducing poverty significantly.

The State health services has always aimed at providing reliable, affordable, accountable and effective primary health care to the people of Assam, with special care



provisions from women and children. For the achievement of this goal, the State has been implementing various Central Government schemes, along with its own schemes and programmes for continuously increasing allocation of funds to the Health sector in successive State Plans.

Essentially three categories of health indicators like outcomes Infant Mortality Rate (IMR), process (institutional delivery) and input (infrastructure), public expenditure, National Health Mission (NHM) etc. describe the progress of the health sector in the State. Along with these, important indicators are Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR), Crude Birth Rate (CBR) and Crude Death Rate (CDR) etc.

#### Status of Health Infrastructure in the State.

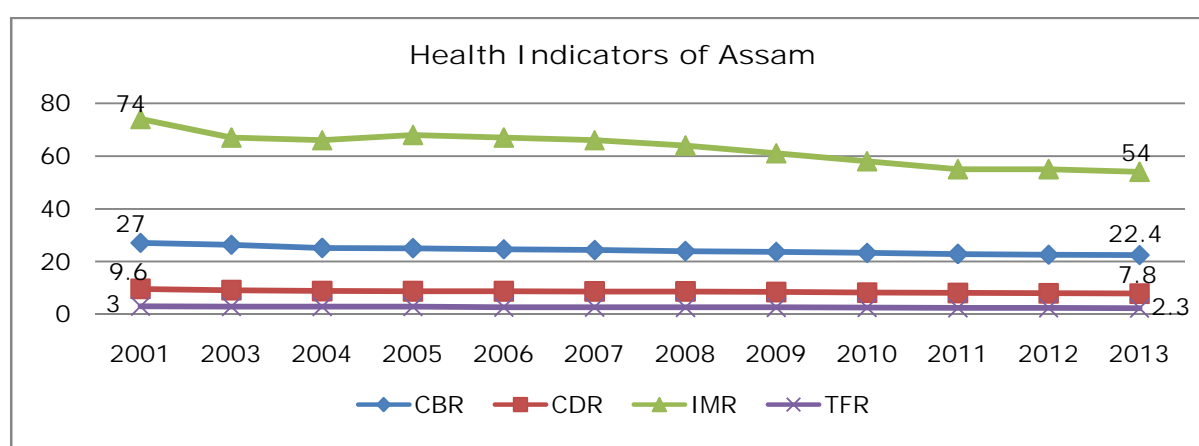
- The status of Health infrastructure in the State is improving over the years.
- At present there are 25 Civil Hospitals, 13 Sub-Divisional Civil Hospitals, 1014 PHCs, 62 FRUs, 151 CHCs and 4621 Sub Centres with 18006 numbers of total beds in the State at the end of 2014.
- The number of available Government doctors in the State is 5004 including Ayurvedic and Homeopathic doctors in 2014.

#### CHILD HEALTH INDICATORS IN ASSAM, 2013

The health indicators released by RGI shows that the Under Five Mortality rate in Assam is very high than the all India rate. The neo natal mortality has decreased during the last few years compared to the all India rate and this is due to the initiatives taken by the State Health Service for maternal and child health. The table below shows a comparison of some health indicators of Assam and India.

| Activity                      | Total |       | Rural |       | Urban |       |
|-------------------------------|-------|-------|-------|-------|-------|-------|
|                               | Assam | India | Assam | India | Assam | India |
| Crude Birth Rate              | 22.4  | 21.4  | 23.5  | 22.9  | 15.4  | 17.3  |
| Crude Death Rate              | 7.8   | 7.0   | 8.2   | 7.5   | 5.6   | 5.6   |
| Infant Mortality Rate.        | 54    | 40    | 56    | 44    | 32    | 27    |
| Neo-Natal mortality rate      | 27    | 28    | 29    | 31    | 10    | 15    |
| Under 5 (Five) mortality rate | 73    | 49    | 77    | 55    | 34    | 29    |

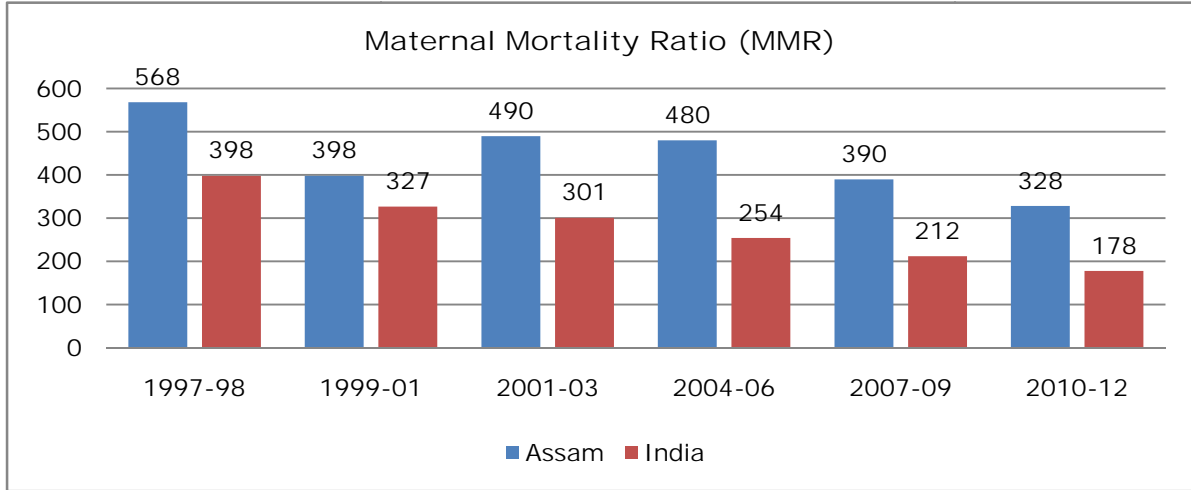
The graph below shows the trend of Crude Birth Rate (CBR), Crude Death Rate (CDR), Infant Mortality Rate (IMR) and Total Fertility Rate (TFR) in Assam since 2001 to 2013. The CBR, CDR, IMR and TFR which was 27, 9.6, 74 and 3 in 2001 decreased to 22.4, 7.8, 54 and 2.3 in 2013.



### MATERNAL MORTALITY RATIO (MMR)

Maternal Mortality Ratio (MMR) is the Annual number of Female death per 100,000 live birth from any cause related to or aggravated by pregnancy or its management.

The Maternal Mortality Ratio of Assam and India from 1997 to 2012 is presented through the graph given below.

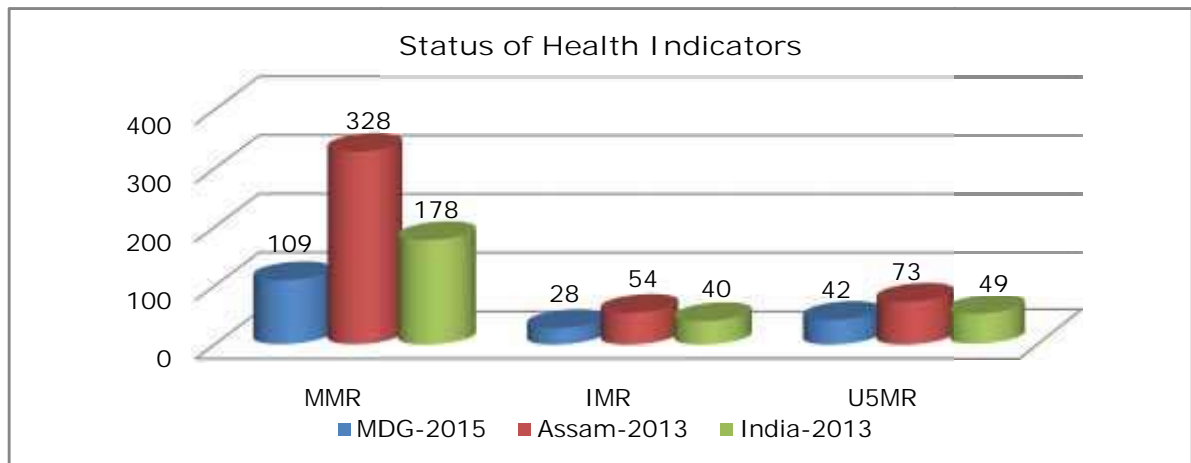


Source: SRS Bulletin, Registrar General of India.

The graph depicts an overall decline of the Maternal Mortality Rate (MMR) during the period 1997 to 2012. Although the rate is still very high in Assam being 42 percent, in comparison to All India rate of 55 percent, due to some improvement made and taken up for maternal health at birth in the state, the gap between the relative figures in the State and the Country shows a decline during the period 2004-2012, which has been minimised. Various measures have been taken up for improving MMR for safe delivery under National Health Mission (NHM) in the state. Measures such as Janani Suraksha Yojana (JSY), Mamata, Mamoni, etc. has relatively reduced maternal and neo natal mortality by the promotion of institutional delivery among the poor pregnant women in the State.

### MILLENNIUM DEVELOPMENT GOALS (MDGS)

For the achievement of Human and Social Development Goals, the united nation (UN) has set up numerical and time bound targets to be reached and covered by 2015. The graph shows the details of the same, depicting MMR, IMR and under Five Mortality Rate (UFMR) set by UN for MDGs.



The State is implementing Health Sector Schemes both in the urban and rural areas to provide health care facilities at free or at an affordable cost. Some of the schemes being implemented in the State are as follows.

- ❖ Primary health care both in rural and urban areas.
- ❖ Secondary health care
- ❖ Ayush
- ❖ Control of communicable diseases
- ❖ Non communicable diseases
- ❖ Schemes for food safety measures
- ❖ Public health education
- ❖ School health services
- ❖ Assam Bikash Yojana
- ❖ National Fluorosis Control Programme
- ❖ Pilot project for prevention of burn injuries

### REVIEW OF ELEVENTH FIVE YEAR PLAN (2007-12)

The projected outlay by the Eleventh Five Year Plan (2007-12) for the State is Rs.1179.14 crore at 2006-17 prices. The table below shows year wise allocation and fund utilisation during the plan period.

#### ALLOCATION AND FUND UTILISATION IN ASSAM

| Year    | Allocation | Utilisation | Utilisation (in %) |
|---------|------------|-------------|--------------------|
| 2007-08 | 80.30      | 66.08       | 82.29              |
| 2008-09 | 163.09     | 160.32      | 98.00              |
| 2009-10 | 237.50     | 220.00      | 92.62              |
| 2010-11 | 370.62     | 360.79      | 97.00              |
| 2011-12 | 464.85     | 443.34      | 95.37              |

(Rupees in crore)

Source: Draft Twelfth Five Year Plan and Annual Plan, 2014-15 (Vol-1),  
Planning and Development Department, Assam.

The schemes taken up during the Eleventh Five Year Plan that were implemented through State Health Society are broadly classified as follows.

- ✓ State Schemes under Directorate of Health Service, Assam
- ✓ Grants-in-Aid to NRHM for implementation of State schemes.
- ✓ Centrally Sponsored Schemes such as National Vector Borne Disease Control Programme (NVBDCP), National Programme for Control of Blindness (NPCB), National Leprosy Eradication Programme (NLEP), Revised National Tuberculosis Control Programme (RNTCP), National Iodine Deficiency Disorders Control Programme (NIDDCP) and AYUSH.

### TWELFTH FIVE YEAR PLAN

The Twelfth Five Year Plan was started in Assam with a proposed plan outlay of Rs.1588.68 crore. During 2012-13, the first year of the plan period an amount of Rs.463.84 crore was allocated against which an amount of Rs.421.61 crore was utilised achieving a financial target of 91 percent. The plan allocation for the Annual Plan 2013-14 is Rs.520.30 crore to implement the following schemes during the year.

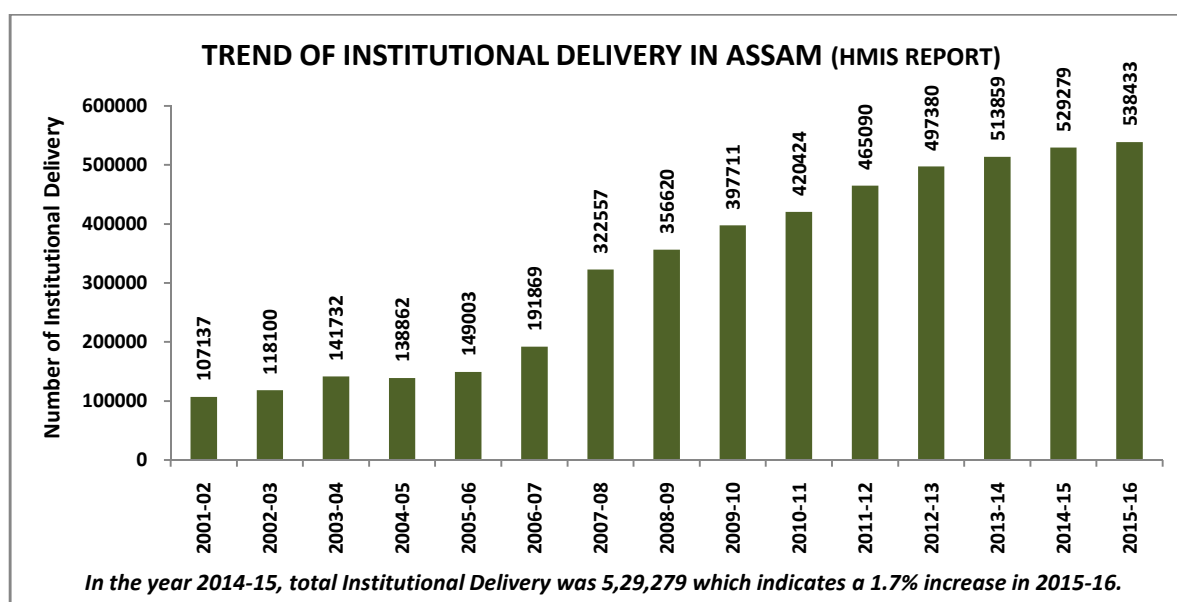
- An amount of Rs.10.00 crore was allocated to procure surgical and other consumable items, anti cancer medicines and nephrology medicines for civil hospitals, sub divisional civil hospitals, CHCs and PHCs.
- To purchase heart valves and heart valves accessories for BPL families an amount Rs.1.00 crore and Rs.0.50 crore was allocated for the year.
- To procure Pace Makers for BPL families an amount of Rs.0.60 crore was allocated.
- An amount of Rs.3.00 crore was provided to purchase of machineries and equipments for District Hospitals, Sub-Divisional Civil Hospitals, PHCs and CHCs.
- An amount of Rs.10.00 crore was provided for improvement and strengthening of office buildings and hospitals in the State.
- An amount of Rs. 30.00 crore was earmarked for the Chief Minister's Special Scheme-Purchase of Long Lasting Insecticides Treated Bednets (LLIN) for BPL families.

## NATIONAL HEALTH MISSION

Govt. of India launched the National Health Mission (NHM) to carry out necessary architectural correction in the basic health care, delivery system. The Mission's approach is relating health to determinants of good health viz. segments of nutrition, sanitation, hygiene and safe drinking water. It also aims at mainstreaming the Indian systems of medicine to facilitate health care. Various measures taken by National Health Mission (NHM) for child and mothers health are discussed below.

### INSTITUTIONAL DELIVERY

The Govt. under NHM has taken various initiatives to increase institutional delivery in Assam. Institutional delivery in Assam till 2006-07 was not so encouraging. During 2007-08 number of institutional delivery in Assam increased by 68 percent and is on an increasing trend resulting in decline of MMR. In the year 2014-15 total Institutional Delivery was 5,29,279 while during 2015-16 the number Institutional delivery increased to 5,38,433 registering a growth of 1.7 percent. The graph below shows the trend of Institutional delivery in the State since 2001-02.



Source: HMIS Report.

### JANANI SURAKSHA YOJANA

Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission (NRHM) being implemented with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery among the poor pregnant women. The Yojana, launched on 12 th April, 2005, by the Hon'ble Prime Minister, is being implemented in all states and Uts with special focus on low performing states. JSY is a 100% centrally sponsored scheme and it integrates cash assistance with delivery and post delivery care. Under the scheme 37.63 lakh women have got benefitted in the State till 2015-16.

### IMMUNISATION

The Coverage Evaluation survey conducted by RRC, North East during 2012-13 shows 78.25 percent children got fully immunised in the State against the dismal figure of 31.60 percent fully immunised children in 2005-06 s per NFHS-III.

### MAMATA

The scheme 'Mamata' seeks to reduce IMR and MMR by insisting on a post delivery Hospital stay of 48 hours of the mother and new born. During discharge from hospital a gift hamper called 'Mamata Kit' is given. It contains materials for the new born. Till date 10,01,923 Mamata Kit has been distributed since 2010-11 to 2013-14.

**OPD**

Assam is showing consistent increase in outdoor and indoor patient registered in the hospitals. During 2015-16, a total of 28,103,892 OPD patient recorded in comparison to total of 53,91,318 outdoor patients in 2005-06.

**IPD**

The State's health record shows a significant increase of IPD patient from 2,53,875 in 2005-06 to 11,27,308 in 2015-16.

**FIRST REFERRAL UNIT (FRU)**

A total of 40 numbers of First Referral Unit were made functional in the State to provide Comprehensive Emergency Obstetric and New Born Care.

**SPECIAL NEW BORN CARE UNIT (SNCU)**

Presently 19 numbers of Special New Born Care Unit are functioning in the State.

**MOBILE MEDICAL UNIT**

At present 50 numbers of Mobile Medical Unit are functioning in the State to provide health care services to the un-served and in the areas not covered under the health care facilities. Since 2007-08 to 2015-16 a total of 57,49,982 patients were treated in 50,920 camps organised by Mobile Medical Units.

**BOAT CLINIC**

There are 15 Boat Clinics operational in 13 districts of the State to provide health care services to the people living in the riverine and char areas. A total of 15,08,184 patients were treated in 19,727 camps organised by Boat Clinic from 2008-09 to 2015-16

**SARATHI 104 HEALTH INFORMATION HELPLINE**

"Sarathi 104", a round the clock health information helpline has been established for medical and counselling services.

**ASHA**

There are 30,508 ASHA workers and 2,848 ASHA supervisors are in the State looking after child and women health care.

**TEA GARDEN HOSPITAL**

There are 150 numbers of Tea Garden Hospitals in the State providing health care services in the tea garden areas.

**OPERATION SMILE**

Under the scheme free surgery for children having cleft palate and lip has been taken up by the Department of Health and Family Welfare, Govt of Assam, NHM and International NGO. Total of 11,860 numbers of children having cleft lip has been operated under 'Operational Smile' since inception till 14<sup>th</sup> July, 2014.

**RASHTRIYA BAL SWASTHA KARYAKRAM (RBSK)**

Rashtriya Bal Swasthya Karyakram (RBSK) which is an extension of the School Health Programme is a new initiative under NRHM that seeks to put together a systematic approach to child health screening and early intervention. All children in the age group of 0-18 years will be screened across the state under RBSK through a structured screening process by a dedicated mobile health team consisting of a Medical Officer, Dental Surgeon ANM and a pharmacist (Two teams for each Health block).

The children diagnosed with any of the health conditions identified for screening will receive follow-up referral support and treatment including surgical interventions at identified DEICs (District Early Intervention Centres) and appropriate health facilities free of cost.

**MAMONI**

Under the scheme cash assistance to pregnant women for nutritional support @ of Rs. 1000.00 in two instalment is provided to the beneficiaries. It is a State Government sponsored scheme that encourages pregnant women to under go at least three ante-natal checkups which identify danger signs during pregnancy and offer proper medical care. Till 2013-14 total 36,50,453 numbers of cheques has been distributed.

## MAJONI

Social assistance to all the girl child born in the family up to second order is given a fixed deposit of Rs. 5,000.00 for 18 years. On her 18<sup>th</sup> birth day, the girl will be able to encash the fixed deposit. In case she is married before attaining 18<sup>th</sup> years of age, the fixed deposit will be forfeited. This scheme is applicable to families who are limiting themselves to two children. Till 2013-14, total 3,08,109 numbers of fixed deposits have been issued.

## MOROM

The 'Morom' scheme will provide financial support to indoor patients of Government Health institutions for supplementary nutrition and compensation for weight loss during hospitalisation and post hospital expenses. Indoor patients admitted to a Hospital receives Rs.75/- per day for Medical College, Rs. 50/- per day for District Hospital and Rs.30/- per day for SDCH/ CHC/ PHC. Amount paid under Morom scheme till 2013-14 is Rs. 2061.66 lakhs.

## FREE OPERATIONS FOR CHILDREN HAVING CONGENITAL HEART DISEASE (CHD)

It is a State Government sponsored scheme. Under this scheme, children having congenital heart disease are given free treatment at Narayana Hridayalaya, Bangaluru and Kolkata up to the age group of 0-14 years whose guardian are permanent residence of Assam having an annual income not more than Rs. 6.00 lakh. Till 17<sup>th</sup> July 2015, a total of 2114 children had been treated.

## SUSRUSHA

It is an initiative from Govt. of Assam where Rs. 1.00 lakh is granted as financial assistance to people who have undergone Kidney Transplantation after 1st April 2010. A person who is a permanent resident of Assam and whose annual income does not exceed Rs. 3.00 lakh are eligible to avail this scheme. Govt. Servants, Public sector employees and employees who are entitled for medical reimbursement shall not be eligible for the scheme. So far 243 no. of patients have been given one time financial assistance of Rs. 1.00 lakh till 17<sup>th</sup> July, 2014.

## SANJEEVANI -VILLAGE HEALTH OUTREACH PROGRAMME

Sanjeevani –Village Health Outreach programme is once a month, fixed date outreach initiative that will result in converged health services at village level. The services aims in early identification, screening, diagnosis and follow up for non-communicable and lifestyle diseases. Village Health Outreach Programme (VHOP) covering 62 lakh populations every month. From 1st Marh 2011, a total of 26,56,136 patients visited Sanjeevani services up to 13<sup>th</sup> July, 2014.

## ASSAM AROGYA NIDHI (AAN)

The Assam Arogya Nidhi provides financial assistance upto Rs.1.50 lakh to BPL families and families having a monthly income of less than Rs. 1000.00 for specialized and general treatment like Heart Diseases, Heart Surgery, Cancer, Kidney, Urinary diseases, Orthopaedic, limbs, hip, knee joint replacement, bone diseases, implants for fractures and spinal surgery, Thalassaemia, Bone marrow Transplant, AIDS, Chronic Mental Illness, Brain tumour with surgical treatment etc. The treatment taken at Government hospitals and other hospitals empanelled with State Govt are eligible under Assam Arogya Nidhi. The Govt. of Assam has released an amount of Rs. 5.00 crore and the Central Govt. has released Rs. 1.50 crore for implementation of the programme. NRHM, Assam has already granted Rs.2.41 crore to 287 beneficiaries and Rs.1.70 crore to the Medical colleges.

## "SNEHA SPARSHA"

Sneha Sparsha is the recent unique Health Care Initiative for Children launched by the Department of Health & Family Welfare, Government of Assam during 2013-14. Sneha Sparsha, literally meaning the touch of love, is aimed at extending financial assistance for specialized treatment of children below 12 years of age affected with some serious ailments such as (1) Thalassaemia requiring Bone Marrow Transplant, (2) Kidney Transplant, (3) Liver Transplant, (4) Cochlear Implant, (5) Limb deformities requiring artificial and motorized limb, (6) neurological anomaly, (7) specialized eye surgery, (8) blood cancer requiring chemo therapy, and (9) various solid tumors. Target group/ beneficiaries & criteria: Children below 12 years of age from

families with annual income less than Rs.2.50 Lakh while priority given to children belonging to BPL families. NRHM, Assam has released Rs.2.29 crore to 55 beneficiaries under Sneha Sparsha.

#### RASHTRIYA SWASTHYA BIMA YOJANA

In Assam RSBY was first started in Jorhat in the month of October 2009. Presently it has been extended to all the districts of the State. A total of 4,13,31,073 active smart card has been issued against 11,841,243 numbers of beneficiaries up to 31<sup>st</sup> March, 2016.

#### PUBLIC HEALTH ( SANITATION & DRINKING WATER)

##### NI RMAL BHARAT ABHI JAN

The Total Sanitation Campaign (TSC) was launched by Govt. of India with reform initiatives in rural sanitation sector to accelerate the sanitation coverage and eventually to bring about an improvement in the general quality of rural life. The TSC projects have been renamed as Nirmal Bharat Abhijan (NBA). The target and achievement during the year 2013-14 is presented below.

##### PHYSICAL TARGET AND ACHIEVEMENT UNDER NI RMAL BHARAT ABHI JAN I N ASSAM

| Name of the project                     | Target | Achievement | Percentage of achievement |
|---|--------|-------------|---------------------------|
| Individual Household Latrine (IHHL-BPL) | 350000 | 124408      | 36                        |
| Individual Household Latrine (IHHL-APL) | 250000 | 36194       | 14                        |
| School Toilet                           | 1770   | 631         | 36                        |
| Anganwadi Toilet                        | 5810   | 195         | 3                         |

Source: Chief Engineer (PHE), B&S, Assam.

The total fund available as on 1<sup>st</sup> April 2013 was Rs. 131.41 crore of which State share was Rs.3.24 crore and Central share was Rs.128.17 crore. The total fund released for implementing the programme in the State during 2013-14 was Rs. 42.72 crore comprising of Rs.41.81 as Central share and Rs.17.01 crore as State share. Out of the total fund of Rs.174.13 crore available up to March 2014, an amount of Rs.74.69 crore was utilised achieving a financial target of 43 percent. The number of IHHL beneficiary up to March 2014 is 160602.

Various measures has been taken by Govt. of Assam for Rural Water Supply and Sanitation

- (1) Stress will be given on safe drinking water. Priority will be given to fluoride and arsenic affected areas in implementing of water supply schemes. So far, 9073 piped Water Supply Schemes and 3,27,237 spot sources have been completed. Work is going on to cover 6334 nos. of partially covered habitations and 3604 water quality affected habitations.
- (2) With the aspiration that all rural households have access to piped water supply in adequate quantities throughout the year, house connections are being provided from a number of existing as well as new water supply schemes.
- (3) Safe drinking water facilities are provided to 2,147 nos. of Arsenic Affected sources, 294 nos. of Piped water Supply Schemes (Zone I & Zone II) was completed. It covered 308 nos. of Arsenic affected habitations, 199 nos. of other habitations, serving 2,19,795 persons with a project cost of Rs. 98,1858 crores.
- (4) Safe drinking water facilities are provided to 618 nos. of fluoride affected habitations in 7 districts of Assam which include 931 nos. of spot sources, 27 nos. of Piped Water Supply Schemes, with a project cost of Rs. 98.66 crores. Seven large multi-village Schemes have been undertaken under World Bank Assisted Project in selected areas of seven districts with a total outlay of Rs. 1474 crore.
- (5) Assam has launched MANASA (Mukhya Mantri Nirmal Aru Seuj Abhijan) with a mission to make Assam clean and green. Simultaneously, all districts are taking up cleanliness and awareness programmes on sanitation in a massive way. The mission aims to clean and transform all towns and villages. All individual household will be provided with Individual Household Latrin (IHHL) to eliminate open defecation by the end of 2019.
- (6) A massive plantation drive across the state has been taken up under MANASA.

- (7) It also aims to create the habit of using toilets by all rural masses to commemorate the 150<sup>th</sup> Birth Anniversary of the father of the Nation Mahatma Gandhi.
- (8) Proposal to cover 300 G.Ps. this financial year by Solid Liquid Waste Management (SLWM) scheme, construction of 270 Community Sanitary Complexes (CSCs) and repair of public toilets in government offices.
- (9) Initiating the process of undertaking seven large multi village schemes with a total outlay of Rs. 1474 crores for providing drinking water to rural areas with World Bank Support, in addition to construction of 1100 Piped Water Supply Schemes at an earmarked outlay of Rs. 550 crores for rural areas.
- (10) Proposal to ensure the availability of Sanitation facilities to all people in the State and to make Assam Open Defecation Free(ODF).
- (11) Lastly, a proposal to develop 123 nos. of old toilets blocks of 29 bus stations under MANASA.

Source: Finance Minister Budget Speech, Assam 10<sup>th</sup> March, 2015.

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## APPENDIX-19.1

STATUS OF CLASSROOMS IN GOVT/PROVINCIALISED PRIMARY AND UPPER  
PRIMARY SCHOOLS, 2014-15

| District      | No. of Primary Schools | Average No. of class room in Primary Schools | No. of Upper Primary Schools | Average No. of class room in Upper Primary Schools | NER Primary | Dropout Upper Primary |
|---------------|------------------------|--|------------------------------|--|-------------|-----------------------|
| Kokrajhar     | 1514                   | 2.8  | 282                          | 4.6  | 87.7        | 11.1                  |
| Dhubri        | 2175                   | 3.2  | 460                          | 4.7  | 89.6        | 14.2                  |
| Goalpara      | 1499                   | 2.9  | 273                          | 4.3  | 91.4        | 9.7                   |
| Barpeta       | 1953                   | 3.1  | 422                          | 4.0  | 93.4        | 7.7                   |
| Morigaon      | 1244                   | 2.9  | 244                          | 5.2  | 98.3        | 8.0                   |
| Nagaon        | 2653                   | 3.3  | 542                          | 4.7  | 94.1        | 11.1                  |
| Sonitpur      | 1938                   | 3.3  | 226                          | 5.7  | 90.3        | 6.7                   |
| Lakhimpur     | 1824                   | 2.8  | 506                          | 3.8  | 94.7        | 9.2                   |
| Dhemaji       | 1304                   | 2.6  | 237                          | 4.5  | 93.6        | 3.8                   |
| Tinsukia      | 1133                   | 3.9  | 197                          | 4.6  | 88.0        | 5.9                   |
| Dibrugarh     | 1462                   | 3.1  | 270                          | 4.6  | 91.7        | 5.0                   |
| Sivasagar     | 1925                   | 9.2  | 357                          | 4.3  | 96.5        | 1.1                   |
| Jorhat        | 1754                   | 2.6  | 345                          | 4.2  | 97.6        | 2.8                   |
| Golaghat      | 1332                   | 3.0  | 290                          | 4.4  | 93.3        | 3.8                   |
| Karbi-Anglong | 1789                   | 3.2  | 268                          | 4.2  | 85.9        | 4.0                   |
| Dima-Hasao    | 751                    | 2.5  | 166                          | 3.3  | 77.2        | 8.4                   |
| Cachar        | 2068                   | 5.2  | 343                          | 4.4  | 91.4        | 6.6                   |
| Karimganj     | 1634                   | 2.6  | 287                          | 4.2  | 94.1        | 17.7                  |
| Hailakandi    | 1236                   | 2.0  | 302                          | 3.1  | 93.9        | 20.5                  |
| Bongaigaon    | 848                    | 2.9  | 200                          | 4.3  | 88.3        | 7.9                   |
| Chirang       | 836                    | 2.8  | 119                          | 5.1  | 93.9        | 6.4                   |
| Kamrup        | 1894                   | 3.1  | 366                          | 4.8  | 96.1        | 2.0                   |
| Kamrup (M)    | 532                    | 3.9  | 115                          | 4.4  | 90.0        | 2.4                   |
| Nalbari       | 998                    | 3.1  | 225                          | 4.6  | 95.6        | 0.8                   |
| Baksa         | 1456                   | 2.8  | 401                          | 4.4  | 90.6        | 5.0                   |
| Darrang       | 1099                   | 3.2  | 151                          | 5.0  | 93.7        | 6.5                   |
| Udalguri      | 1166                   | 3.0  | 208                          | 5.0  | 97.5        | 5.9                   |
| ASSAM         | 40017                  | 3.0  | 7775                         | 4.5  | 92.4        | 7.1                   |

## APPENDIX-19.2

NO. OF EDUCATIONAL INSTITUTIONS AND ENROLMENT IN HIGH SCHOOL  
HIGHER SECONDARY SCHOOLS AND JUNIOR COLLEGE IN ASSAM, 2012-13

| District      | High School            |                 | Higher Secondary School |                 | Junior College         |                 |
|---------------|------------------------|-----------------|-------------------------|-----------------|------------------------|-----------------|
|               | Number of Institutions | Enrolment Total | Number of Institutions  | Enrolment Total | Number of Institutions | Enrolment Total |
| Kokrajhar     | 135                    | 26858           | 19                      | 4305            | 15                     | 7720            |
| Dhubri        | 208                    | 49094           | 107                     | 13322           | 23                     | 8121            |
| Goalpara      | 154                    | 26006           | 28                      | 3507            | 35                     | 11067           |
| Barpeta       | 366                    | 48757           | 76                      | 8946            | 26                     | 7182            |
| Morigaon      | 149                    | 25254           | 36                      | 4493            | 16                     | 3810            |
| Nagaon        | 351                    | 66953           | 73                      | 9398            | 19                     | 4390            |
| Sonitpur      | 287                    | 50386           | 40                      | 9053            | 22                     | 8364            |
| Lakhimpur     | 350                    | 36719           | 62                      | 9574            | 33                     | 9644            |
| Dhemaji       | 253                    | 30073           | 15                      | 3501            | 45                     | 11977           |
| Tinsukia      | 201                    | 34401           | 26                      | 5055            | 1                      | 336             |
| Dibrugarh     | 245                    | 33612           | 55                      | 6720            | 21                     | 5912            |
| Sivasagar     | 272                    | 33589           | 54                      | 7844            | 38                     | 7260            |
| Jorhat        | 324                    | 34830           | 38                      | 7109            | 21                     | 4699            |
| Golaghat      | 243                    | 32305           | 30                      | 5485            | 20                     | 8213            |
| Karbi-Anglong | 291                    | 31892           | 20                      | 5349            | 12                     | 7442            |
| Dima-Hasao    | 85                     | 7775            | 9                       | 1558            | 4                      | 1315            |
| Cachar        | 216                    | 43598           | 61                      | 7689            | 27                     | 8591            |
| Karimganj     | 107                    | 26434           | 63                      | 5677            | 3                      | 1376            |
| Hailakandi    | 85                     | 16085           | 14                      | 4058            | 5                      | 1621            |
| Bongaigaon    | 121                    | 21269           | 17                      | 4101            | 4                      | 2621            |
| Chirang       | 77                     | 15681           | 11                      | 2700            | 4                      | 2399            |
| Kamrup        | 350                    | 48541           | 67                      | 10703           | 12                     | 5327            |
| Kamrup (M)    | 139                    | 20171           | 38                      | 3538            | 7                      | 3312            |
| Nalbari       | 195                    | 26390           | 48                      | 5588            | 15                     | 5335            |
| Baksa         | 234                    | 31779           | 15                      | 4222            | 11                     | 5390            |
| Darrang       | 180                    | 26099           | 43                      | 5342            | 22                     | 6071            |
| Udalguri      | 125                    | 19479           | 15                      | 2192            | 5                      | 2604            |
| ASSAM         | 5743                   | 864030          | 1080                    | 161029          | 466                    | 152099          |

## APPENDIX-19.3

NUMBER OF STATE GOVT. HOSPITALS AND HEALTH INSTITUTIONS IN ASSAM  
AS ON 2014

| Sl.No. | District      | CH | SDCH | PHC  | FRU | CHC | SC   |
|--------|---------------|----|------|------|-----|-----|------|
| 1      | 2             | 3  | 4    | 5    | 6   | 7   | 8    |
| 1      | Kokrajhar     | 1  | 1    | 38   | 4   | 4   | 161  |
| 2      | Dhubri        | 1  | 1    | 42   | 1   | 8   | 246  |
| 3      | Goalpara      | 1  | 0    | 41   | 1   | 5   | 151  |
| 4      | Barpeta       | 1  | 1    | 51   | 2   | 6   | 264  |
| 5      | Morigaon      | 1  | 0    | 26   | 2   | 5   | 123  |
| 6      | Nagaon        | 1  | 0    | 80   | 6   | 15  | 354  |
| 7      | Sonitpur      | 1  | 2    | 58   | 2   | 9   | 275  |
| 8      | Lakhimpur     | 1  | 1    | 30   | 2   | 8   | 156  |
| 9      | Dhemaji       | 1  | 0    | 22   | 2   | 4   | 98   |
| 10     | Tinsukia      | 1  | 0    | 23   | 3   | 6   | 164  |
| 11     | Dibrugarh     | 0  | 0    | 30   | 2   | 7   | 231  |
| 12     | Sivasagar     | 1  | 2    | 45   | 3   | 4   | 219  |
| 13     | Jorhat        | 0  | 2    | 44   | 3   | 5   | 144  |
| 14     | Golaghat      | 1  | 1    | 40   | 2   | 4   | 144  |
| 15     | Karbi Anglong | 1  | 1    | 46   | 2   | 6   | 145  |
| 16     | Dima-Hasao    | 1  | 0    | 11   | 2   | 2   | 65   |
| 17     | Cachar        | 1  | 0    | 33   | 2   | 5   | 270  |
| 18     | Karimganj     | 1  | 0    | 29   | 2   | 5   | 218  |
| 19     | Hailakandi    | 1  | 0    | 13   | 2   | 3   | 105  |
| 20     | Bongaigaon    | 1  | 0    | 30   | 2   | 3   | 84   |
| 21     | Chirang       | 1  | 0    | 25   | 2   | 3   | 86   |
| 22     | Kamrup        | 1  | 1    | 71   | 5   | 11  | 280  |
| 23     | Kamrup (M)    | 1  | 0    | 25   | 1   | 3   | 51   |
| 24     | Nalbari       | 1  | 0    | 67   | 2   | 6   | 121  |
| 25     | Baksa         | 1  | 0    | 41   | 2   | 5   | 156  |
| 26     | Darrang       | 1  | 0    | 30   | 1   | 6   | 163  |
| 27     | Udalguri      | 1  | 0    | 23   | 2   | 3   | 147  |
| 28     | ASSAM         | 25 | 13   | 1014 | 62  | 151 | 4621 |

CH-Civil Hospital, SDCH-Sub-divisional Civil Hospital, PHC- Primary Health Centre, FRU-First referral Unit,  
CHC- Community Health Centre, SC- Sub Centre

Source: Directorate of Health Services, Assam

APPENDIX-19.4  
NUMBER OF BEDS IN DIFFERENT TYPES OF HEALTH INSTITUTIONS IN ASSAM  
AS ON 2014

| Sl.No. | District      | No. of Beds |      |      |      |      |      |       |
|--------|---------------|-------------|------|------|------|------|------|-------|
|        |               | CH          | BPHC | MPHC | CHC  | SDCH | MCH  | TOTAL |
| 1      | 2             | 3           | 4    | 5    | 6    | 7    | 8    | 9     |
| 1      | Kokrajhar     | 150         | 24   | 164  | 120  | 75   | 0    | 533   |
| 2      | Dhubri        | 200         | 42   | 148  | 240  | 40   | 0    | 670   |
| 3      | Goalpara      | 150         | 30   | 144  | 150  | 0    | 0    | 474   |
| 4      | Barpeta       | 100         | 54   | 168  | 180  | 30   | 380  | 912   |
| 5      | Morigaon      | 100         | 18   | 132  | 150  | 0    | 0    | 400   |
| 6      | Nagaon        | 190         | 66   | 276  | 450  | 0    | 0    | 982   |
| 7      | Sonitpur      | 190         | 48   | 200  | 210  | 120  | 0    | 768   |
| 8      | Lakhimpur     | 100         | 36   | 68   | 240  | 50   | 0    | 494   |
| 9      | Dhemaji       | 100         | 30   | 72   | 120  | 0    | 0    | 322   |
| 10     | Tinsukia      | 100         | 24   | 104  | 180  | 0    | 0    | 408   |
| 11     | Dibrugarh     | 0           | 36   | 96   | 210  | 100  | 1385 | 1827  |
| 12     | Sivasagar     | 150         | 48   | 148  | 120  | 100  | 0    | 566   |
| 13     | Jorhat        | 200         | 42   | 148  | 150  | 50   | 410  | 1000  |
| 14     | Golaghat      | 100         | 30   | 140  | 120  | 50   | 0    | 440   |
| 15     | Karbi Anglong | 100         | 48   | 152  | 150  | 0    | 0    | 450   |
| 16     | Dima-Hasao    | 100         | 18   | 32   | 60   | 0    | 0    | 210   |
| 17     | Cachar        | 50          | 48   | 100  | 150  | 0    | 929  | 1277  |
| 18     | Karimganj     | 100         | 30   | 96   | 150  | 0    | 0    | 376   |
| 19     | Hailakandi    | 100         | 24   | 36   | 90   | 0    | 0    | 250   |
| 20     | Bongaigaon    | 150         | 36   | 96   | 90   | 0    | 0    | 372   |
| 21     | Chirang       | 150         | 0    | 100  | 90   | 0    | 0    | 340   |
| 22     | Kamrup        | 200         | 78   | 323  | 330  | 100  | 0    | 940   |
| 23     | Kamrup (M)    | 0           | 6    | 69   | 90   | 0    | 2017 | 2209  |
| 24     | Nalbari       | 100         | 42   | 160  | 270  | 0    | 0    | 572   |
| 25     | Baksa         | 150         | 0    | 164  | 150  | 0    | 0    | 464   |
| 26     | Darrang       | 100         | 42   | 92   | 180  | 0    | 0    | 414   |
| 27     | Udalguri      | 150         | 0    | 96   | 90   | 0    | 0    | 336   |
| 28     | ASSAM         | 3280        | 900  | 3460 | 4530 | 715  | 5121 | 18006 |

CH-Civil Hospital, BPHC-Block Primary Health Centre, MPHC-Mini Primary Health Centre

Source: Directorate of Health Services, Assam

## APPENDIX-19.5

## NUMBER OF MEDICAL &amp; PARAMEDICAL STAFFS IN ASSAM, 2014

| Post                                  | Position   |      |       |
|---------------------------------------|------------|------|-------|
|                                       | Government | NRHM | Total |
| 1                                     | 2          | 3    | 4     |
| MBBS Doctors                          | 1693       | 888  | 2581  |
| Special Doctor                        | 841        | 292  | 1133  |
| Ayurvedic Doctor                      | 358        | 434  | 792   |
| Dental Surgeon                        | 63         | 199  | 262   |
| Homeopathic Doctors                   | 75         | 161  | 236   |
| MBBS Doctors for 1 year rural posting | 0          | 0    | 0     |
| ANM                                   | 4934       | 5184 | 10118 |
| GNM                                   | 2609       | 2826 | 5435  |
| Pharmacists                           | 1368       | 247  | 1615  |
| Laboratory Technician                 | 860        | 641  | 1501  |
| Radiographer                          | 91         | 50   | 141   |
| Rural Health Practitioner             | 0          | 354  | 354   |

## APPENDIX-19.6

## MEDICAL &amp; PARAMEDICAL PERSONNEL REGISTERED IN ASSAM, 2014

| Item                             | Particulars (In Nos.) |     |
|----------------------------------|-----------------------|-----|
| 1                                | 2                     |     |
| Allopathic Practitioners         | MBBS                  | PG  |
|                                  | 609                   | 351 |
| Pharmacists                      | 219                   |     |
| General Nurses Mid Wives ( GNM)  | 752                   |     |
| Auxiliary Nurses Mid Wives (ANM) | 497                   |     |
| B.Sc. Nurse                      | 146                   |     |

## APPENDIX-19.7

## DISTRICT WISE BIRTH &amp; DEATH REGISTERED DURING 2014

| Sl.No. | District      | Current Year Registration |        | Delayed Registration |       | Total  |        |
|--------|---------------|---------------------------|--------|----------------------|-------|--------|--------|
|        |               | Birth                     | Death  | Birth                | Death | Birth  | Death  |
| 1      | 2             | 3                         | 4      | 5                    | 6     | 7      | 8      |
| 1      | Kokrajhar     | 15180                     | 1904   | 4062                 | 321   | 19242  | 2225   |
| 2      | Dhubri        | 49097                     | 4633   | 341                  | 37    | 49438  | 4670   |
| 3      | Goalpara      | 24968                     | 2588   | 2575                 | 93    | 27543  | 2681   |
| 4      | Barpeta       | 40087                     | 3483   | 3647                 | 330   | 43734  | 3813   |
| 5      | Morigaon      | 24033                     | 2973   | 6247                 | 103   | 30280  | 3076   |
| 6      | Nagaon        | 64494                     | 7676   | 4959                 | 325   | 69453  | 8001   |
| 7      | Sonitpur      | 31083                     | 6533   | 4051                 | 323   | 35134  | 6856   |
| 8      | Lakhimpur     | 21160                     | 2764   | 1684                 | 163   | 22844  | 2927   |
| 9      | Dhemaji       | 14363                     | 2907   | 2371                 | 171   | 16734  | 3078   |
| 10     | Tinsukia      | 23553                     | 10664  | 2143                 | 371   | 25696  | 11035  |
| 11     | Dibrugarh     | 26236                     | 8115   | 1413                 | 473   | 27649  | 8588   |
| 12     | Sivasagar     | 16894                     | 3736   | 4383                 | 552   | 21277  | 4288   |
| 13     | Jorhat        | 19957                     | 4092   | 3319                 | 320   | 23276  | 4412   |
| 14     | Golaghat      | 19721                     | 3141   | 2771                 | 222   | 22492  | 3363   |
| 15     | Karbi Anglong | 12879                     | 1047   | 7295                 | 258   | 20174  | 1305   |
| 16     | Dima-Hasao    | 4081                      | 508    | 2801                 | 70    | 6882   | 578    |
| 17     | Cachar        | 42871                     | 11208  | 1595                 | 1103  | 44466  | 12311  |
| 18     | Karimganj     | 31374                     | 3764   | 9004                 | 276   | 40378  | 4040   |
| 19     | Hailakandi    | 15595                     | 2191   | 1233                 | 14    | 16828  | 2205   |
| 20     | Bongaigaon    | 19467                     | 2807   | 1126                 | 193   | 20593  | 3000   |
| 21     | Chirang       | 8831                      | 1231   | 1615                 | 102   | 10446  | 1333   |
| 22     | Kamrup        | 24097                     | 5120   | 3877                 | 461   | 27974  | 5581   |
| 23     | Kamrup (M)    | 34810                     | 11456  | 1682                 | 265   | 36492  | 11721  |
| 24     | Nalbari       | 11704                     | 1974   | 2243                 | 391   | 13947  | 2365   |
| 25     | Baksa         | 6812                      | 947    | 4390                 | 218   | 11202  | 1165   |
| 26     | Darrang       | 17771                     | 1578   | 717                  | 103   | 18488  | 1681   |
| 27     | Udalguri      | 15815                     | 1792   | 5005                 | 263   | 20820  | 2055   |
| 28     | ASSAM         | 636933                    | 110832 | 86549                | 7521  | 723482 | 118353 |

CH-Civil Hospital, SDCH-Sub-divisional Civil Hospital, PHC- Primary Health Centre, FRU-First referral Unit,  
CHC- Community Health Centre, SC- Sub Centre

Source: Directorate of Health Services, Assam

## APPENDIX-19.8

## NUMBER OF FAMILY WELFARE CENTRES IN ASSAM FOR THE YEAR 2014-15

| Sl. No. | Name of District | Family Welfare Centres (Nos.) |       |
|---------|------------------|-------------------------------|-------|
|         |                  | Rural                         | Urban |
| 1       | 2                | 3                             | 4     |
| 1       | Barpeta          | 7                             | 2     |
| 2       | Bongaigaon       | 4                             | 0     |
| 3       | Baksa            | 6                             | 0     |
| 4       | Chirang          | 2                             | 0     |
| 5       | Cachar           | 8                             | 1     |
| 6       | Darrang          | 4                             | 1     |
| 7       | Dibrugarh        | 6                             | 1     |
| 8       | Dhubri           | 7                             | 1     |
| 9       | Dhemaji          | 5                             | 0     |
| 10      | Diam-Hasao       | 3                             | 1     |
| 11      | Goalpara         | 5                             | 1     |
| 12      | Golaghat         | 5                             | 2     |
| 13      | Hailakandi       | 4                             | 1     |
| 14      | Jorhat           | 7                             | 1     |
| 15      | Kamrup (Metro)   | 0                             | 1     |
| 16      | Kamrup (Rural)   | 12                            | 0     |
| 17      | Karimganj        | 5                             | 2     |
| 18      | Kokrajhar        | 4                             | 1     |
| 19      | Karbi-Anglong    | 8                             | 1     |
| 20      | Lakhimpur        | 6                             | 1     |
| 21      | Morigaon         | 3                             | 1     |
| 22      | Nalbari          | 4                             | 1     |
| 23      | Nagaon           | 11                            | 3     |
| 24      | Sonitpur         | 8                             | 2     |
| 25      | Sivasagar        | 8                             | 1     |
| 26      | Tinsukia         | 4                             | 2     |
| 27      | Udalguri         | 3                             | 0     |
| 28      | Assam            | 149                           | 28    |

## APPENDIX-19.9

## DISTRICTWISE IMMUNISATION PROGRAMME IN ASSAM 2014-15

| Sl. No. | District      | TARGET |        | PERFORMANCE |        |        |        |        |
|---------|---------------|--------|--------|-------------|--------|--------|--------|--------|
|         |               | Infant | PW     | BCG         | DPT-3  | OPV-3  | MLS    | TT(PW) |
| 1       | Barpeta       | 35123  | 40884  | 43374       | 36478  | 30921  | 34540  | 36658  |
| 2       | Bongaigaon    | 14237  | 16572  | 15643       | 14162  | 13206  | 13393  | 14666  |
| 3       | Baksa         | 17839  | 20766  | 14142       | 15036  | 14388  | 14702  | 15860  |
| 4       | Chirang       | 9277   | 10799  | 8820        | 8402   | 7528   | 8516   | 9822   |
| 5       | Cachar        | 44951  | 52324  | 41234       | 36090  | 30677  | 35400  | 37157  |
| 6       | Darrang       | 18195  | 21180  | 21231       | 18467  | 16850  | 19180  | 19486  |
| 7       | Dhemaji       | 15747  | 18329  | 15137       | 13516  | 12014  | 13529  | 13927  |
| 8       | Dhubri        | 42420  | 49378  | 65891       | 45739  | 44714  | 42832  | 54395  |
| 9       | Dibrugarh     | 25228  | 29366  | 24919       | 21424  | 18491  | 21681  | 22135  |
| 10      | Goalpara      | 22003  | 25612  | 25564       | 22691  | 18942  | 21640  | 25348  |
| 11      | Golaghat      | 22183  | 25821  | 19050       | 16425  | 15435  | 16597  | 18533  |
| 12      | Hailakandi    | 20712  | 24110  | 17604       | 16903  | 15374  | 15852  | 17409  |
| 13      | Jorhat        | 20458  | 23814  | 18332       | 18608  | 18620  | 18724  | 18730  |
| 14      | Kamrup        | 27042  | 31478  | 31192       | 30748  | 29986  | 30293  | 30892  |
| 15      | Kamrup (M)    | 27600  | 32127  | 30377       | 23480  | 22080  | 23612  | 32997  |
| 16      | Karbi-Anglong | 20052  | 23341  | 18350       | 18950  | 18955  | 18114  | 20986  |
| 17      | Karimganj     | 30730  | 35770  | 29083       | 26490  | 23032  | 24943  | 31719  |
| 18      | Kokrajhar     | 19909  | 23174  | 16431       | 16665  | 16202  | 14654  | 18050  |
| 19      | Lakhimpur     | 24420  | 28425  | 21622       | 19671  | 19525  | 19611  | 20835  |
| 20      | Morigaon      | 22057  | 25674  | 22480       | 21340  | 19615  | 21489  | 25070  |
| 21      | Nagaon        | 67582  | 78667  | 62279       | 58210  | 54757  | 53761  | 66245  |
| 22      | Nalbari       | 14013  | 16312  | 15340       | 13960  | 12843  | 13330  | 13307  |
| 23      | N.C.Hills     | 3844   | 4475   | 4642        | 3519   | 3539   | 3307   | 3873   |
| 24      | Sivasagar     | 21652  | 25204  | 19328       | 18107  | 16942  | 17716  | 18762  |
| 25      | Sonitpur      | 37022  | 43095  | 39223       | 34597  | 32836  | 34086  | 36836  |
| 26      | Tinsukia      | 27028  | 31462  | 21190       | 23178  | 20542  | 21467  | 23104  |
| 27      | Udalguri      | 16855  | 19619  | 11942       | 13867  | 12599  | 13910  | 14312  |
|         | ASSAM         | 668179 | 777778 | 674420      | 606724 | 560613 | 586879 | 661114 |



## APPENDIX-19.10

## FAMILY PLANNING PERFORMANCE OF ASSAM DURING 2014-15

| Sl. No.      | District     | Sterilisation |              | I. U. D. Insertion |               | C. C. Users  |              | O. P. Users  |               |
|--------------|--------------|---------------|--------------|--------------------|---------------|--------------|--------------|--------------|---------------|
|              |              | Target        | Achievement  | Target             | Achievement   | Target       | Achievement  | Target       | Achievement   |
| 1            | 2            | 3             | 4            | 5                  | 6             | 7            | 8            | 9            | 10            |
| 1            | Barpeta      | 4100          | 1210         | 5180               | 3821          | 4900         | 3535         | 4900         | 10922         |
| 2            | Bongaigaon   | 2150          | 277          | 2110               | 1859          | 3200         | 1696         | 3200         | 3238          |
| 3            | Chirang      | 440           | 131          | 1200               | 1552          | 1900         | 532          | 1900         | 1724          |
| 4            | Cachar       | 7800          | 3080         | 4820               | 2091          | 4800         | 3196         | 4800         | 5452          |
| 5            | Darrang      | 3400          | 1848         | 3280               | 4731          | 3200         | 1849         | 3200         | 3490          |
| 6            | Udalguri     | 200           | 55           | 1800               | 2339          | 1800         | 512          | 1800         | 2412          |
| 7            | Dibrugarh    | 8760          | 4383         | 3800               | 3820          | 3400         | 3281         | 3400         | 4050          |
| 8            | Dhubri       | 3100          | 825          | 4900               | 7952          | 4700         | 3875         | 4700         | 9052          |
| 9            | Dhemaji      | 4300          | 1907         | 2380               | 5386          | 2800         | 484          | 2800         | 2652          |
| 10           | Goalpara     | 3400          | 892          | 3080               | 3430          | 3700         | 3518         | 3700         | 5760          |
| 11           | Golaghat     | 5350          | 1946         | 3390               | 7220          | 3300         | 2103         | 3300         | 5631          |
| 12           | Hailakandi   | 3150          | 613          | 2200               | 4285          | 2200         | 1688         | 2200         | 2438          |
| 13           | Jorhat       | 4250          | 4216         | 3410               | 2403          | 3700         | 4234         | 3700         | 3471          |
| 14           | Kamrup       | 4850          | 2850         | 4610               | 6832          | 5000         | 4845         | 5000         | 7901          |
| 15           | Kamrup (M)   | 8000          | 3776         | 3000               | 15557         | 3600         | 1052         | 3600         | 1957          |
| 16           | Karimganj    | 3100          | 1248         | 3020               | 1947          | 3050         | 1778         | 3050         | 3970          |
| 17           | Kokrajhar    | 2150          | 184          | 3220               | 2199          | 2800         | 1702         | 2800         | 4248          |
| 18           | KarbiAnglong | 1550          | 118          | 2940               | 4441          | 2800         | 4117         | 2800         | 4264          |
| 19           | Lakhimpur    | 6350          | 1776         | 3550               | 1391          | 3400         | 1556         | 3400         | 4750          |
| 20           | Morigaon     | 3100          | 984          | 3300               | 2758          | 2900         | 984          | 2900         | 3712          |
| 21           | Nalbari      | 3200          | 1347         | 3230               | 1757          | 3700         | 2418         | 3700         | 3385          |
| 22           | Baksa        | 1100          | 258          | 1800               | 1301          | 1200         | 1454         | 1200         | 3359          |
| 23           | Nagaon       | 8000          | 2111         | 5770               | 4312          | 5300         | 3302         | 5300         | 6328          |
| 24           | N. C. Hills  | 500           | 70           | 940                | 818           | 1400         | 396          | 1400         | 720           |
| 25           | Sonitpur     | 5000          | 3525         | 5380               | 2305          | 4200         | 2454         | 4200         | 9842          |
| 26           | Sivasagar    | 4300          | 2098         | 3950               | 3457          | 3700         | 4165         | 3700         | 4787          |
| 27           | Tinsukia     | 8400          | 4111         | 3740               | 4876          | 3350         | 590          | 3350         | 3693          |
| <b>ASSAM</b> |              | <b>110000</b> | <b>45839</b> | <b>90000</b>       | <b>104840</b> | <b>90000</b> | <b>61316</b> | <b>90000</b> | <b>123208</b> |

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## CHAPTER – XX

## IMPORTANT FACTS/FINDINGS OF SIXTH ECONOMIC CENSUS, ASSAM

## ALL ESTABLISHMENTS

- As per the results of the Sixth Economic Census 2013, there were altogether 20.10 lakh establishments in the state engaged in different economic activities other than crop production, plantation, public administration, defence & compulsory social security services.
- Out of 20.10 lakh establishments, around 14.43 lakh establishments (71.81%) were operated in the state as own account establishments and the remaining 5.67 lakh establishments (28.19%) with at least one hired worker.
- Out of 20.10 lakh establishments, 14.41 lakh establishments (71.71%) were located in rural areas while 5.69 lakh establishments (28.29%) in urban areas.
- Out of 20.10 lakh establishments, 2.22 lakh establishments (11.04%) were involved in agricultural activities and the remaining 17.88 lakh establishments (88.96%) in non-agricultural activities.
- Average persons per establishment (Rate of employment) of the State were found around 1.95. In rural areas, it was found about 1.89 as against 2.10 in urban areas.
- Out of total 20.10 lakh establishments in the state, about 1.01 lakh establishments (5.01%) were operated under the ownership of Govt./PSU, 89.77% under private proprietary, 0.31% under private partnership, 0.27% under private company, 0.25 under STG, 0.10% under co-operative, 3.29% under NPI and the rest 1.00% under other ownerships.
- Out of the total establishments, about 8.09 lakh establishments (40.27%) were operating from outside the households with fixed structure. 6.78 lakh establishments (33.73%) were operating from outside the households without fixed structure (without premises) and the rest 5.23 lakh establishments (26%) were operating inside the households/premises during Sixth Economic Census.
- Out of the total establishments, 18.82 lakh establishments (92.2%) were operated in the state as perennial, 6.1% as seasonal and 1.7% as casual in nature.
- Around 18.04 lakh establishments were operated in the state under the ownership of private proprietary of which 2.12 lakh establishments (11.8 %) belonged to Scheduled Caste owned, 1.79 lakh establishments (9.9%) belonged to Scheduled Tribes owned, 3.78 lakh establishments (20.9%) owned by Other Backward Classes and remaining 10.35 lakh establishments (57.4%) owned by other communities.
- Out of total establishments, about 63.3% proprietary establishments were operated by Hindus, 32.1% by Muslims, 1.9% by Christians and the remaining 2.7% by other religions.
- About 12.63 lakh establishments were found to be operated in the size class of 1(one) person which accounted for around 62.83% of the total establishments in the state. The concentration of establishments in the size class of employment 1-5 was found about 96.77% to the total establishments in the State.
- The maximum numbers of establishments were located in the districts of Kamrup (Metropolitan) (10.05%), Nagaon (9.59%), Barpeta (8.48%) and Cachar (6.76%).
- The maximum numbers of rural establishments were found to be located in the districts of Nagaon (10.04%), Barpeta (9.78%), Cachar (7.45%) and Kamrup (5.41%). These four districts together accounted for almost 1/3<sup>rd</sup> of the total establishments located in rural areas of the state.
- Kamrup (Metropolitan) district alone accounted for nearly 1/3<sup>rd</sup> of the total urban establishments in the state, followed by Nagaon district (8.44%) and Barpeta district (5.17%) respectively.

## EMPLOYMENT IN ALL ESTABLISHMENTS

- About 39.19 lakh persons were usually working in all establishments in the state except crop production, plantation, public administration, defence & compulsory social security services.
- Out of the 39.19 lakh persons, about 27.23 lakh (69.48%) were usually working in rural areas and the rest 11.96 lakh (30.52%) in urban areas.
- Out of the total employment, 35.40 lakh (90.33%) were employed in non-agricultural activities and the remaining 3.80 lakh (9.67%) were employed in agricultural activities.
- There were around 22.29 lakh (56.87%) persons usually working in the establishments run by without involving any hired workers i.e own account establishments in the State and the rest 16.90 lakh (43.13%) persons were working in the establishments engaging with at least one hired worker.
- Around 29.65 lakh persons were usually working in proprietary establishments in the state of which 3.19 lakh (10.7 %) persons belonging to Scheduled Caste, 2.71 lakh (9.1%) persons belonging to Scheduled Tribes, 6.01 lakh persons (20.3%) pertaining to Other Backward Classes and remaining 17.75 lakh persons (59.8%) pertaining to other communities.
- Around 39.19 lakh persons were usually working in both agricultural and non-agricultural establishments located in the State of which 13.11 lakh persons (33.4%) were found to be as male hired, 3.79 lakh persons (9.7%) as female hired, 18.76 lakh persons (47.9%) as male non-hired and the remaining 3.92 lakh persons (10.4) as female non-hired.
- Nearly 27.23 lakh persons were usually employed in establishments located in rural areas of the State of which 8.29 lakh persons (30.4%) were found as male hired, 2.85 lakh persons (10.5%) as female hired, 13.27 lakh persons (48.7%) as male non-hired and the remaining 2.82 lakh persons (10.45%) as female non-hired.
- Almost 11.96 lakh persons were usually employed in both agricultural and non-agricultural establishments located in urban areas of which 4.82 lakh persons (40.3%) were employed as male hired, 0.94 lakh persons (7.9%) as female hired, 5.49 lakh persons (45.9%) as male non-hired and the remaining 0.70 lakh persons (5.9) as female non-hired.
- Kamrup (Metropolitan) district had alone contributed around 11.42% of total employment in the state, followed by Nagaon district (9.28%), Barpeta (7.84%) and Cachar (5.11%) respectively.

## AGRICULTURAL ESTABLISHMENTS

- About 92.92% of total agricultural establishments in the State were located in rural areas and the rest 7.08 % in urban areas.
- Out of the total agricultural establishments, about 93.07% agricultural establishments were operated in the State as own account establishments and the rest 6.93% agricultural establishments were operated with at least one hired worker.
- Out of total 2.22 lakh agricultural establishments in the State, 2.19 lakh establishments (98.78%) were operated under the ownership of private proprietary and the rest 1.22% was under other ownerships. The highest numbers of agricultural establishments under the ownership of proprietary were found in livestock activity (57.13%).
- There were around 1.82 lakh agricultural establishments operated in the State as perennial establishments which constituted about 82.05% of total agricultural establishments.
- Out of the total agricultural establishment in the State, about 56.9% establishments were owned by Hindu, followed by Islam (36.9%) and Christian (3.2%). The percentage share of ownership of other religion was found very low.
- Out of total agricultural proprietary establishments in the State, about 10.7% was owned by Scheduled Casts Community (SC), 17.9% operated by Scheduled Tribes Community (ST) and remaining 20.6% run by Other Backward Classes Community (OBC).

- Out of total agricultural establishment, about 82.93% establishments owned by male proprietors and the remaining 17.07% run by female proprietors.
- Barpeta district had the maximum number of agricultural establishments (0.47lakh) constituting about 21.39% of total agricultural establishments in the State.

#### EMPLOYMENT IN AGRICULTURAL ESTABLISHMENTS

- About 3.79 lakh persons were usually working in agricultural establishments in the State which contributed around 9.68% of total workers engaged in all economic activities except Crop production and plantation, Public Administration, Defence and Compulsory Social Security Services activities.
- About 3.53 lakh (93%) persons were reported to be working in agricultural establishments located in rural areas as against 0.27 lakh (7%) in urban areas.
- Out of total employment in agricultural establishments, about 2.93 lakh persons (77.24%) were usually working in own account establishments and the remaining 0.86 lakh persons (22.76%) in establishments with at least one hired worker.
- Out of the total employment in agricultural establishments, 3.56 lakh persons (93.73%) were engaged in establishments owned by private proprietary.
- About 0.32 lakh (9.1%) were employed in agricultural establishments owned by Scheduled Caste Community (SC), 0.62 lakh (17.4%) owned by Scheduled Tribes Community (ST) and 0.80 lakh (22.8%) owned by Other Backward Classes Community (OBC).
- The proportion of employment in agricultural establishments owned by Self Help Group was found about 3.94%. The maximum number of employment under the ownership of proprietary establishments was found in livestock activity with a share of 56.66%.
- About 0.86 lakh persons employed in agricultural establishments with atleast one hired worker in the state of which around 0.78 lakh persons (89.97%) worked under the ownership of proprietary establishments.
- Barpeta district had provided maximum number of employment among the districts in terms of agricultural establishments with a share of 22.05%, followed by Nagaon district (11.35%) and Tinsukia district (10.95%).
- In rural areas, the three districts viz. Barpeta (21.34%), Nagaon (11.40%) and Tinsukia (11.40%) each have provided for more than 11% of the total employments.
- In urban areas, the Barpeta district alone accounted for almost one-third of the total employment in agricultural establishments, followed by Kamrup (Metro) district (15.66%) and Nagaon district (10.80%).

#### NON-AGRICULTURAL ESTABLISHMENTS

- About 17.88 lakh establishments involved in non-agricultural activities in the State other than public administration, defence & compulsory social security services of which 12.35 lakh establishments (69.08%) were located in rural areas as against 5.53 lakh establishments (30.92%) in urban areas.
- Out of the total 17.88 lakh non-agricultural establishments of the State, around 12.46 lakh (69.71%) establishments were operated in the State without employing hired workers as against 5.42 lakh (30.29%) establishments operated with engaging at least one hired worker.
- Out of the total non-agricultural establishments in the State, about 7.95 lakh establishments (44.44%) were operated from outside the household with fixed structure, 6.16 lakh (34.43%) operating from outside the household without fixed structure/without premise and the rest 3.78 lakh (21.13%) were operating inside the households.
- Out of total 17.88 lakh non-agricultural establishments in the State, 1.00 lakh non-agricultural establishments (5.60%) were operated under the ownership of Govt./PSU, 88.65% was under private proprietary, 0.34% was under private partnership, 0.29% was under private company, 0.20% was under STG, 0.11% was under co-operative, 3.69% was under NPI and 1.12% falls under others.

- Around 15.85 lakh non-agricultural establishments were operated in the State under the ownership of private proprietary of which 1.89 lakh non-agricultural establishments (11.9 %) belonged to Scheduled Caste owned, 1.40 lakh non-agricultural establishments (8.8%) belonged to Scheduled Tribes owned, 3.33 lakh non-agricultural establishments (21.0%) owned by Other Backward Classes and remaining 9.23 lakh non-agricultural establishments (58.3%) owned by other communities.
- About 16.70 lakh non-agricultural establishments were operated in the State as perennial in nature which constituted about 93.4% of the total non-agricultural establishments. Out of the total non-agricultural establishments, merely 5.1% establishments were found to be operated as seasonal establishments and 1.5% as casual establishments in nature.
- There were 11.37 lakh non-agricultural establishments operated in the size class of 1(one) person, which accounted for around 63.59% of the total non-agricultural establishments.
- The concentration of establishments in the size class of employment 1-5 was found about 96.59% to the total non-agricultural establishments in the State. The percentage share of establishments gradually declined with the increase in the size class of employment.
- Kamrup (Metropolitan) district had provided maximum number of non-agricultural establishments (1.98 lakh) constituting about 11.05% of total non-agricultural establishments in the State. It was followed by Nagaon district (9.24%) and Cachar district (7.15%) respectively.
- In rural areas, the maximum numbers of non-agricultural establishments were found in the districts of Nagaon (9.64%), Cachar (8.05%) and Barpeta 7.96%).
- In urban areas, maximum numbers of non- agricultural establishments were found in Kamrup (Metropolitan) district with a share of 33.70%, followed by Nagaon district (8.36%) and Cachar district (5.13%) respectively.
- Kamrup (Metropolitan) district accounted for nearly 10.00 % of total own account non-agricultural establishments which was highest among the districts and it was followed by Nagaon district (8.47%).
- As regard to concentration of non-agricultural establishments with atleast one hired worker, Kamrup (Metropolitan) district with its share of 13.46% was found highest among the districts, followed by Nagaon district (11.02%) and Barpeta district (6.58%) respectively.
- Retail trade, manufacturing, other personal service and transportation and storage were the four most important activity groups in terms of number of establishments in the non-agricultural sector. These four activity groups together shared more than 70% of the total non-agricultural establishments operating in the state.
- Retail trade activity group contributed about 40.79% of total non-agricultural establishments which was found to be the highest among all major activity groups in the State.
- The maximum number of non-agricultural own account establishments was found in retail trade activity with a share of 48.38%., followed by manufacturing activity (11.06%) and transport and storage activity (10.69%).
- The maximum number of non-agricultural establishments under the ownership of Govt./PSU in the state were found in education sector (7.29% ), followed by human health & social work sector (4.96%) and other personal service sector (4.13%) respectively.
- The highest proportion of establishments in the size class of 1(one) person was found in retail trade activity group (47.66%), followed by transportation and storage activity group (11.55%) and other service activities not elsewhere classified (9.82%).
- The highest proportion of non-agricultural own account establishments in the size class of 1 (one) person was found in retail trade activity (44.98%), followed by Transportation and storage activity (11.86%) and manufacturing activity (9.24%) respectively

## EMPLOYMENT IN NON-AGRICULTURAL ESTABLISHMENTS

- Around 35.40 lakh persons were usually working in non-agricultural establishments in the State which contributed about 90.32% of total workers engaged in all economic activities except crop production and plantation, public Administration, defence and Compulsory Social Security Services activities.
- About 23.71 lakh (66.96%) were reported to be working in non-agricultural establishments located in rural areas against 11.69 lakh (33.04%) in urban areas.
- Out of total employment, about 14.49 lakh persons (36.97%) were usually working as being non-hired workers in non-agricultural establishments and 20.91 lakh persons (53.35%) with engaging at least one hired worker.
- There were around 26.10 lakh persons usually working in non-agricultural private proprietary establishments in the State of which 2.86 lakh (11 %) persons belonging to Scheduled Caste, 2.09 lakh (8%) persons belonging to Scheduled Tribes, 5.20 lakh persons (19.9%) pertaining to Other Backward Classes and remaining 15.94 lakh persons (61.1%) pertaining to other communities.
- Nearly 23.71 lakh persons were usually working in non-agricultural establishments located in rural areas of the State of which 7.93 lakh (33.4%) were found as male hired, 2.71 lakh (11.4%) as female hired, 11.26 lakh (47.5%) as male non-hired and the remaining 1.81 lakh (7.6) as female non-hired.
- As regard to employment in the establishments run by without hired workers , the highest share of employment to total employment among all districts was observed in Kamrup (Metropolitan) district (9.54%) , followed by Nagaon district (8.47%) and Cachar district(8.15%) respectively.
- As far as district wise concentration of employment engaged in the establishments with at least one hired worker are concerned, Kamrup (Metropolitan) district with its share of 14.37% of total employment was found to be highest among the districts and it was followed by Nagaon district (9.47%).

## HANDICRAFT/ HANDLOOM ESTABLISHMENTS

- About 0.91 lakh establishments were operated in the State as Handicraft / Handloom establishments which constituted merely 4.52 % of total establishments in the State.
- There were 90767 numbers of handloom / handicraft establishments in the State of which 71.37% run by without hired workers i.e. own account establishments and the rest 28.63% with at least one hired worker.
- There were about 1.89 lakh persons engaged in handloom / handicraft establishments in the State of which 1.38 lakh (73.2%) persons employed in rural areas and the rest 0.51 lakh (26.8%) in urban areas.
- The maximum number of Handloom/Handicraft establishments was found to be located in the districts Barpeta (14.03%), Nagaon (10.30%) and Kamrup (10.04%).

## WOMEN ENTREPRENEURS

- 1.51 lakh establishments were operated in the State under the ownership of women entrepreneurs which constituted about 7.52% of total establishments. Out of the total establishments owned by females, around 1.08 lakh establishments (71.48%) were located in rural areas as against 0.43 lakh (28.52%) in urban areas.
- About 1.16 lakh (76.89%) establishments were found to be operated under the women entrepreneurs in the state as being non-agricultural activities and remaining 23.11% as agricultural activities.



- The maximum number of establishments runs by women entrepreneurs were found in manufacturing activity group (30%), followed by retail trade activity group (21.89%) and livestock activity group (19.91%).
- The maximum number of establishments operated by the female entrepreneurs in the State was found in Barpeta district with a share of 21.13%.
- There were about 2.48 lakh persons usually working in the establishments owned by female entrepreneurs in the State of which 1.01 lakh (40.95%) establishments engaged in the size class of employment of 1(one) person.
- Out of 1.51 lakh establishments under women entrepreneurs of the State, 10.83% belonging to S.C community, 16.29% belonging to S.T community, 22.23% belonging to O.B.C community and rest of 50.65% belonging to other community.
- Average employment per establishment for women owned establishments was found to be 1.64.

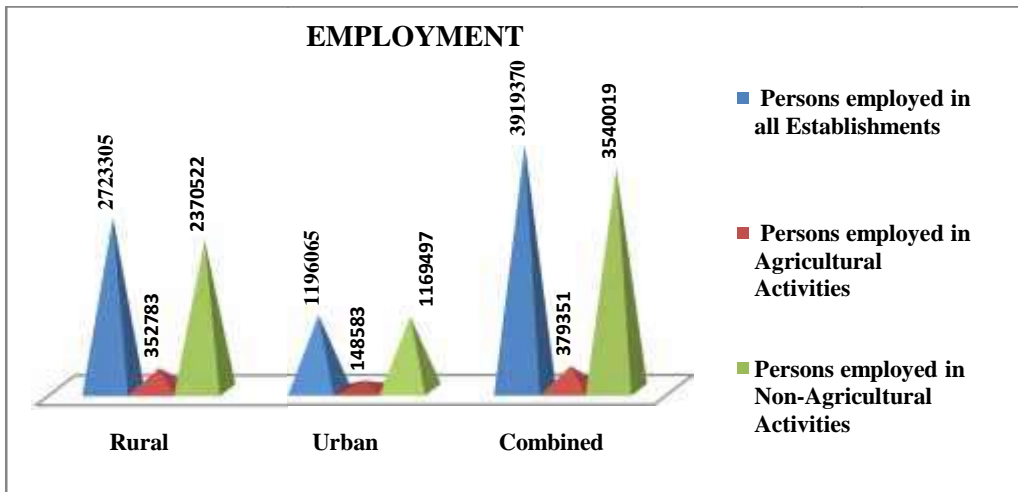
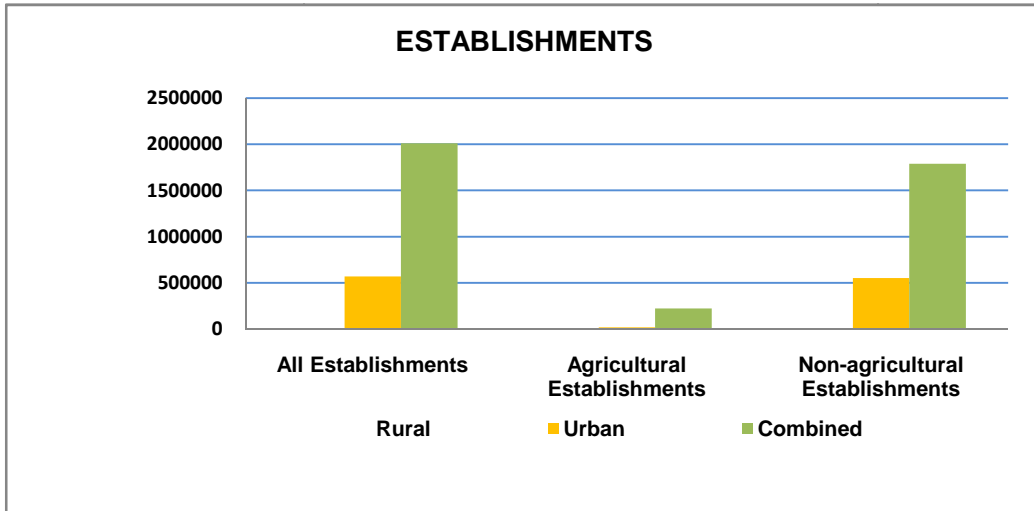
#### STABLISMENTS WITH 10 (TEN) OR MORE WORKERS

- There were around 0.24 lakh establishments operating in the State with 8 or more persons who contributed about 1.19 % of total establishments.
- There were around 6.64 lakh persons employed in the establishments having 8 or more workers in the State, which accounted for about 16.94 % of total employment.
- The activity group 'education' had shared the highest proportion to the establishments having 8 or more workers in the State among all major activity groups (49.38%) and it was followed by manufacturing activity group (16.63%).
- There were around 6.64 lakh persons employed in the establishments having 8 or more workers in the State, which accounted for about 16.94 % of total employment.

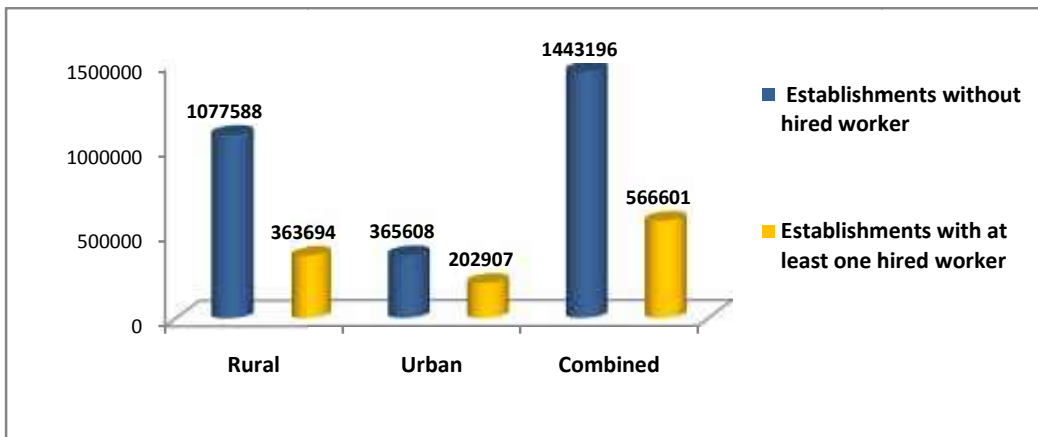
#### ANNUAL GROWTH RATE

- During the period between two Economic Censuses (2005 & 2013), the overall annual growth rate of establishments in the State was found 9.45%.
- During the period 2005-2013, the overall annual growth rate of agricultural establishments in the State was found about 22.96%.
- During the period 2005-2013, non-agricultural establishments in the State grew annually at the rate of 8.46%.
- The growth rate of own account establishments in the State has increased sharply from 6.95% during 1998-2005 to 10.75% during 2005-2013.
- During the period 2005-2013, the annual growth rate of establishments in the state was found to be highest (14.51%) in Dima Hasau district, followed by Barpeta district (14.05%), Karbi Anglong (13.65%) and Jorhat district (13.64%). During the same period, the annual growth rate of establishments was found to be lowest (5.72%) in Goalpara district.
- During the period 2005-2013, the growth rate of employment in the State was found to be highest in Barpeta district with a share of 13.7%, followed by Karimganj district (13.1%) and Kamrup (Metropolitan) district (10.5%).

PICTORIAL PRESENTATION

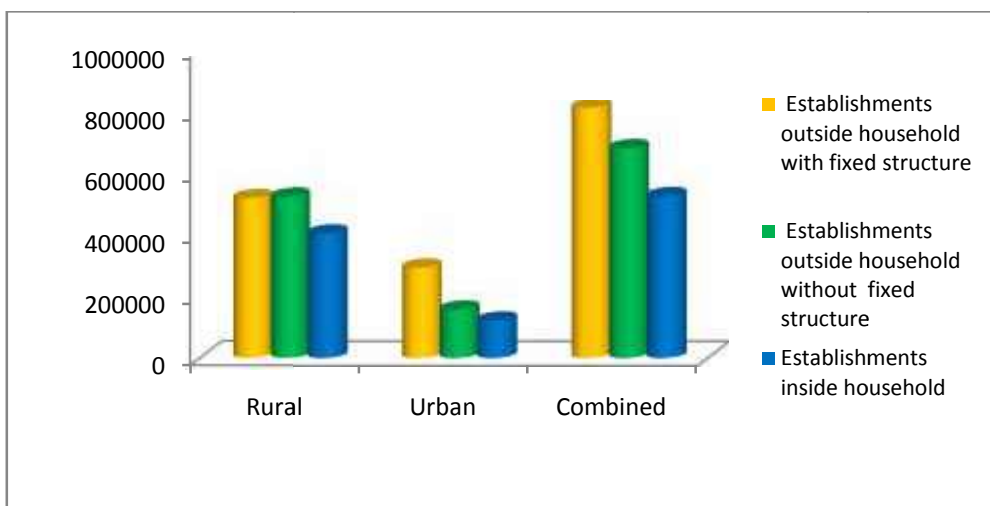


Establishments by type of employment

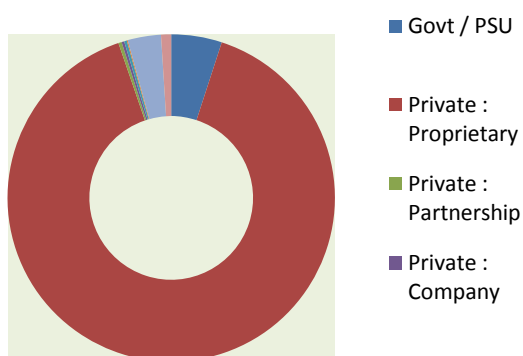




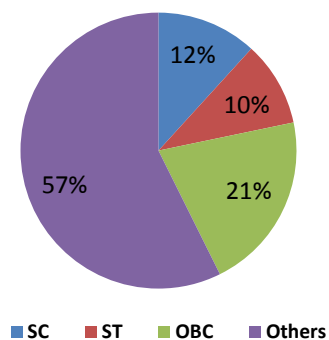
### ESTABLISHMENTS BY TYPE OF STRUCTURE



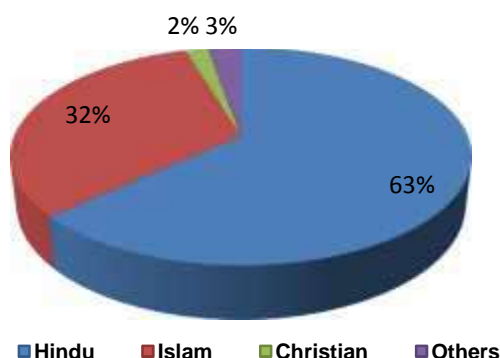
**Distribution of establishments by type of ownership**



**Percentage distribution of proprietary establishments by social group of owner**



**Percentage distribution of proprietary establishments by religion in Assam**



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