



Income and Livelihoods





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The Village and District *Jan Rapats* treat livelihood as one of the central aspects of human development. A secure, stable and sustainable livelihood—that provides employment and helps people grow and live with dignity – is imperative for human development.

Only secure livelihoods can give people the means to ensure access to facilities such as education, health care and safe habitats. Livelihoods impact the quality of life, afford a certain standard of living, and help people overcome the daily battle for survival. Secure livelihoods reduce dependence on natural resources, Government or middlemen. Secure livelihoods bring about economic independence and lead to increased self-reliance, help to build productive assets and skills, and give to people the ability to intervene in the environment (natural, cultural, social, economic and institutional).

Recognising the multidimensional impact of livelihood on living and lifestyle, people perceive livelihood not merely as a job that provides an income, but assign a larger and more significant role to livelihood, since it helps to expand their choices.

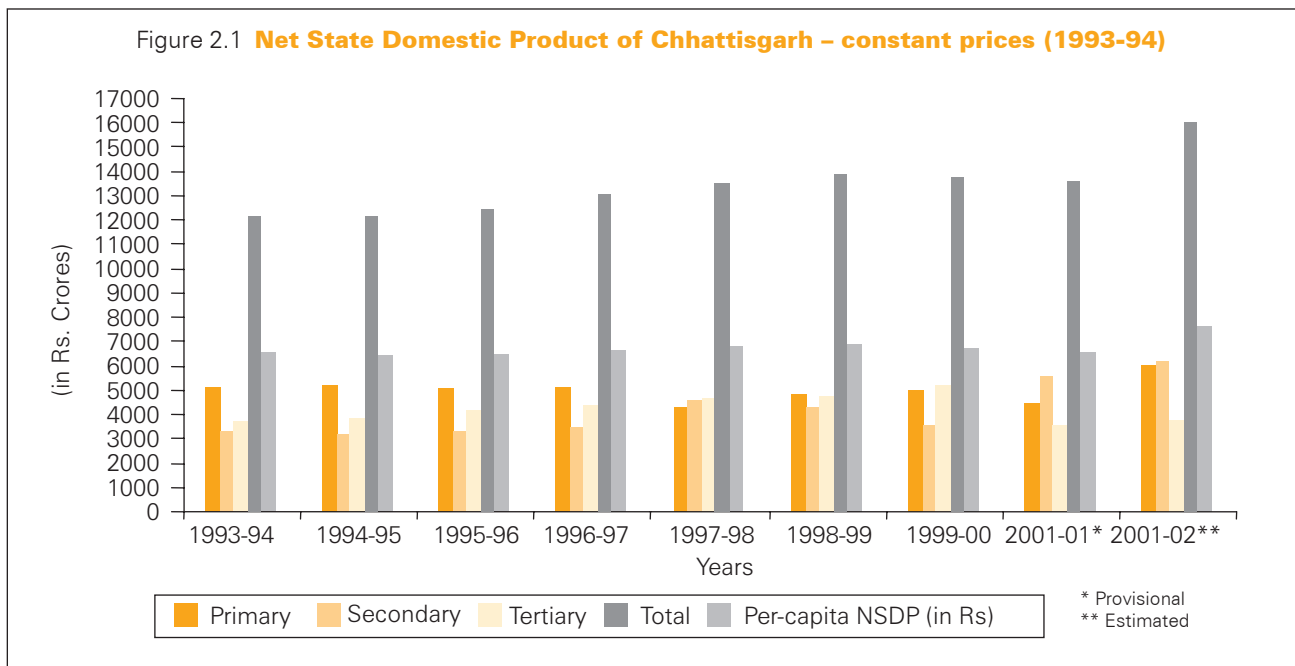
The first section of this chapter presents a macroeconomic view of the livelihood pattern based on secondary data. The second

section explains the regional characteristics of livelihood on the basis of secondary and primary information available from the *Jan Rapats*. This is followed by a detailed discussion of various livelihood choices. The next section analyses the perception of the community on the status of livelihoods, income and employment, sources of livelihoods, the resource base and the survival and growth strategies as reported in the *Jan Rapats*. Two separate sections deal with issues of women and livelihoods and institutions and livelihood choices. The last section details the suggestions, which emanate from the Reports and discusses the future challenges.

Economy and Livelihood Patterns

This section focuses on understanding the broad canvas of livelihood in the State of Chhattisgarh. The economy of the State, the livelihood pattern and major sources of employment are explained using quantitative data from primary and secondary sources.

The primary sector, more specifically agriculture and allied activities, forms the base of the State's economy and provides livelihood to 80 percent of the rural population. The rural economy has a diversified base with agriculture and allied activities as the mainstay, accompanied by a thriving rural non-farm economy.



Source: Directorate of Economics and Statistics, Government of Chhattisgarh

Income and employment - a macro view

According to the available secondary data on income and livelihoods, the per capita Net State Domestic Product (NSDP) in the State was Rs 12,476 in 2001-2002. The per capita NSDP has increased at an average rate of about two percent per annum, (at constant 1993-94 prices) since 1993-94.

Although there has been a gradual decline in the share of the primary sector in the NSDP,

it still continues to be very significant. The primary sector accounted for about 38 percent of the NSDP in 2001-02, which was roughly the same share as the secondary sector. The secondary sector expanded rapidly from 27.3 percent to 38.5 percent of NSDP, in the 1993-94 to 2001-2002 period. The share of the tertiary or services sector in the State income has seen a decline, in 2001-2002, after a rapid increase in the late 1990s (see figure 2.3).

Table 2.1 **Net State Domestic Product of Chhattisgarh**
(in Rs. crores, at constant (1993-94) prices)

Sector	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01*	2001-02**
Primary	5118	5183	5034	5169	4293	4827	4985	4471	6048
Secondary	3322	3162	3320	3485	4592	4294	3515	5567	6158
Tertiary	3723	3835	4142	4387	4664	4761	5220	3556	3778
Total	12163	12181	12496	13041	13551	13882	13720	13594	15984
Per-capita NSDP (in Rs)	6539	6445	6474	6654	6810	6873	6692	6567	7647

Source: Directorate of Economics and Statistics, Government of Chhattisgarh
*Provisional ** Estimated

Table 2.2 **Net State Domestic Product of Chhattisgarh**
(in Rs crores at current prices)

Sector	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01*	2001-02**
Primary	5118	5543	5758	6462	6302	7342	8153	7461	9914
Secondary	3322	3449	3816	4278	6055	6073	5100	5422	6158
Tertiary	3722	4205	4860	5630	5985	6897	8077	8667	10002
Total	12163	13198	14435	16372	18344	20313	21331	21551	26074
Per capita NSDP (in Rs)	6539	6983	7479	8353	9218	10056	10405	10363	12476

Source: Directorate of Economics and Statistics, Government of Chhattisgarh
*Provisional ** Estimated

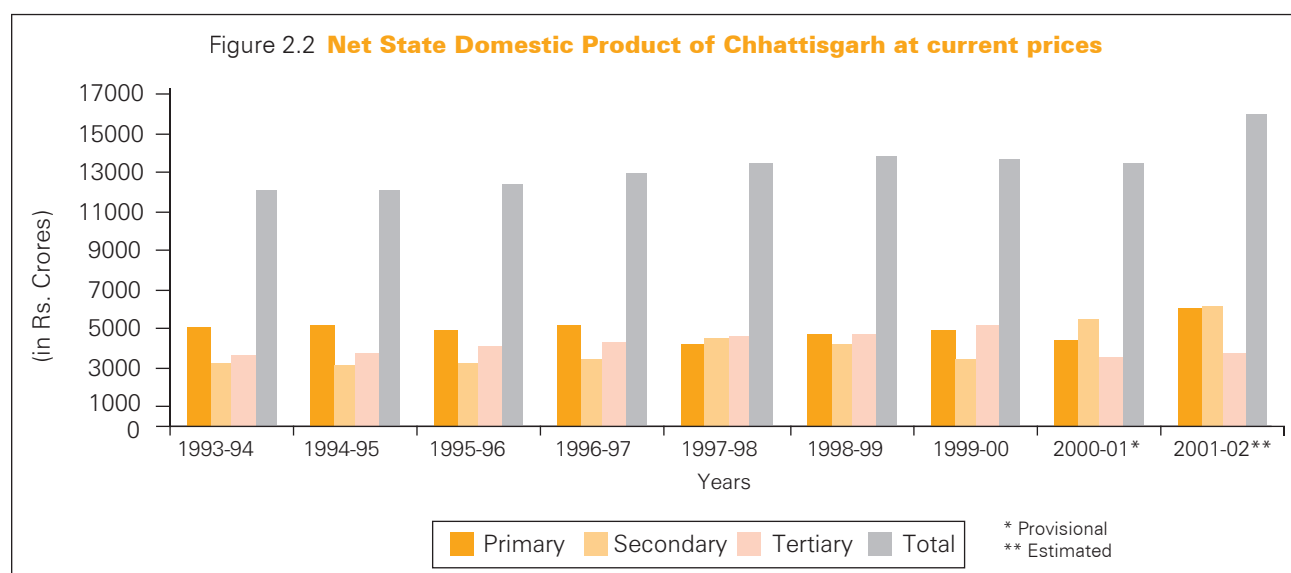


Table 2.3 **Sectoral composition of NSDP of Chhattisgarh**
(as a percentage of total NSDP)

Share of Sectors	1993-94	1994-95	1995-96	1996-97	1997-98	1999-00	2000-01*	2001-02**
Primary	42.1	42.5	40.3	39.6	31.7	36.3	32.9	37.8
Secondary	27.3	26.0	26.6	26.7	33.9	25.6	41.0	38.5
Tertiary	30.6	31.5	33.1	33.6	34.4	38	26.2	23.6

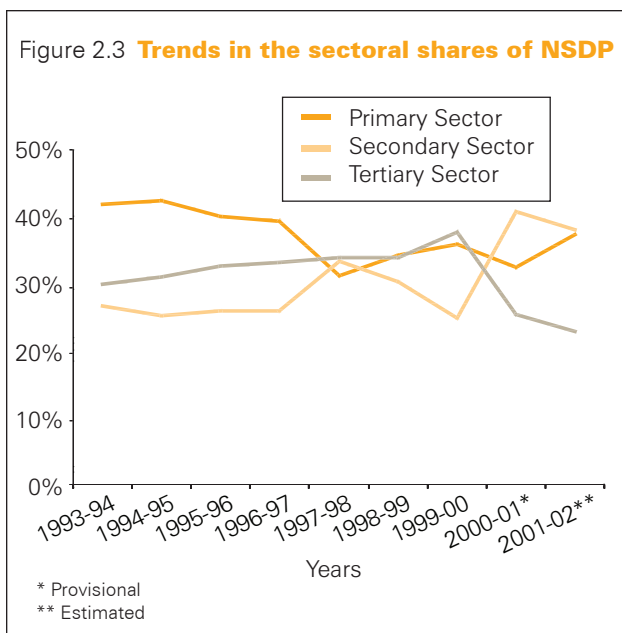
Source: Directorate of Economics and Statistics, Government of Chhattisgarh
* Provisional ** Estimated

Work force participation rate¹

According to the 2001 Census, the Work Force Participation Rate (WFPR) for the State is 46.5 percent. The rural WFPR is higher, at 50 percent,

compared to the urban WFPR of 31 percent. Marginal workers constitute about 27.2 percent of the total work force in the State of which 70 percent are women. Around 76 percent of

¹ Work force participation rate is defined as the number of workers divided by the total population



the total workers are employed in agriculture. Agricultural labour accounts for 32 percent of the workforce.

Table 2.4 **Average growth rate of income per annum, 1993-94 to 2001-02**

Sector	1993-94 to 2001-02 (growth rate in percent per annum)
Primary Sector	2.11
Secondary Sector	8.02
Tertiary Sector	0.18
Total	3.47
Per capita NSDP	1.98

Source: Directorate of Economics and Statistics, Government of Chhattisgarh

Regional Characteristics and Classification by Livelihoods

The livelihood patterns depend on distinct regional characteristics. Three broad regions emerge in the State, based on the terrain, cropping pattern, forests and industrial development.

Regional classification

Each of the three broad regions of the State has distinctive characteristics that influence the lives of the people. This has been explicitly brought out in the *Jan Rapats*. The three broad areas are northern Chhattisgarh, the central plains area and southern Chhattisgarh.

Northern Chhattisgarh

The hilly and forested terrain in the north of the State includes the districts of Korea, Surguja, Jashpur, and parts of Bilaspur, Korba, Kabirdham and Raigarh districts. The environment and the topography shape the lives of the people of this region.

- People and communities are dependent on the forests for fuel, firewood, medicines, liquor, food, implements and housing material. Many trees, shrubs and creepers provide vegetables and fruits that form an important part of the diet of the people.
- The main agricultural crop is paddy. Despite the increasing use of high yielding varieties (HYV), local strains continue to be popular. A wide variety of other local crops are grown as well, primarily for self-consumption.
- Goats, poultry and cattle are the major animal assets.
- The area has ample sources of water, from rivers, streams and springs.
- This region is the coal belt of Chhattisgarh. Most of the coalmines are situated here. Mining activities provide limited opportunities for wage employment.
- Korba is the major industrial town in this region.

Central plains

The plains area of the State covers the districts of Rajnandgaon, Durg, Raipur, Mahasamund, Dhamtari and some blocks of Bilaspur.

- Single crop agriculture is the norm and paddy is the main crop. The increasing spread of irrigation has provided opportunities for double cropping and diversification, and has encouraged horticultural activities. This is the most fertile and productive region of Chhattisgarh.
- There are a few forests in this region. Villagers in the vicinity of forests, gather forest produce for sale and for self-consumption.
- The animal population consists mainly of milch animals.
- In terms of infrastructure, the plains are relatively well developed. Industrial activity and urban conglomerations provide opportunities for non-farm activities, as well as markets for horticulture and animal produce.
- Migration is common from this region, from the villages to towns within the State, and even to other States such as Punjab, Uttar Pradesh and Haryana.
- Durg is the major industrial district and the Bhilai Steel Plant is situated here.
- Exceptionally fortunate in its water resources, the region has good rainfall and rapid run off due to the undulating terrain. There is substantial potential for rainwater harvesting and watershed development.
- Forests play an important role in the lives of the people, providing food security and livelihood through the collection of minor forest produce, and employment (as casual labour) in the Forest Department. The forests provide for people's consumption needs — fuel and firewood, medicines, food and drink, implements and housing materials.
- Agriculture is mainly single cropped. People depend on traditional knowledge and techniques for agriculture. The main crop is paddy, grown with local seeds, fertilisers and implements. This region is one of the richest sources of local paddy varieties. Many local crops are grown for self-consumption and these ensure nutritional and food security. Most people keep domesticated animals as well – cattle, goats and poultry.
- Infrastructure and communication channels are poor. Much of the area gets cut off during monsoon.
- This region is well known for its rich iron ore deposits and the Bailadila mines are located here.

Southern Chhattisgarh

This area consists of the forested hill tracts of the districts of Bastar, northern Bastar (Kanker) and southern Bastar (Dantewada). It has a lot in common with the forested and hilly tracts of the north. The region is heavily forested and forests are the primary source of livelihood, providing for many household needs.

Classification of livelihoods

The *Jan Rapats* provide an analysis of the livelihood patterns in the State. There are several distinct categories, which have been identified. The various categories that emerge from the village reports are detailed below:

Table 2.5 **Classification of livelihoods**

Agriculturists: People with land, who depend almost entirely on cultivation, either on their own holdings or on the holdings of others.	They supplement their income and consumption with animal husbandry, and sundry labour at times. Some of them have also diversified into small services or small manufacturing activities.
Labourers: People without their own land or with very little land.	They survive by working as farm and casual labour. They also work in the non-farm sector, in mines, small shops, on construction sites and as part of the urban work force.
Agriculturists and forest gatherers: Those with some land, and living in the vicinity of forests	In areas adjacent to the forests, most people (including those who own some land) gather minor forest produce. A major part of the household consumption and income is based on forest gathering, with agricultural activities providing supplementary income.
Forest gatherers and labourers: People living close to the forests with very little land or without their own land	They are primarily dependent on forest produce, which they gather and sell or directly consume. Occasional labour on fields or in the forest supplements their income. Sometimes they migrate to other places to sell their labour.
Manufacturers: These are traditional occupation based producers	These include the silk weavers of Raigarh, the blacksmiths, carpenters, <i>chattai</i> (woven mats of bamboo or other grasses) weavers and tailors of Raipur, bamboo craftsmen of Korea, and the potters of Bilaspur. They operate in the cottage or household sectors, in tiny units, which may be family-owned and worked, or may even have some contracted workers. Some people have taken to modern manufacturing, operating electrical repair or lathe shops. These are located in the big villages or along main roads.
Service persons: These include traditional as well as modern service providers.	This group is bridging traditional livelihoods and new opportunities, sometimes replacing but often merging with each other. It is a growing segment, its expansion fuelled by the need for manufacturers and users to establish common ground. It tends to be based on simple and easily understood transactions. Entry barriers and requirements are few. Even as the demand for some services is declining – for those offered by cobblers, for example, there are newer trades that are springing up – car and tractor mechanics, for instance, based on apprenticeship and ‘on the job training’ systems. The processes of skill acquisition tend to break social and cultural barriers, as people work together at <i>dhabas</i> , (food stalls) workshops and construction sites.
Organised sector: People with jobs in the public / private organised sector.	Typically requiring formal education, this segment includes public sector service, and employment in offices, industries, and educational institutions and in development related services.

Source: District Reports

Agriculturists and farmers

The analysis of primary data collected from the villages shows that 78 percent of the total rural households are farmers. Only 1.5 percent of all farmers are familiar with modern agricultural practices like the use of modern equipment, chemical fertilisers and HYV seeds; and most of these farmers belong to the central plains region.

Small and marginal farmers constitute the most vulnerable group amongst the cultivators. With just one crop in a year and low productivity, their land is not sufficient to sustain their households. They need to work on additional land, as sharecroppers or as wage labour. Attachment to their land hinders mobility. They have to incur expenses for production and are seldom able to take advantage of any increase in the market

Table 2.6 **Farmers in Chhattisgarh**
(percentage of total farmers)

Region	Small and Marginal farmers	Medium farmers	Large farmers	Total	Farmers with knowledge of modern agricultural practices
Northern region	25.31	25.20	23.96	25.09	22.29
Central plains	64.05	62.34	59.14	62.86	71.45
Southern region	10.64	12.45	16.90	12.05	6.26
State	56.02	30.16	13.82	100	1.5

Source: *Jan Rapats* Part I, data of villages

price, due to small outputs and low bargaining power. (For details see Table 2.6).

Workers, shopkeepers and skilled workers

The data from the Village *Jan Rapats*, gives category wise information about major sources of livelihood in Chhattisgarh. About 18.74 percent of households are workers or wage earners. Around three percent of the rural households run shops. It is important to note that this figure refers to those households that are completely dependent on wages and other work. A sizeable proportion of agriculturists live on the margins. During the lean season, or when they face a shortage of food grain, they look for wage labour. Wages are an important source of livelihood. Within the wage labour category, there are several sub-categories like agricultural wage labour, wage labour for forest

produce collection and wage labour in cattle rearing. Wage earners are engaged in cottage industry, manufacturing industry, construction work, mines, transport related activities and in small hotels and *dhabas*. The smallest category of rural households (0.15 percent of all rural households), is that of skilled workers and they are largely rural artisans.

Wage earners

About 82 percent of rural wage earners find employment in agricultural activities. Cattle-rearing is second in importance to agriculture and provides employment to 6 percent of all rural wage earners. However, wages from cattle rearing are largely contractual in nature. About five percent of the rural wage earners get wages from forest-based activities.² Construction labour provides employment to about 2.7 percent of wage earners. (See Table 2.8)

Table 2.7 **Workers in Chhattisgarh**
(percentage of total workers)

Workers as per occupation	Region			
	Northern region	Central plains	Southern region	Total
Farmers	72.53	79.64	81.49	78.01
Shopkeepers	3.06	3.63	0.39	3.10
Wage labour	24.26	16.58	17.99	18.74
Skilled workers	0.15	0.15	0.13	0.15
State	26.05	62.18	11.77	100.00

Source: *Jan Rapats* Part I, data of villages

² There are two kinds of forest based work. The forest department provides employment as a part of regular departmental activity in forest areas. Secondly, people collect non-timber forest produce from forest areas.

Table 2.8 **Category-wise distribution of rural wage earners**
(percentage of total)

Workers	Agriculture	Forest	Cattle rearing	Fishery	Cottage industry	Petty industry	Construction	Mine-worker	Transport	Big industry	Dhaba/Restaurants	
Northern Region	76.44	5.98	8.61	0.60	1.06	0.41	3.76	1.62	1.18	0.18	0.17	100
Central Region	85.85	3.25	4.84	1.16	1.02	0.34	2.09	0.60	0.35	0.24	0.26	100
Southern Region	79.07	9.13	5.04	1.00	1.99	0.15	2.92	0.26	0.27	0.03	0.15	100
State	81.98	4.96	6.01	0.97	1.18	0.33	2.72	0.86	0.59	0.19	0.22	100

Source: *Jan Rapats* Part I, data of villages

The central plains account for 54.7 percent of the total wage earners. A third (30.2 percent) of the wage earners are located in the northern region while only a sixth (15.2 percent) of the wage earners are in the southern region. Of the total agricultural workers, around 57 percent workers belong to the central plains. A high proportion (44 percent) of the total people engaged in cattle rearing also belong to the central plains. The southern

region accounts for only 13 percent of the wage earners engaged in cattle rearing. (For details see Table 2.9) This is not surprising given the population distribution between the three regions. The central plains are home to about 60 percent of the people, while the northern and southern regions account for 25 percent and 15 percent of the population respectively.

Table 2.9 **Region-wise wage earners in each category**
(percentage of total)

Field	Northern region	Central plains	Southern region	Total
Agriculture	28	57	15	100
Forest	36	36	28	100
Cattle rearing	43	44	13	100
Fishery	19	65	16	100
Cottage industry	27	47	26	100
Small industry	37	56	7	100
Construction	42	42	16	100
Mining	57	38	5	100
Transport	60	33	7	100
Large and medium scale industry	29	69	2	100
<i>Dhabas</i> / Restaurants	23	66	10	100
Region-wise percentage	30.2	54.7	15.2	100

Source: *Jan Rapats* Part I, data of villages

Table 2.10 **Traditional artisans/workers**
(percent of total artisans)

Artisan category	Northern region			Central plains			Southern region			State		
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
Art/ Painting	4.3	5	4.65	6	6.7	6.35	6	5.9	5.95	5.43	5.87	5.65
Pottery	37.9	22.9	30.4	33.4	18.5	25.95	28.6	15.7	22.15	33.30	19.03	26.17
Mining and metallurgy	4.9	3.4	4.15	5.0	3.3	4.15	7.1	5.9	6.5	5.67	4.20	4.93
Carpentry	5.6	25.3	15.45	5.5	24.5	15	11.1	31.7	21.4	7.40	27.17	17.28
Blacksmith	7.5	12.5	10	3.3	6.7	5	8.3	16.1	12.2	6.37	11.77	9.07
Weaving	5.8	3.7	4.75	9	5.4	7.2	5.5	3.4	4.45	6.77	4.17	5.47
Dyeing / colouring	1.2	0.9	1.05	1.2	0.7	0.95	0.6	0.3	0.45	1.0	0.63	0.82
Stitching / Embroidery	32.8	26.3	29.55	36.6	34.2	35.4	32.8	21	26.9	34.07	27.17	30.62

Source: *Jan Rapats* Part I, data of villages

Rural artisans

The artisans of Chhattisgarh are famous for their craftsmanship. Primary data, collected from the villages, gives a profile of the artisan families in rural Chhattisgarh. Rural artisans range from weavers, potters and blacksmiths to carpenters, tailors and metal workers. There are around 1,84,000 families in rural Chhattisgarh. The data from 19,128 villages shows that around 1.8 percent of the total rural workforce (population aged 15 and above) earn their livelihood from artisanship. About 17 percent of the artisans in the State are women. Among rural artisans, 30.62 percent are involved in stitching and embroidery related activities. Art and painting engage 5.65 percent of the artisans, while 5.47 percent work as weavers. The *koshthas* or *devangans* are traditional weavers of Chhattisgarh. Both communities are spread all over the State, from Raigarh to Bastar, and most of the community members are engaged in their traditional craft. Around 0.8 percent of the artisans are engaged in dyeing and colouring activities. A little over a fourth of the artisans (26.17 percent) earn their livelihood through craftsmanship in pottery. About 17 percent of the total artisans work as

carpenters. Another 9.07 percent of the artisans earn their livelihood by working as blacksmiths while traditional mining and metallurgy provide livelihood to 4.93 percent of the artisans.

Rural craftsmanship is perhaps the most important non-farm activity. However, the production is largely for rural consumption and very little finds a market outside the rural economy. The terracotta from Bastar and *kosa* silk are two products that have reached urban markets. The Government has taken some



steps to develop the institutional infrastructure to assist the rural artisans, including access to markets. An important aspect of this activity is the role played by women. They are partners in these activities. The disaggregated data of the villages (disaggregated by craft and gender) shows that in crafts such as earthenware, metal related activities (excluding blacksmithy), weaving and stitching, there is a higher proportion of women than men.

Jobs (in Government and the organised sector)

Only about 3.61 lakh people are employed in the Government and the private organised sector. According to the *Jan Rapats*, among the total number of people employed in Government jobs, only 14.3 percent are women and 85.7 percent are men, reflecting a high gender inequity. The percentage of women in private sector employment is higher (23.9 percent) than in the Government sector. Of the total Government employees, 53.5 percent belong to the central plains, reflecting the inter-regional population distribution.

Livelihood Choices

In Chhattisgarh, there are a variety of livelihood options, although agriculture is the

From the people

Raipur district can be divided into three regions, on the basis of dominant livelihood patterns:



- Agriculture dependent: Abhanpur, Arang, Dharsiva, Bhatapara, Baloda *Bazaar* and Devbhog blocks.
- Agriculture and forest dependent: Mainpur, Gariyaband, Chhura, Kasdol and Bilaigarh blocks.
- Agriculture and Industry dependent: Dharsiva, Bhatapara and Tilda blocks.

Apart from agriculture, the people are involved in animal husbandry (poultry, goat-rearing, piggery etc.), fisheries and non-timber forest produce collection. Some people work in traditional occupations like blacksmithy, carpentry, mat-weaving and stitching. Others have taken up service-based occupations like minor repair work, running grocery stores, betel nut shops and trinket shops.

District Report, Raipur

main occupation. Rarely does one vocation dominate the livelihood profile of a household. With the exception of those with the luxury of a Government job, most people take up supplementary activities, to add to their income and meet their basic needs.

Table 2.11 **Distribution of people working in the organised sector**
(percentage of employment)

Region	Government jobs			Organised private sector		
	Female	Male	Total	Female	Male	Total
Northern region	32.3	30.2	30.5	24.1	36.9	33.8
Central plains	46.6	54.7	53.5	50.2	52.8	52.2
Southern region	21.1	15.1	15.9	25.6	10.3	14.0
State (percentage of total employment)	14.3	85.7	100.0	23.9	76.1	100.0

Source: *Jan Rapats* Part I, data of villages

The earlier rigidities of vocation are breaking down. People have diversified their portfolio of work, taken to new occupations and even migrated in search of employment. One of the few binding factors is land; landowners give up their land, if at all, only very reluctantly. Small and marginal farmers are worst affected because they do not have adequate land for agriculture to be sustainable nor do they have the mobility to look for a job elsewhere. The exceptions to the multiple vocation norm tend to lie on the extremes of the livelihood spectrum — either those who are doing very well in their primary and single occupation, such as large asset holders and those comfortably and securely employed, or alternatively those who are extremely poor and have no other option or assets but to depend solely on their only livelihood source.

Agriculture

Agriculture is the main occupation of the people and the foundation of the economy. Even in the districts in the north and south, where forests play a significant role, agriculture is very important.

Crops and cropping pattern

The norm is single cropped and rain-fed agriculture, with paddy as the main *kharif*³ crop, in about 80 percent of the net sown area.⁴ It is only in the plains that there is any significant double cropping, mainly in the districts of Durg, Raipur, Bilaspur and Rajnandgaon.⁵ The net sown area in the State is 4,828, 000 hectares, which is 35.92 percent of the total area of the State. The gross cropped area⁶ is 5,327,000



Table 2.12 **Area under different crops**

Crops	Area	Total Percentage
	(In 000's of hectares)	
Paddy	3477	62.97
<i>Kodo kutaki</i>	146.8	2.66
Maize	151.01	2.74
Wheat	142.2	2.58
Gram	281.39	5.10
<i>Tiwra</i>	472.34	8.55
<i>Ramtil</i>	129.83	2.35
Linseed	152.7	2.77
Mustard	127.78	2.31
Groundnut	61.24	1.11
Fruits and vegetables	379	6.86
	5521.29	100.00

Source : Directorate of Economics and Statistics, Government of Chhattisgarh

³ *Kharif* refers to the crop that is sown in early summer and harvested in late summer or early winter. Some prominent *kharif* crops are cotton, paddy, maize, *jowar* and *bajra*. The *rabi* crop is sown in winter and harvested in late winter or during early summer. Important *rabi* crops are wheat, gram, barley, rapeseed and mustard.

⁴ The net sown area represents the total area sown; area sown more than once is counted once.

⁵ Durg has a substantial area of 43-45 percent that is double cropped. Raipur, Bilaspur and Rajnandgaon each have a fourth of their areas under double cropping.

⁶ The gross cropped area refers to the sum total of areas covered by individual crops; areas sown with crops more than once during the year are counted as separate areas for each crop.

hectares (2000-01),⁷ which is about 40 percent of the total area of the State.

While the main *kharif* crop is paddy, other *kharif* crops are *kodo*, *mariya*, *kutki*, *kulthi*, *makai*

Table 2.13 **Cropping pattern (percentage)**

Region	Villages dependent on a single crop paddy	Double cropped villages, sowing wheat	Double cropped villages, sowing pulses	Total
Northern region	75.1	10.7	14.2	100
Central plains	66.7	12.5	20.8	100
Southern region	83.7	5	11.3	100
State	70.7	11.2	18	100

Source: *Jan Rapats* Part I, data of villages

and *jowar*. Village Reports indicate that most farmers plant another crop along with paddy, typically a hardy crop that brings in some food grain, or gives other produce like oilseeds. A little more than 70 percent of the villages grow a single crop and these villages depend entirely on paddy. Only 11.2 percent of the villages go in for wheat as a second crop, after paddy. The remaining 18 percent of the villages sow pulses. In some areas, farmers use HYV seeds, but even in these areas, the use of local and indigenous varieties of paddy, such as *swarna*, are common. Local varieties are perceived to be more drought resistant, provide assured yield and therefore act as an insurance. A mix of HYV and local seeds is the preferred strategy. The

Box 2.1

Rice varieties in Chhattisgarh—the Raipur collection

Chhattisgarh, boasts of an impressive range of rice varieties, and is one of the places where the indica variety of rice originated. The rice varieties vary in type (flavour, size of grain and fragrance) and days of maturity (60 – 150 days). Many rare varieties of rice, which have curative properties, are also grown in the State.

The local varieties of rice have been developed and nurtured by farmers in the State over generations. In 1971, an effort was made to evaluate and document these varieties by Dr. Richcharia, former Director of the Central Rice Research Institute, Cuttack. The aim was to study the local varieties, using the method of 'adaptive rice research' and determine which varieties could be strengthened and developed for specific, local situations. The implicit agreement was that the farmers would make available these local varieties for the purpose of study and once the process was over, the varieties would be handed back to the farmers for cultivation.

Over a period of five years (1971-1976) Dr. Richcharia accessed over 19,000 varieties of rice. This repository of these 19,116 varieties came to be known as the 'Raipur Collection'. Today, it is stored with the rice germ plasm bank at the Indira Gandhi Krishi Vishwavidyala, in Raipur and is the second largest collection of its kind in the world.

However, Dr. Richcharia's vision of replicating 'adaptive rice research centres' in a decentralised

manner, all across the State, is yet to be fulfilled. It is especially relevant in the present context and can be instrumental in increasing productivity as well as in providing a counter to the drought problem.

The situation today, as reflected by the District *Jan Rapats*, shows the increasing popularity of the high yielding varieties of rice (especially IR-36, IR-64, *Mahamaya* and *Swarna* amongst others) along with a continued dependence on the local varieties (especially *Dubraaj*, *Saphri*, *Javaphul* and *Vishnubhog* amongst others), in the face of drought and other calamities.

Some of the local varieties documented in the *Jan Rapats* include *Sultu*, *Paltu*, *Hanslo*, *Luchai*, *Kankadiya*, *Murmuriya*, *Churi*, *Badshah bhog*, *Kutki*, *Dokra megha*, *Marhaan dhaan*. Other varieties include *Jag Phool* (smallest grain), *Dokra dokri* (longest grain), *Hathi Panjara* (two grains in one floret), *Naargoidi* (which can grow in up to 10 feet of water) and *Gurmutiya* (which has a purple stem).

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- Genetic Resources – The Raipur Collection, Asha Krishnakumar
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⁷ Source: Statistical Pocket Book of Chhattisgarh; Directorate of Economics and Statistics, Chhattisgarh - 2001

HYV seeds ensure a surplus in good years, and the local varieties ensure that there is some production in case of any natural calamity.

Despite some improvements, crop productivity in Chhattisgarh is relatively low in comparison with other States. There are also region-wise variations and from village to village. Small and marginal farmers, unable to use improved agricultural techniques, usually get low yields. Productivity also changes with the type of technology used. Availability of assured irrigation in the *kharif* season makes a big difference to productivity. Thus, some farmers may have low yields while in the same village their neighbours may be getting substantially higher yields.

Within the State, traditional seeds and traditional technology have shown good yields. The use of organic farming is now nationally accepted as an option that if used properly can get yields close to HYV seeds, with much lower costs of production. Local seed varieties in paddy have shown resilience towards climatic and other uncertainties and there are seeds that yield produce even in poor soil. There is already a large pool of local seeds, which has been built up by the work of Dr Richcharia, and this invaluable pool can be used to select, develop and then disseminate better yielding and resistant varieties of paddy seeds. Dissemination of the better yielding and resistant varieties of paddy will have two significant benefits. Firstly, it will preserve and promote the varieties that are hardy, locally suited and ensure good production. Secondly, these are varieties with high nutritive values and their propagation will help in promoting food security as well as in conserving the rich agrobiodiversity of the State.

Water and agriculture

Availability of water for irrigating fields is cited as a crucial issue in rural Chhattisgarh. A good

monsoon suffices only for a single crop. The inadequacy of water conservation, storage and drawl systems precludes the possibility of a second crop for most people and areas. Even in villages that have ponds and *talaabs*, there is a need for facilities to draw out groundwater or facilities for lift irrigation. All Village and District Reports stress the urgent need for more irrigation to ensure adequate water for the *kharif* crop and to increase the area under *rabi* cultivation.

Most districts of the State have terrain that is suitable for watershed development, water conservation and storage of surface water. Villagers are ready to collaborate with the State to exploit this potential. The scars of consecutive drought years are evident in the tenor of the *Jan Rapats*.

The one overriding need of the people in Chhattisgarh today is water. The drought in recent years has intensified the people's concern for water. The Reports also mention the adverse impact of natural calamities like drought, hailstorms and insect/ pest attacks which lead to a decline in agricultural production.

Agriculture extension

The Government is making concerted efforts to provide information on new technologies and farming techniques to the people. It is seeking to persuade farmers to change cropping patterns, introduce crop diversification and raise productivity and returns. Agriculture extension is seen as an activity of the Government, carried out by Government employees. Community based organisations and NGOs are not involved. Village and District *Jan Rapats* have not talked about the Government's extension efforts in agriculture. But there is a demand for information on agriculture, new crops, crop rotation, seeds and modern techniques. Villagers

have demonstrated a need for information and knowledge, as well as the capacity to take a decision based on this knowledge, when they are ready for it.

Animal husbandry and fisheries

Most households, irrespective of their land holding, (even those without any land) keep animals such as milch cattle, goats, pigs and poultry. This is an important source of supplementary income and nutrition. It also enhances soil productivity through organic manure. Wherever agriculture is good and there is water and fodder available for cattle, people keep buffaloes and cows as well. They rear them for milk (for home consumption and for sale). Draught animals are also reared as most agriculture is based on animal power.

In regions where agriculture is poor, as in forest belts, or for the small and marginal farmers and the landless, animals play a crucial role. They are often the only assets that can be disposed of in times of distress and therefore provide security as well.

The animals are not very productive as far as milk production is concerned. Animals usually produce enough milk for home consumption with some surplus but do not afford a sound business proposition, unless there is a large herd in an area where there is enough good fodder. This is not always a matter of concern, as many communities in Chhattisgarh do not consume milk, and it does not form an essential part of their diet. This is especially true of the tribal communities in southern Chhattisgarh, in Bastar, Kanker and Dantewada.

In the plains, animal husbandry is a more viable option. Fodder and the marketing of milk and eggs are both relatively easier. In the southern and northern regions animal husbandry

poses a challenge because of the absence of infrastructure to rear high quality animals. Pasture lands within the villages are small and not well maintained. Grazing in the forests is common. Animals do not get good quality fodder but feed instead on *mahua* leaves and graze on poorly vegetated common lands.

Fisheries are an important source of livelihood for many communities. A number of community ponds have come up under the Government's promotional programmes or have been revived. In these cases fishing rights have been given to co-operative groups or to local women's self-help groups. There are many positive factors that sustain and promote fisheries in the State. These include the large number of standing and flowing water bodies that enable fishing. The standing water bodies require proper management to sustain quality fishing over long periods as well as to enable fishing on a larger scale. Fishing ponds that fall under the common property management regime have been highly successful as far as maintenance, management, output and profit distribution are concerned. The presence of fishing communities, which have expertise and experience in fishing and good local markets, provide a strong local base for this activity. Better connectivity to the large markets of eastern India can make fisheries an extremely viable economic activity in the State.

Forests

The role of forests in people's lives and their livelihoods is the defining characteristic of Chhattisgarh State. The reports delineate three broad patterns:

- a) For households and villages in the vicinity of, or within forests, there is a cultural, economic, social and physical dependence. The lives of the people in such areas revolve around the

forests. Forests provide employment and sustain livelihoods through the collection of Non Wood Forest Produce⁸ (NWFP), which people consume or sell to Government promoted co-operatives and societies as well as private traders. The forest has proved itself as a provider for the entire year, particularly during the lean agricultural season. This high dependence and reliance is found mainly in the three southern districts, as well as in Surguja, Korea and the forested belts of Kabirdham, Janjgir-Champa and Raigarh. Access is however increasingly regulated and governed by policy and unsympathetic policy makers. The control of the State is all pervasive and is operationalised through the forest guards and their administrative hierarchy. This is despite the efforts of the State to provide for community management of local resources, in accordance with tribal traditions and customs.

- b) The second type of people-forest relationship is where agriculture is predominant but forests exist in the vicinity of people's habitat and therefore play an important role in their lives. Here, the forests provide sustenance, employment and even income for households. Forests provide for fuel wood, wood for home construction and implements, and a range of Non Wood Forest Produce.
- c) The third type of people-forest interface occurs in the non-forested belts, mainly in the plains. Even here people use forest produce extensively, but the dependence is much less.

It is apparent that for many people, forests are not just a supplementary source of livelihood



but are central to their lives. Regions with sparse forest cover witness much more migration than the forested belts. This is because forests provide a safety net and ensure at least a minimal income. The sustenance that forests provide is an effective insurance in times of need. People in the forest areas therefore neither look for off-season work nor do they migrate in search of employment and income.

- Villages with access to forests appear to have a more sustainable way of life. While the overall income of the households in these areas may not be high, their basic needs are taken care of and there is a comfortable regularity in incomes, which ensures subsistence.
- The direct cash needs for people who rely on the forests are relatively lower, hence dependence on the market is reduced. In villages dominated by agriculture, the market plays a greater role.
- This relationship of dependence on forests as a livelihood provider makes sure that the

⁸ Also called Non Timber Forest Produce (NTFP).

people regard the forest as their own and therefore want to protect it. However since only limited access is permitted and that too under strict supervision of the forest department, the livelihoods of many people are adversely affected.

Mining and industry

Mining is an important economic activity in Chhattisgarh. Mining activity generates employment but the perception is that it is limited and stagnant. Organised sector mining does generate ancillary benefits for the economy of the districts in which it is carried out. The major mines are in Korba and Korea districts, although some quarrying and mining is carried out in other districts as well.

While providing limited opportunities for wage employment, mining has given opportunities for migrant labour, both skilled and professional. Whether the labour employed in mines is entirely local or not is not well known, although indications are that there is substantial migrant labour from outside the State. Mining and related activities do have some downstream local impact on services.

Table 2.14 **Major Industries**

Steel and Pig Iron	03
Cement	20
Aluminium	1
Ferro-alloys	13
Sponge Iron	23
Paper	03
Steel Based Industries like Re-rolling Mill and Steel Casting Mills	150
Agriculture based Industries	700
Mining	1

Source: Directorate of Industries, Government of Chhattisgarh

In some areas, mining is reported to have had a detrimental impact on land productivity and the availability of water. In Korba, the reports say that coal has been extensively extracted and this has affected the productivity of the land. The Bastar District Report reports that the river water is being polluted due to mining activity.

The impact of industries on local employment is not perceived to be significant as the number of industries is limited. Although industrial activity has not created many jobs, there have been some indirect benefits. Some Village Reports have referred to unfulfilled promises made by entrepreneurs to provide jobs in return for their land.

Labour and services (non-farm sector)

Several sectors provide opportunities for wage labour and employment. The most important of these are agriculture, construction, and Government works. There are also opportunities for work in small shops, *dhabas* and transport services. Service and manufacturing industries in urban areas and brick kilns in rural areas absorb labour for small periods of time. In most of these areas the entry-level skills required are low and there are no overt barriers of caste or class.

The growth of services often stems from a local need or a specific feature. In places of tourist interest, tourism related services spring up. Along main roads, highways, travel junctions and transport service nodes, transport and travel related services spring up, and around manufacturing clusters, *dhabas*, small shops, small engineering and sundry service and sale units emerge. Traditional services such as carpenters, masons and blacksmiths continue to exist, although in a much more limited

manner. Most of such sectors survive by either changing their product profile to match markets or by up scaling themselves.

There is a wide diversity in the services provided and this makes the service sector a dynamic one. Wherever a requirement is felt, enterprising people step in to provide the service. For example, in some villages of Surguja district, people go from house to house buying iron products for cash and then sell them in the recycled scrap metal market. In Mahasamund, veterinary care is provided for a fee, when the service is required. In Durg, cultural troupes perform on religious and social occasions, in festivals and fairs for a fee. Some traditional services face a problem, but most display a remarkable degree of adaptability and manage to survive in new forms. In addition, a range of new modern services provides opportunities for employment.

Transport, repair work, small engineering, *dhabas*, tailoring, selling shoes and other plastic products, recycling metal, plastic and wood and cloth are other activities that are quite common. An interesting feature of the traditional service workers like barbers, *dhobis*, and leather workers versus modern service workers, is that the traditional ones are more rigid as far as both entry and exit are concerned. These services tend to be far more community specific but modern services afford a high degree of mobility.

Another trend, which is now apparent, is the growth of private services in the social sectors, which has been dominated by the Government so far. In the last few years, the huge gap between the demand for health and education and their provision by the State has meant that the private sector has stepped in. The space for such services is now emerging

especially because both the large scale organised private sector and the public service providers have not responded to the need for local, contextual, price sensitive options in health and education. Small-scale private entrepreneurs are responding to the need for meeting gaps in the services provided by the State and the organised private sector.

The demand for more appropriately positioned and priced services has provided a range of opportunities for enterprising people. This sector has grown without any institutional benefit, promotion or regulation. The absence of standards and quality monitoring does therefore pose a problem.

Manufacturing

Manufacturing has also shown some signs of growth, albeit a more gradual one. Small, non-industrial rural manufacturing, both home-based as well as those with own business premises, from traditional manufacturing activities to modern manufacturing, are all growing. There is a vibrant mix of traditional and modern products being produced in the State.

Every district has its own manufacturing units. In the plains of Chhattisgarh, where agriculture is more dominant, there is a greater diversity with a large number of modern units. In the more remote villages and in the forested belts there is a preponderance of traditional manufacturing, and service based sales networks. The forest communities in Korea are involved in the manufacture of articles from wood, bamboo and mud, while in Mahasamund tiles and brick making is popular.

Some traditional manufacturing is carried out for products that are largely consumed at home, or within the village. In such cases, physical isolation has actually helped these

activities to survive since these markets are effectively closed to penetration by industrial goods and services. On the other hand, if these manufacturers are linked to more vibrant and distant markets or brought into an organised chain of marketing, they can respond positively. Technical and design inputs will help bring about the emergence of artisan-entrepreneurs.

These units are relatively advantaged. Modern and large-scale industries require supportive and complex institutional frameworks of supply, marketing and credit. The effort here should be to build on this economy of inputs and structures needed for cottage industry, develop its skill and functionality and provide support in the form of credit, upgraded technology and market access. The Village and District Reports point to the need to create appropriate legal, investment, technical and credit mechanisms to facilitate growth.

Traditional occupations need to change their processes and products to keep pace with changing preferences and demands. Most crafts have a functional or utilitarian background and this is what has sustained them. Some are however beginning to adapt and modify their products while improving their processes. In some cases, people have abandoned their traditional vocations because they cannot make a livelihood from them. This is indeed a cause of concern.

Improved technology and tools can make a major difference to manufacturing activity, especially in the cottage and small sectors. There has been little change in manufacturing techniques and technologies, and this, stands in the way of reducing cost, increasing efficiency and capacity, which are pre-requisites to surviving competition from large-scale industry. The competition is acute and the traditional products

that are still holding out are those with stable local markets often, because of their perceived utility. These sectors need infusions of low cost yet appropriate technology, credit facilities and marketing support.

Non-farm manufacturing and services do well when there is agricultural prosperity and a greater demand for goods and services. In Chhattisgarh, agriculture provides an insufficient surplus, and this is a constraining factor. At the same time, there are some developments that have impacted favourably on the growth prospects of non-farm activities. The reports mention the investments made by the State in infrastructure, in roads and bridges, in introducing new technologies in agriculture, irrigation and power. The reports highlight the fact that better served villages are more prosperous with more employment opportunities and there is a greater demand for goods and services in such villages. The reports have also emphasized that more needs to be done.

District Reports have identified the scope for promoting manufacturing facilities in their districts. These are based both on the potential and demand expressed in the Village Reports and the availability of local raw materials and skills. Primary produce from agriculture and forests goes out of villages and districts, with very little value addition. Even the first step in the value addition chain, which can take place locally without very much investment of capital or technology, does not take place. Production or processing units based on locally produced raw materials also appear to have potential.

People's Perception

People's perception about their livelihood as documented in the Village Reports provides

information about the sources of livelihoods and the issues and problems that affect livelihoods. The Village Reports also record the numerous suggestions made by the people. The qualitative information, recorded in part II and part III of the Village Reports, and its subsequent analysis in the District Reports provide valuable inputs for policy initiatives that may be undertaken to enhance the status of livelihoods in rural Chhattisgarh. This section attempts to understand the perception of the communities regarding livelihoods and related issues.

Income and employment

Village economies and sustainable livelihoods

The village and its agriculture are treated synonymously in the Village Reports. All the Village Reports, in the 16 districts, state that a good crop is what the villagers hope for. A good crop increases the self-reliance of the community as it means availability of more food. More production means food security for small and marginal farmers, for a longer period during the year. These farmers complete the sowing on their own land and work as agricultural labour in the fields of the big and medium farmers, ensuring better income and access to food grains. Wage earners are also able to find employment easily. They are often paid in kind and the family attempts to store as much grain as possible. The need to migrate outside the village in search of employment is then considerably reduced. The stored food grain helps these farmers to secure seed for the next year. The big and medium scale farmers on their part aim to generate surplus.

Many families live on the margins of subsistence. Their condition and capacity varies from season to season, and very often from event to event. A drought, an illness, a bad crop or a pest attack can imperil a family and its livelihood. A good crop can provide relative assurance and safety. Households adopt a variety of strategies to support themselves and to insure against adversity and scarcity.

One strategy is to spread the risk by multiplying livelihood options. Family members undertake more than one activity and more than one member takes up work elsewhere. People turn to wage labour in agriculture, in non-farm sectors like construction. This is an option that offers the least space for negotiation, with regard to terms of employment, since labour is plentiful and surplus. It also demands a certain level of physical fitness, health and skill, which may not always be present. Poor households, when confronted with a crisis, tend to take recourse to contract labour (sometimes these arrangements border on a semi-bonded status) to tide over tough times. The prospect of putting the future at stake is deemed a small sacrifice. Many households resort to inducting their children into home-based tasks or even into wage labour.

Homestead and village resources are support mechanisms for every household. Most households have a small *baadee* or homestead next to their habitat, where they grow fruit and/or other trees and plant crops like maize, *kodo* and vegetables. Similarly, village resources, mainly the common resources such as fruit trees, jackfruit and bamboo clumps, are used by villagers within pre-defined usage rules and customary practices. The membership of people in a commune⁹ – a social/ caste/

⁹ These identities are based on habitat and social groups.

tribal/ economic identity — provides crucial assistance to households, especially in a crisis. The common property resources of the village are distributed amongst households on the basis of age-old practices, which are biased in favour of poor families.

Small and large animals are another source of livelihood support. Fisheries are a primary source of livelihood for some people, while for others access to small rivers or ponds and occasional fishing helps in their own consumption and may even provide surplus for sale.

A critical resource mentioned in every Village Report is the role played by Government relief programmes, providing much needed wage labour in times of crisis such as droughts.

However not all households in the village are poor. There are some households that generate surplus. These are:

- a) households with good landholding and irrigation facilities, which enables them to grow two crops.
- b) households with access to power - political, administrative and social.
- c) households with linkages to the external economy.
- d) households that have broken social and economic identities and moved into livelihoods, where traditional identities are less important.

Surplus households sustain the village economy and most local entrepreneurs belong to these families. These families have greater risk taking capacity, access to information and the ability to experiment and adopt new

techniques. It is these households that benefit most when a shift occurs from the local market to larger markets. They also trigger diversification in livelihoods, especially in the service and manufacturing sectors, either by investing in it themselves or by generating demand through their surplus.

Local surplus households are distinct from households and business entities that represent external economic forces and sometimes foray into villages. Such business entities are reported to extract much of the local surplus and give poor returns to farmers and small manufacturers for their goods, as well as to NTFP collectors.

Income and employment — Yesterday and today

There is considerable discussion regarding the condition of livelihoods in the *Jan Rapats*. The situation today is continuously compared with the past. The general consensus is that while the present situation is not satisfactory, there has been an improvement compared to the past. The sources of livelihoods that used to sustain families earlier are no longer sufficient. Thus, villagers are forced to look for alternate livelihood opportunities. These new livelihood choices have helped reduce the dependence on the primary sector.

The Reports state that the level of self-sufficiency villages and households is much less at present since the State and the market have entered their homes. The market has opened up the economy, which has not necessarily been beneficial. The economy has become much more monetised and a large number of products find their way into the villages. As the terms of trade benefit industrial products vis-à-vis primary produce, the villagers feel that they are the losers in this exchange. The spread of the monetised economy has also dented the

Table 2.15 **Current status of livelihood**
(percentage of Village Reports selected for perception analysis)¹⁰

Region	Very Good	Good	Average	Inadequate	Very Inadequate
Northern region	1.3	3.9	43.2	30.8	21
Central plains	0	5	65	23	7
Southern region	2	36	44	14	2
State	1.1	15	50.7	22.6	9.9

Source: Village *Jan Rapats*, Part III



*Jajmani*¹¹ system, depriving many producers of established demand and servicing nodes.

Box 2.2

Employment and work — conceptual differences

The definitions of employment and unemployment or working and not working, which have been used in this Report do not correspond to the definitions and estimates used in the national surveys and employment and unemployment estimates by the National Sample Survey Organisation (NSSO). In these surveys, unemployment is assessed by the number of days a person has not got work in a preceding time interval, of a month or a week, or as of that day.

In Chhattisgarh, no person, rich or poor, farmer or manufacturer can survive without working. All the people work, either on something that brings in benefits for the family to consume (tilling their own land, collecting forest produce, moulding clay, weaving cloth, repairing a roof, making tiles, painting a wall, etc) or they work on something that is of immediate and direct use to them. Thus a person may be engaged in a productive activity, which does not directly bring in something from outside, in cash or even in kind. Many such activities are non-waged and while people are engaged in work, they are not adequately employed. The NSSO definition does not list them as being unemployed.

According to the *Jan Rapats*, the earlier sources of livelihood are no longer adequate, due to the increased population and a reduction in the availability of resources. Over-use of resources, restrictions on access and fragmentation of land holdings have also contributed to the present state of affairs. There is also competing demand from other claimants to land, water and forest wealth, like the State and the market.

Most villages have discussed the current status of livelihoods.¹² About half of the Village Reports (50.7 percent) give an average rating for the status of livelihood in their villages. Another 22.6 percent of the Village Reports rate the status of livelihood in their villages as inadequate because they fail to find assured livelihood throughout the year. About 10 percent of the Village Reports term the availability of livelihoods as wholly inadequate as they are constantly looking for work.

Employment and under-employment

In the *Jan Rapats*, employment has been linked with income and with the number of days of work. The reports have confirmed that there are

¹⁰ A total of 2669 village *Jan Rapats* were selected from 146 blocks in 16 districts for the perception analysis.

¹¹ In the *Jajmani* system, members of oppressed service castes work for the more powerful and dominant landowning castes of the village. They receive customary seasonal payments of grain, clothing, and money. This system has been operating for generations.

¹² The issue was discussed by 2543 out of the 2869 Village Report (88.6 percent of the sample).

very few or in fact no completely unemployed people. Everyone desirous of work, irrespective of skill level, does get some work, in some measure or the other. The enormous capacity and potential of land and forests for gainful labour is what sustains the demand and need for employment.

Most people work even when they are not employed for a wage. Women work hard to maintain their homes, tend animals and children and collect dung, fuel-wood and forest produce. Men repair homes, make implements, tend animals and offer free labour for the development of social infrastructure and social capital. All of this is extremely important work and very productive, but may not fit in with formal definitions of employment.

There are many people who do not have opportunities for wage related employment



for large parts of the year. With most of the State's agriculture under single crop system, the agricultural season lasts only for four or five months. People near forested areas are able to take up collection of forest produce and find employment for a longer period. People with adequate agricultural land or irrigation facilities or those with employment options through the year are able to sustain themselves well. Others take recourse to casual labour, migration and daily work. People with non-agriculture related professions tend to have a more stable livelihood.

Unemployment is a major problem. The labourer wants full work through the year, the farmers want to grow more crops and get more returns per acre, and want work in the agricultural off-season. The educated want remunerative and acceptable jobs while the manufacturers want increased demand for their goods or services.

Several districts highlight the increasing problem of educated unemployed. Young people in the villages, (especially the educated young), are unable to find employment commensurate with their expectations and this is a cause of discord.

Sources of livelihood

Agriculture

An analysis of the Village and District Reports reveals that agriculture is the most important source of livelihood for the villages in the plains of Chhattisgarh. Even in the southern and northern regions, agriculture is very important, although the forested areas in these regions do provide an alternative source of livelihood to the people. In the plains the situation is different. A single crop in the year is often not enough to ensure food security, and provides

little in cash or kind for the households. After agriculture, the main source of livelihood is daily wage labour, mostly outside the village.

Typically more than one member of the family sells his/her labour, to ensure survival as well as cash and food year round. In those villages,

From the people

Agriculture, labour, mining, collection and sale of forest produce, stone and *murram* quarrying, fisheries on leased lakes, animal husbandry and horticulture are our main occupations. Home industries and self-employment are also gaining popularity.

District Report, Surguja

Agriculture is the primary source of livelihood in the district. Besides this, people work in non-farm activities like grocery shops and *paan dukaans*, horticulture and other service sector jobs. Forest-based livelihoods especially in tribal areas include collection and sale of *tendu, lac, harra, bahera, chironji* and *mahua*. Home industries and traditional occupations like weaving, handicrafts and rural crafts are other occupations. Animal husbandry, fisheries and poultry help to supplement livelihoods since there is single cropping in the district. The Government and the private sector also provide some employment.

District Report, Rajnandgaon

In the Scheduled Tribe areas, the main sources of livelihood are agriculture, wage labour, collection and sale of NTFPs and animal husbandry. In the other areas agriculture is the main source of livelihood. Labour and construction work, *kosa* weaving, fisheries and poultry, stone quarrying are other sources of livelihood. Pottery and work with mud



is also prevalent. There is some horticulture but this is mainly for self-consumption.

District Report, Bilaspur

Animal husbandry, fisheries, poultry and contracting services are common in Janjgir. People also run small service units like hotels and grocery shops. Traditional and caste based livelihoods like barbers, blacksmiths, washer men and cobblers are common.

District Report, Janjgir-Champa

The main occupation is agriculture and agriculture related labour. Traditional occupations like animal husbandry, black smithy, carpentry, leather workers, barbers, washer men also exist. People supplement their income by the collection of forest produce, labour and animal husbandry.

District Report, Dhamtari

Agriculture is the main occupation of the district. Those villages situated by the river grow vegetables and fruits in the summer.

District Report, Mahasamund

The sources of livelihood include farming and cultivation, wage labour, collection of forest produce, trading, animal husbandry, bamboo work and pottery.

District Report, Raigarh

Table 2.16 **Dependence on various sources of livelihood**
(percentage of Village Reports selected for perception analysis)

Region	Labour	Agriculture	Traditional Farming	Forest Produce	Cottage Industry	Fisheries	Cattle Rearing
Northern region	52	36	57	61	14	10	21
Central plains	67	60	41	39	12	24	24
Southern region	49	42	93	80	12	14	27
State	56	46	64	60	12.7	16	24

Source: Village *Jan Rapats*, Part III

which are close to the big or industrial towns, there is a third alternative. Here people find employment in some industrial work either as daily wage earners or as semi skilled workers. The markets of these towns also provide an opportunity to engage in small trading.

The Village Reports say that people depend largely on traditional farming (64 percent of Village Reports), while 46 percent of the villages follow modern agriculture. Forest produce (60 percent of reports) and wage labour (56 percent of reports) are the next important sources of livelihood. Cattle rearing and fisheries are important in 24 percent and 16 percent of the villages respectively. About 13 percent of the Village Reports list cottage industries and crafts as a source of livelihood. The dependence on forests is extremely high, especially in the northern and southern regions.

Single crop agriculture is characterised by a total dependence on rain and traditional cultivation practices. This results in a dual burden. The total quantity of food grain produced is lower, and the demand for labour in the agricultural sector is also lower. The poor and the landless are affected adversely and find it hard to survive. The impact on food security and nutrition accentuates the problem. The *Jan Rapats* bring out the linkages between nutrition, health and livelihoods. Natural calamities and the lack of substantive nutrition take their heaviest toll on the poorest. The battle for survival poses a major challenge for large sections of the people.

Irrigation can change the very nature of agriculture. In irrigated areas, double cropping is the norm and people grow other crops, including wheat in the second season. The double-cropped area covers only about 30 percent of the cropped area in the State, and in these areas work is available for six to eight months

in the year. Apart from the lack of irrigation, there are other reasons for the continued use of local varieties. When local seeds are used there is local knowledge about their use, and the seeds and inputs required are available with the household or within the village. On the other hand, cash or credit is needed to purchase HYV seeds, chemical fertilisers and pesticides, which are not easily or always available. The problem of adequate and timely supply of HYV seeds through agricultural societies results in farmers preferring to rely on traditional inputs. Other factors like credit, loans, information and alien technical knowledge come into play and often limit the options available for farmers.

In the central plains of Chhattisgarh, where more than one crop is often grown, the major *rabi* crops are wheat, *til* (sesame) and linseed. Most households also grow vegetables. These find a market in large *haats* and in urban areas. The village *Jan Rapats* highlight the potential for many other crops, including cash crops and horticulture, provided markets and transport are available.

Agricultural technology and practice

Agriculture is still practiced in a largely traditional mode. A significant proportion of the Village Reports rate traditional knowledge as very useful or useful (56.2 percent; this refers to 8.9 percent plus 47.3 percent i.e. those who rate it as being very useful and useful), 33.3 percent rate it as partially useful and only 11.3 percent state that it is useless.

Agricultural practices are changing gradually but surely, adapting to new needs. These changes are more apparent in the central plains area. Much less change has taken place in the tribal districts or in the hilly and forested tracts of the north and the south of the State. In some places, shifting cultivation continues to be practised.

Table 2.17 **Perception regarding usefulness of traditional knowledge**
(percentage of Village Reports selected for perception analysis)

Region	Very Useful	Useful	Somewhat useful	Useless
Northern region	10.7	48.5	33.8	6.9
Central plains	5.7	42.3	49.3	5.3
Southern region	10.5	51.2	16.9	21.5
State	8.9	47.3	33.3	11.3

Source: Village *Jan Rapats*, Part III

It is not surprising therefore that the *Jan Rapats* show an increasing awareness of and willingness to use high yielding varieties of rice (especially IR-36, IR-64, *Mahamaya* and *Swarna* amongst others) along with a continued dependency on the local varieties (especially *Dubhraaj*, *Saphri*, *Jawaphool* and *Vishnubhog* amongst others), in the face of drought and other calamities.

The Reports suggest that the choice of technology in agriculture, specifically the decision to adopt modern techniques or to continue with traditional practices, is influenced by the existence of irrigation facilities, the availability of resources to purchase seeds

and fertilisers and the knowledge of improved technologies. In most cases, cultivators want to keep at least some land under local varieties and use time tested and familiar cropping practices. Even though this lowers productivity, it also lowers input costs and risk. Typically, it is the larger farmer and not the small or marginal cultivator who first takes to new technology.

Varieties of paddy and their suitability to different qualities of land

Most of the farmers in the northern and southern regions of the State grow local varieties of paddy and cereals. Agriculture in this area is largely rain-fed. Land is categorised according to yield.

From the people

We have land, but we do not know how to utilise the land appropriately. The terrain is undulating and this prevents us from harvesting a good crop. Hence we do not get a good income from the land.



Village Report, Kesaguda, Bhopalpatnam block, Dantewada

The soil lacks productivity because there is lack of cattle, which leads to a shortage of manure. The farmers are unable to fertilise their land and make it more productive.

Village Report, Jabla, Jashpurnagar block, Jashpur

For example in Bastar and Dantewada the land is categorised into four categories, starting from the lowest grade to the best grade. The four grades of land are: *Marhan*, *Tikra*, *Gabhar* and *Mall*. *Mall* is the best quality land and gives the highest output in a good monsoon. *Gabhar* is placed one grade lower, followed by *Tikra* and *Marhan*. There are different varieties of paddy that are grown on these different categories of land, each variety suited to the specific quality of land and the availability of water. Paddy grown on *Marhan* and *Tikra* land is hardy, needs less water and has the capacity to withstand adverse conditions. These varieties yield some produce even in a poor monsoon. Paddy planted

From the people

Local varieties of paddy such as *safri*, *gurmatia*, *doobhraj*, *sultu*, *paltu*, *jawaphool*, *haslo*, *luchai*, *kankadia* are common. In recent times new varieties like *swarna*, *mahamaya*, IR36, IR 64, *Purnima*, PNR381, HMT *Sona*, *Indrani* and MTU 1001 are also being grown.



District Report, Korba

People prefer to use organic fertilisers and local seeds.

District Report, Dantewada

It is the local varieties of paddy, which survive the drought and not the HYV seeds. Local varieties include *murmuriya*, *churi*, *safri*, *badshah bhog*, *kutki*, *dokra megha*, *marhan dhaan*. The *kharif* crops include rice, pulses like *urad*, *toor*, *jawar*, maize and sugarcane. Among HYV seeds, BBT, IR36 and IR64 are common. *Rabi* crops include '*darad*', oilseeds like *til*, *alsi*, *sarso*, pulses like *moong* and *chana* (*nag chana*). People also grow vegetables for self-consumption and sometimes for sale in the markets. Wherever rice, wheat and maize is grown, the people keep enough for seed and self consumption and if there is a surplus it is sold in the local *haats*.

District Report, Bastar

on Gabhar and Mall land requires comparatively more water and is more vulnerable. It can survive only if there is adequate water.

Animal husbandry

A large part of the economy of Chhattisgarh continues to use the barter system and sellers in the local *haats* and *bazaars* still accept goods in return for goods 'sold' to consumers. Animals are regarded as assets similar to security deposits held in a bank. These assets can be liquidated in times of need or in a period of unforeseen expenditure. Apart from serving as asset holdings, animals are the backbone of the agricultural economy.

From the people

Animals are an economic asset and embody saving and investment. When there is an immediate requirement of cash, the villagers sell their animals. Local animal breeds are sturdy and are best adapted for survival, even though productivity may not always match that of other breeds. The supply of fodder is becoming increasingly more difficult and therefore the cattle population and their health is getting affected. The use of animals in agriculture is also decreasing. Tractors are replacing them to a large extent.



District Report, Dantewada

Animal husbandry has not been developed as a profitable livelihood option. Animals like the bullock and buffalo are domesticated to suit the requirements in the fields and households, rather than for marketing purposes. A few households have attempted to make animal husbandry a primary activity. They have taken credit and bought buffaloes. However, the quality of country-bred animals is poor. This coupled with the absence of pasture lands for grazing deters other people from taking up animal husbandry. Some families in the village earn incomes by grazing animals belonging to others in the village and they are paid in cash or in kind.

District Report, Korea

People depend on animal husbandry and fisheries to supplement their income from agriculture and forestry.

District Report, Surguja

Animal husbandry is an important support activity. People keep cows and buffaloes for milk, poultry for eggs and goats, pigs and sheep for meat.

District Report, Durg

Wages and migration

Wage labour is an important source of livelihood. People in rural areas try to earn wages within the village and in nearby areas or towns. If they

do not find work in or around the village they migrate to larger cities either within the State or to neighbouring states like Maharashtra, Uttar Pradesh and Madhya Pradesh.

Table 2.18 **Adequate availability of employment within the village**
(percentage of Village Reports selected for perception analysis)

Region	Available	Not available
Northern region	19	81
Central plains	7	93
Southern region	29	71.5
State	18.3	81.8

Source: Village *Jan Rapats*, Part III

The analysis of the Village Reports shows that only 18.3 percent of the villagers say that they find employment, all year round, within the village. As many as 81.8 percent of the Reports say that there are only limited employment opportunities within the village, throughout the year. The situation is particularly critical

in the central plains region, where 93 percent of the Village Reports say that employment opportunities are inadequate. The situation is relatively better in the north and the south, due to the proximity of forests.

State of livelihood resources

There is a feeling that the available resources have not been exploited fully, and that optimal utilisation of these resources is necessary for livelihoods to become secure and sustainable. Besides, the resource use is not equitable with some households being able to utilise the common resources better. They are in a better position to control not only access to these resources but also access to credit and markets.

The *Jan Rapats* take cognisance of the gaps and constraints in the use of existing resources. They highlight this as an important area of intervention through people's initiatives and assistance from the State Government.

From the people

People want the development of human resources through education and training to enable them to use the existing physical and natural resources.

District Report, Korba

Human resource is one of the main strengths of the people but because they do not have education, adequate skills or technical knowledge they are unable to utilise their potential. They want vocational training.

District Report, Raigarh

Lack of education is a major problem for the youth of Korea. The level of education is not up to the mark. This is seen as an obstacle to getting Government employment. Lack of specialised skills among the workers prevents them from being employed in small scale and

manufacturing industries. This is of special relevance since these industries and mines are an integral part of the economy of the district.



District Report, Korea

There are times when people are particularly prone to illness and disease. For example, malaria is prevalent between July and September. This is the peak season for agriculture. If an illness is contracted during this period, cultivators and agricultural labour are unable to work. This affects incomes and livelihoods.

District Report, Korea

Two important hindering factors in livelihoods are the seasonality of employment and sudden illness.

District Report, Surguja



The perception of the people as gleaned from the Village Reports is that in general the status of the resources, which are critical in determining livelihoods, is adequate. While 60 percent of the Village Reports state that the status of the resources is adequate, since they are able to sustain them, more than 25 percent of the Reports state that the status of resources is inadequate or very inadequate. This reflects some amount of dissatisfaction and the need for certain critical inputs like water, electricity, seeds, fertilisers and even financial support to ensure better livelihood. Only 13 percent of the Village Reports say that the state of the resources is good and only a little over one percent classify the status of livelihoods as being very good.

Human resources

People recognise the gap in their level of education and skill development. They feel that the education provided in schools is not useful in enhancing their skills. Besides they also do not have the required skills for many of the emerging areas for work nor do they have adequate information regarding where these skills can be obtained.

Poor health and nutrition impact adversely on capacities and livelihoods of people. Inadequate and erratic nutrition patterns make people unhealthy and susceptible to illness. This reduces the number of workdays and burdens families with health related expenses. The death of an earning or productive member of the family brings its own economic burden, often leading to a crisis.

Infrastructure

The lack of proper and year round connectivity has been mentioned by all remote villages as an impediment to improved livelihoods. This is because distance reduces their reach to labour deficit places, and it increases the time taken and the costs incurred for locally manufactured goods to reach more remunerative markets. The District Reports of Kabirdham, Korea, Surguja, and Dhamtari make this point very lucidly.

Other infrastructure inadequacies that have been specifically mentioned in the District

Table 2.19 **Status of resources of livelihood**
(percentage of Village Reports selected for perception analysis)

Region	Very Good	Good	Adequate	Inadequate	Very poor
Northern region	1	8	70	21	1
Central plains	0	11	58	29	2
Southern region	2.2	20.1	52	24	0
State	1.1	13	60	24.7	1

Source: Village Jan Rapats, Part III

Reports are the absence of power, and the lack of storage or ware housing facilities in the villages for grain and vegetables. Limited markets and the lack of information are additional factors that prevent farmers from getting better returns.

Technology

The Village and District Reports assess the existing traditional technology – and discuss its advantages, disadvantages and the need for better technology as an input in agriculture and marketing. The Reports point to the failure of technology to develop resources. Traditional technology continues to be prevalent in agriculture, forest gathering and primary processing and in rural non-farm manufacturing. Traditional technology has certain distinct advantages, especially in agriculture and forest based activities. The main advantage is that it is affordable and the process of transferring this technology is rooted within the social structure.

However, there is a demand for new technology, so that it can be used to improve productivity. This demand is not articulated as a need to replace traditional technology but rather as a need to access knowledge about new technologies, which can lead to increased productivity and cost reduction. Once they have this information, the people can make an informed choice.

The knowledge about forests that exists with the people is considered invaluable and people feel that little can be added to this knowledge, except in the processing of forest produce. Modern technology can add value to local knowledge and help people to understand and learn the mechanics of setting up, running and managing processing units.

Another area where modern technology is necessary is the non-farm manufacturing sector. While local markets have sustained many small

From the people

People from villages located near the main roads say that communication and transport facilities have been beneficial to agriculture and related industries.

District Report, Surguja

Marketing is difficult because there are no proper transport facilities

District Report, Janjgir- Champa

Sale of traditionally crafted articles is difficult because modern articles available in the market are more attractive than our products. In interior areas, most people do not have sufficient information with regard to employment opportunities or schemes.

District Report, Korea

The lack of suitable markets and the presence of middlemen are two problems that we face.

District Report, Surguja



There are no markets for agriculture and forest produce. The people in the local markets have less income, and low purchasing power. This affects business activities. The presence of a large number of middlemen also adversely affects the poor.

District Report, Kabirdham

The lack of information and knowledge amongst the poor and the people in general is a drawback for livelihoods.

District Report, Jashpur

In 40 percent of the villages in Bastar, people say that they lack information and awareness and this affects their bargaining power and they do not get good prices.

District Report, Bastar

local producers, there is some apprehension and the feeling that unless new technology can help, small manufacturers will lose out.

Generational change in technology is not the only solution; integrated and strategic changes are needed. The criteria for the selection and designing of these must draw from what is faster, efficient, and retains control with people. It is important that technology should not disempower small farmers, forest gatherers and small producers. An integrated technology regime is required, that combines the best of the traditional and the modern, and does so selectively in separate sectors and processes.

Locked resources and low value addition

The vast forest and mining wealth of the State is under the control of the State Government and

people have limited access to these resources. Further, the forest resources themselves are declining – both in terms of area and quality of forests.

The level and scale of local value addition to primary produce from agriculture and forests is low. Most produce goes out either as grain or forest produce and value addition takes place elsewhere. Adding value to agriculture and forest produce, especially in the case of the latter, where there appears to be considerable potential, will require a sustained promotional effort at the sub-sector level. The adoption of such an approach requires strategic planning and promotion, based on a selection of activities and the strengthening of technology and credit facilities.

From the people

Resources in the village are not adequate to sustain the people all year round. Either the resources or the skills need to be developed to overcome this situation. Modern technology in all livelihoods is required.

District Report, Raigarh

People feel that traditional knowledge is useful for their livelihoods. Agriculture still uses traditional methods. Implements for handicrafts and agriculture are still made by those who have traditionally practised carpentry and many articles are made with mud, bamboo and iron.

District Report, Korea

People use traditional knowledge, but they also feel that it is necessary to integrate this with current technology. In village Sohga, in Ambikapur block, people relied on traditional knowledge earlier. Now they use modern scientific techniques and earn much better incomes. People do not consider traditional knowledge

adequate and they feel that modern techniques are needed. There can be a mix of the two with adequate training whenever new techniques are introduced. People also say that the herbs found in the forests should be further investigated so that they can be used optimally.



District Report, Surguja

Traditional knowledge is an important resource for livelihood. Herbs from the forests are used for medicinal purposes. Other traditional skills like carpentry, black-smithy, pottery, leather work, flaying and processing are also prevalent. These need to be improved using modern technology.

District Report, Rajnandgaon

Agriculture and other traditional occupations like carpentry, blacksmithy and tailoring are practised. These are based on traditional knowledge and skills. New technology needs to be adopted to improve productivity.

District Report, Kabirdham

Survival Strategies and Threats to Livelihood

There are several strategies that households adopt in order to survive within their limited resources and livelihood options. Though the Village Reports do not directly list these as strategies they are apparent from the reports.

Migration – distant and local

Migration permits households to escape from the problems caused by geographic and economic constraints and take advantage of the options and surpluses of other economies, both close to and distant from their habitats. Migration is resorted to when

there are no options available locally.

Migration is related to the local livelihood mix. Even where agriculture gives a reasonable return to households, the lack of good supplementary sources of income leaves people free for large periods of time in the year and they migrate in search of employment. On the other hand, in regions where agriculture does not give adequate returns but there are other sources of livelihoods such as forests, migration is much less.

Migration is influenced by cultural practices and the traditions prevalent in those regions. Many communities do not migrate at all while others have a tradition of migration.¹³ Much of

From the people

About 30 percent of the villagers migrate to urban centres as unskilled labour. They return during the agricultural season.

District Report, Mahasamund

If resources are developed within the village, people will not have to move out at all.

District Report, Uttar Bastar Kanker

Migration offers better wages and more work.

District Report, Korba

Migration shows a distressing situation. People migrate because they have no other option. They are forced to leave the village. People want employment to be available in the villages, all year round. The Government should make appropriate interventions so that the physical, mental and psychological effects of migration are avoided. People are willing to give full support to such schemes.

District Report, Raigarh

Migration occurs due to the lack of employment opportunities within the village. People are forced to migrate even though efforts are being made by the Government

to provide employment in the village. This is because the payment for Government schemes is usually delayed. People are forced to leave in order to survive. People feel that urban areas provide more opportunities and better wages. Even those in the village who have comparatively better income levels prefer to go to bigger cities for these reasons.



District Report, Surguja

More than half (56 percent) of the villages in Rajnandgaon report migration. The main reason is the lack of employment all round the year in the villages. Alternative sources of employment are needed to sustain families. Usually small and marginal farmers opt for migration due to low productivity and limited land.

District Report, Rajnandgaon

When agricultural work finishes, people from five blocks migrate in search of employment, usually between December and June. People who make bricks also migrate. If they have land they will be able to make bricks in the village itself.

District Report, Bilaspur

¹³ For example, the *Gonds*, *Uraons/ Oraons*, *Mundaris*, *Rathiyas* (amongst the tribal communities) and *Dalits* migrate; the *Kamar*, *Baiga* and *Madhiya* people usu ally do not migrate.

the migration is supported by well organised migration management systems run by labour traders, who link with labour deficit areas, arrange wages, contractual agreements and transportation of labour. Though very little data is available in the *Jan Rapats* on these systems, it is quite obvious that these systems are fairly well developed and organised. From the information derived from field interviews during the *Jan Rapat* exercise it is also evident that most of these systems are exploitative, with a fairly high share of wages going to migration managers. Besides the working and living conditions are often sub-standard.

The Government has made some attempts to curtail migration, but the reports state that the employment programmes are not adequate enough to make any specific impact on migration.

Only 4.2 percent of the Village Reports¹⁴ that discussed the issue of opportunities of livelihood within the village have said that there are very good livelihood prospects in the village. Another 7.5 percent of the villages have said that there are good prospects of

livelihood within the village. Thus 11.7 percent (4.2 percent plus 7.5 percent) of the Village Reports are reasonably optimistic regarding the prospects of livelihood within the village. More than half of the Village Reports (55.7 percent; 38.7 percent plus 17 percent) report that the prospects are very limited or non-existent. A little over 27 percent of the Village Reports rate the prospects as average.

Diversity and multiplicity

Households resort to diversity in livelihood options and multiplicity in choices within a certain livelihood option to spread risk and ensure sustainability.¹⁵ Diversity of livelihoods allows families to spread risk and to maximise returns on labour. This brings diversity into the local employment profile, thereby providing scope for expansion and growth of employment. Often farmers follow the practice of a multiplicity of options within the same livelihood source — namely, choices and mixes of different crops or different type of seeds for the same crop, different kinds of labour, etc. The strategy however leads to an increasingly peripatetic and nomadic workforce. This makes labour largely un-organised and it loses any specificity of location and trade. Due to the temporary nature of such jobs, the bargaining power of labour remains low.

Threats to livelihood

A large number¹⁶ of the villages have discussed the threats to livelihood that they face. The threats that have been named are drought, lack of employment opportunities, poor information, disease, decline in forest produce (leading to loss of income from forest produce or lower prices), increasing population, insufficiency of resources, addiction, attacks by wild animals,

Table 2.20 **Opportunity for livelihoods within the village**

(percentage of Village Reports selected for the perception analysis)

Region	Very good	Good	Average	Very limited	No opportunity
Northern region	3	6	27	45	5
Central plains	5	7	32	33	23
Southern region	4.5	9.5	23	38	23
State	4.2	7.5	27.3	38.7	17

Source: Village *Jan Rapats*, Part III

¹⁴ Of the 2869 villages selected for the perception analysis, 1994 villages discussed the issue of opportunities for livelihoods within the village.

¹⁵ According to the Dantewada *Jan Rapat*, agriculture accounts for 30 percent of income while 40 percent of income comes from forests, 15 percent from animal husbandry and 15 percent from wage labour. Table 7 in the Appendix shows the diverse profile of employment for households, in Surguja, for one year.

¹⁶ This issue was discussed by 2213 villages of the 2869 villages selected for the perception analysis.

Table 2.21 **Threats to livelihood**
(percentage of Village Reports selected for perception analysis)

Region	Drought	Damage by wild animals	Flood	Diseases	Poor information	Poor production	Money Lender	Addiction	Insects	Lack of finance	Increase in population	Lack of promotion of Small and cottage industry	Lack of employment opportunity	Decrease in forest produce and lower prices of forest produce	Illiteracy
Northern Region	62	20	2	16	28	15	12	10	13	14	3	19.3	21	30	7
Central Plains	65	15	21	23	25	26	18	27	17	20	7	23	33	17	20
Southern Region	37	11	4	4	19	2	10	8	10	4	7	10.5	28	22	9
State	55	15	9	14.3	24	14.3	13.3	15	13.3	12.7	5.7	17.6	27.3	23	12

Source: Village *Jan Rapats*, Part III

insects and pests. The lack of finance, poor production and illiteracy are other threats that have been listed.

More than half (55 percent) of the Village Reports identify drought as a threat. About 27 percent of the Village Reports cite the lack of employment opportunities in rural areas as a threat to livelihood. Decrease in forest produce together with lower prices of non-timber forest produce are a major concern in 23 percent of the Village Reports. About 12 percent of the Village Reports list illiteracy as a threat to their livelihood.

Women and Livelihoods

Women make up a significant proportion of the agricultural work force. Many agricultural operations are based exclusively or largely on the physical labour of women. These include sowing and replanting. Women are also responsible for seed selection and storage and have specialised knowledge about indigenous crop varieties. They are not only a source of labour, but also repositories of knowledge for society.

Women's work is not confined to paddy transplanting and agriculture. In the gathering and processing of forest produce, collecting firewood and fetching water, the burden falls on the women. They tend their domesticated animals, and maintain the *baadees*¹⁷ where vegetables are grown. They run their homes, help the men in repairing roofs and walls, keep the floor and house clean and are responsible for the decorative and aesthetic aspects of their homes.

Despite this, the role of women does not find adequate expression in the *Jan Rapats*. By and large they are perceived in a supporting or supplementary role. They find mention in activities like collecting forest produce, sundry labour in agriculture and making snacks like *papads* and pickles, often in the context of Government programmes that have brought many of these activities to women's groups. Their contribution as primary forest produce collectors and as major workers in agriculture, as well as to the economy of the State, has not been recorded.

¹⁷ In Chhattisgarh, most households have small homesteads or *baadees*, where vegetables and food grains are grown. These are looked after largely by women.

From the people

Women are crucial to the replanting of paddy, weeding, reaping and harvesting of crops. When they are not working on their own fields, women sell their labour and work on the fields of others, or even in neighbouring villages. During the monsoon, they collect wild mushrooms to sell in urban areas. Women also collect vegetables and fruits from the forest, dry and sell them. They collect leaves to make leaf plates and do most of the *tendu patta* collection.

District Report, Korea

In agriculture, animal husbandry and pottery, the entire family is involved—men, women and children. However the credit goes only to the men. Many tasks done by women are not visible, such as pickle making. This work is intrinsic to consumption and to livelihood. If women do not do this, then households would have to purchase pickle from outside, which would require additional resources.

District Report, Raigarh



Women participate in agricultural activities as well as fetch drinking water and fuel wood. In villages located near forests, women collect *tendu patta*, *mahua*, medicinal herbs and plants. They grow vegetables along the field bunds and riverbanks and sell them in the market.

District Report, Kabirdham

Men and women work according to their capabilities. Cooking, cleaning, fetching water, making wheat flour and de-husking of paddy, etc are done by women. Ploughing, cutting wood, carpentry and masonry are done by men. Participation of women in tasks like ploughing and other activities during certain days of the month and during pregnancy is forbidden. Arrangements for girls' education are not as good as that for boys, and women have no claim over paternal wealth. The birth of a male child is a much more joyous occasion than the birth of a female child.

Village Report, Jamha, Bilaspur

This is a pointer to prevailing social conditions, in which women remain invisible, even in Chhattisgarh, which has a substantial tribal population, a high sex ratio, high girl child enrolment in schools and the near absence of practices such as *pardah*¹⁸, dowry¹⁹ and obvious discrimination against the girl child²⁰.

The Reports indicate that women get lower wages, even for the same work, than men. The differential ranges from 25 percent to as

much as 40 percent. However the *Jan Rapats* are by and large silent on issues of inequality of wages, property rights, role in decision-making, ownership of produce, and only mention of the role of women in livelihoods²¹.

Despite the fact that tribal societies are essentially tolerant and equitable, the struggle for women to be visible, heard and acknowledged is as pertinent in Chhattisgarh as in any other part of India.

¹⁸ *Pardah* refers to the practice of keeping women behind the veil or indoors, often confined to the home, away from the outside world.

¹⁹ Dowry refers to the custom of the parents of the girl giving gifts in cash and/or kind to the bridegroom and /or his family at the time of marriage. It is often negotiated in advance and must be paid before the marriage is solemnised. While it is illegal to demand dowry, the practice continues in many parts of both urban and rural India.

²⁰ The absence or incomplete documentation of women's role in most reports may be partly due to the limitations of the training undertaken for this exercise, and partly due to the fact that women as a separate recognised category, different from men, is an idea that is not very well articulated in Chhattisgarh's societal attitudes, as families continue to be seen as single units.

²¹ There is a perceptible male bias in reporting, inspite of ensuring that at least one sangwaari out of two, is a woman.

Women and paddy cultivation in Chhattisgarh

Women do agricultural work, tend to the animals and collect forest produce, apart from their household chores. Due to the migration of men in search of more sustainable sources of livelihood, the demand for labour in agriculture is met by the increasing participation of women and children.

In the agricultural calendar, there is a clear division of labour, on the basis of gender, which defines the role played by women in the rice fields. While the preparation of the land (ploughing and tilling) and seedbeds, as well as broadcasting are done mostly by men, the subsequent task of weeding and transplanting are done largely by women. Fertiliser application after transplanting is done by men. All other tasks that follow like harvesting, threshing, and other post-harvesting operations are done mainly by women. Of these, weeding is the most laborious and monotonous.

These roles differ slightly across economic and social divisions. Women of the upper economic class do not work in the fields. Women from the poorer classes, work on their own fields and as hired labour on other people's fields.

Women also play a significant role in the selection and conservation of various rice varieties. They do this by exchanging seeds with neighbours and relatives, conserving varieties for specific festivals like *Navakhani* and by collecting wild rice, a practice that is more common among tribal women.

Rainfed Rice – A sourcebook of best practices and strategies in Eastern India, V.P. Singh and R.K. Singh, International Rice Research Institute, 2000.

Institutions and Livelihood Choices

Credit

In an essentially low surplus economy, the money required for business, daily expenses, festive occasions and emergencies, is inevitably in excess of what is available. People resort to informal credit to start a business or further a livelihood option while sometimes it is just to meet their expenses. Credit from non-formal sources carries the high risk of falling into a debt trap. In agriculture, farmers need credit at almost every stage of the crop. Small and marginal farmers are unable to access formal credit easily. Most farmers are already in a debt trap and often end up taking more credit from private sources, which only compounds their debt.

The absence of an alternative has been keenly felt. Credit from scheduled commercial banks,

through Government programmes is restricted and not easy to access. The mechanism of self-help groups is yet to make any substantial impact. Even when formal sector credit is available, people, especially the poor, are unable to understand the procedures or the repayment structures and thus are unable to access it.

Haats or village markets

The local *haat bazaars* or local markets are the lifelines of rural Chhattisgarh. A number of *haats*²² are held in different villages of every district, on different days of the week in a rotational pattern.

Haats are useful for small, local entrepreneurs. Entry into these markets is easy. *Haats* are more suitable for the participation of women. In the smaller markets, women sellers and buyers find it easy to transact and negotiate a good

²² See Table 6 in the Appendix for details of a typical *haat* schedule.

price for their produce. This is not necessarily true of larger markets where more complex and exclusive systems govern transactions.

The market provides a forum for cultural and social information exchange. The smaller *haats* are a kaleidoscope of local life and provide an insight into the local society and economy. *Haats* are where news about the family and village are exchanged and sometimes-even marriages are arranged at these markets. Market day is also a day for entertainment. Cultural groups organise performances of dance, drama and story telling, usually related to local folklore and traditions. *Haats* are also an excellent place to judge the influence and penetration of the external economy into rural Chhattisgarh. It is here that mill cloth, modern tools and implements and industrial products are first test marketed before they find their way to the more formal markets.

Government departments

People want the Government to intervene positively in their lives. Despite the fact that there is a large Government presence, the Reports do not highlight the positive impact of the Government on the lives of the people. Apart from providing information, implementing Government programmes and facilitating fair play, people currently do not see the State contributing very much. But they do want the State to facilitate development in the future. People also want to play a role in the functioning of the various Government departments so that they can ensure delivery.

Although the Government has taken some initiatives in promoting and encouraging better agricultural practices, the impact is very limited. This is one area where substantial work needs to be done to ensure that locally relevant extension activities are undertaken.

Suggestions for Intervention

A number of recommendations emerge from the *Jan Rapats*, reflecting specific suggestions, which have been put forward for specific problems. Only the broad points have been articulated, to build an enabling environment for sustainable livelihood options. These recommendations provide a unique opportunity for the State to partner with the villages and become a true collaborator in their progress.

Strategies for growth

It is clear that growth cannot be achieved and sustained in Chhattisgarh without investing in agriculture and allied activities. The current state of agriculture is such that focussed and planned investments in agriculture can make a significant difference, given the low productivity levels and the limited use of technology in Chhattisgarh. The strategies should be such that there is equitable and sustainable growth. The strategies must also ensure that the environmental and ecological costs are kept to a minimum.

The Village Reports reiterate the importance of these critical areas. Two out of five Village Reports (43 percent) state that irrigation can change the available livelihood opportunities. Roughly a third (35.7 percent) of the Reports mention that promotion of agriculture is important for better livelihood opportunities. More than half of the Reports (60.3 percent) say that better prices for forest produce are essential for the enhancement of livelihood opportunities. About 28.3 percent of the Village Reports say that self-employment opportunities are required in the rural areas.

Table 2.22 **Suggestions for better livelihood opportunities**
(percentage of Village Reports selected for perception analysis)

Region	Irrigation	Electricity	Training	Employment	Availability of seed and fertilisers	Cattle rearing	Opportunity for Self-employment	Good price for forest produce	Promotion of Agriculture	Availability of agricultural equipment	Cottage Industry	Fisheries Development	Developmental activities	Relief Work
Northern region	61	15	29	21	33	20	43	61	31	16	16	4	30	29
Central plains	46	18	26	29	29	9	31	41	50	18	36	13	4	4
Southern region	23	4	9	35	5	13	11	79	26	0	21	4	10	5
State	43	12	21	28.3	22	14	28.3	60.3	35.7	11.3	24	7	14.7	12.7

Source: Village *Jan Rapats*, Part III

Agriculture development and irrigation

- While pursuing an agricultural policy it must be kept in mind that an increase in production may not ensure greater returns if it is done on a large scale since there is surplus of many crops at the national level. Hence the promotion must identify and promote crops or varieties within specific crops that have a market, or can develop a market, due to their special characteristics. The selection of crops to be promoted must be based on local market demand, their intrinsic strengths and unique selling attributes (for example the brand value of *Basmati* rice of Punjab and western UP, and of *Durram* wheat of MP). The local varieties of rice in Chhattisgarh have unique qualities of flavour, taste and nutrition and a concerted marketing initiative can enlarge their markets. The objective of a diversified crop regime need not necessarily be crop replacement, but can be diversification. The difference between maintaining local crop diversity that enhances food and nutritional security and ‘diversifying’ into commercial crops for the market, over which local farmers have little control, needs to be understood. For commercial crops, careful selection of crops and varieties and their linkage with local and national markets is critical.
- Farmers need to grow more than one crop to get better returns from the land. This requires irrigation. Local agricultural practices including land development, lack of field channels, inadequate land preparation in the fallow periods in some areas, hinder higher productivity. This hampers efficient utilisation of irrigation during the *rabi* season or for the later summer crops.
- The agriculture extension machinery of the State needs re-tooling and needs to build upon the strengths of existing traditions and practices. The *Jan Rapats* mention that the agriculture extension staff has not played a significant role in the development of agriculture, and their current skills are paddy focussed, based entirely on irrigated agriculture with hardly any focus on rain-fed agriculture.

- Farm inputs from co-operatives, such as seeds and fertilisers, usually reach farmers late and are often inadequate. It is necessary to ensure adequate and timely supply of farm inputs for all villages. Local value addition in agriculture and forest produce can increase the buoyancy of the village economies substantially.
- While dry land farming dominates the State, there is very little R&D work and even less extension support that can assist farmers in practising dry land farming, to improve earnings from their land holdings. More attention needs to be given to dry-land farming. Irrigation is the most urgent need for the State. The provision for irrigation must come from a mix of options. These include the strengthening of existing irrigation schemes and increasing their efficiency; as well as the setting up of new minor irrigation projects, based on local water bodies run by the People's Committees, a move forward from the current Participatory Irrigation Management Committees. Irrigation schemes be designed with the involvement of knowledgeable local people and managed on principles of equity by *Gram Sabhas*/PRIs. Some irrigation schemes have proved to be insensitive to local ecological conditions and have destroyed excellent traditional systems and replaced them with inefficient and unsustainable systems.
- Another suggestion is the development of local water harvesting and water usage mechanisms, by a combination of assistance from the State and management control through the *Panchayats*. Small structures can help increase both the water for irrigation and help in recharging water bodies by activities such as check dams, lift irrigation, and water conservation practices.
- An increase in the irrigated area, by exploiting the vast (and under utilised) ground water potential in the State is required. This can be done through bore wells and tube wells, especially in the hill areas. However, caution needs to be exercised against allowing unregulated drawing out of ground water which may lead to the type of situation existing in most other states (the experience of Punjab, Haryana and Gujarat need special mention) where there has been a fall in the water table due to unregulated ground water exploitation. A framework is needed for sustainable water utilisation combined with recharging mechanisms.
- An increase in the coverage of schemes like the promotion of *dabrees* and the *Khet Ganga* Scheme is another suggestion.
- *Panchayats* must play a more active role in evolving mechanisms to address conflicting livelihood and *nistaari* demands from community and village water bodies, such as for fisheries, *singara* (water chestnut) cultivation, water for irrigation, water for domestic use, and water for animals. A policy framework for ensuring equitable access and entitlements to water for different user groups (including women's groups) needs to be developed.
- Land development in fallow and wastelands is another area that requires attention. Farmers need training and exposure on ways to make their lands more productive.
- There is very little labour work available during the non-agriculture season. Provision of alternate sources of employment is required in substantial measure during the off season.

- The *Jan Rapats* point to a large resource of knowledge, skills and practices that exist among the people that must be drawn upon. Efforts to recognise and acknowledge the rich indigenous knowledge and traditions in agriculture need to be taken, and cross learning should be encouraged.

Animal husbandry

This is one area where the people want concrete collaboration with the Government. The problems of fodder and low productivity breed of animals have been mentioned in many reports.

- There is a requirement for better breeds of animals, especially in the plains.
- Relevant institutions need to look into the issue of encroachment of common lands,

improving the quality of grazing lands, provision of better credit mechanisms to increase the stock of animals, and assistance by way of marketing of milk.

- Credited incentives for activities like piggery, poultry and fisheries are necessary.

Promotion of growth sub-sectors and clusters

To promote livelihood options, focused attention is required in certain sub-sectors and within sub-sectors in dynamic clusters. While the *Jan Rapats* have not been able to identify these clusters, some sub-sectors that may be considered are:

- Forest produce: An increase in local value addition in the hands of local producer groups of women and men. It is important to value and acknowledge indigenous knowledge, particularly that which resides with women and to develop this as a source of income for the women. This may be facilitated by the development of a range of products in the cosmetic industry.
- Repairs and small engineering: Assistance is required in vocational training and credit facilities. Small units flourish all across the State, especially in semi-urban sites, road intersections, and highways as well as in industrial and high productivity areas but there is a need for quality training, skill up-gradation, and the enforcement of environmental standards.
- High value handicrafts: A new-generation design initiative is required for hand crafted products produced in Chhattisgarh. In addition to design inputs and the development of new product lines, marketing efforts are also required.

From the people

Better quality animal breeds should be provided and the local animal breeds should be improved. Grazing and pasture lands should be improved and developed.



District Report, Korea

Better quality animal breeds and medical facilities are required.

District Report, Surguja

Information and knowledge on techniques of animal husbandry are needed.

District Report, Dantewada

Training, setting up chilling plants for excess milk and marketing facilities are required. Enough space should be provided for the maintenance of the animals and there should be sufficient grazing grounds for them.

District Report, Bastar

- Herbal and medicinal plants: There is an increasing demand for opportunities to promote herbal and medicinal plants. The Reports mention that people are eager to participate in ventures where farming of herbal and medicinal plants can be taken up

on a community basis, with the Government acting as a facilitator, providing a link between the producers and consumers. The people feel that these plantations will help to conserve and promote indigenous health practices.

From the people

Processing units for the available forest produce should be established.



District Report, Korea

Forest related economic activities should be developed collectively with the people. This will create employment activities in the village itself. Appropriate prices for forest and agricultural produce should be ensured in the village itself. More herbal and fragrant plant varieties should be promoted. Currently the production of *lac* gives Rs 10 crores to the district but this can be increased. *Tendu patta* co-operatives are also profitable. Other forest produce activities should also be strengthened. *Sheesal*, used to make ropes should be promoted. Self-help groups can be used to promote these activities.

District Report, Rajnandgaon

Sales and marketing facilities for forest produce should be improved and established. Co-operative societies should be set up for the sale of forest produce. Raw materials should be made available at minimum cost. An interest has been expressed for the cultivation of herbal and medicinal plants. Training for growing these plants and marketing support is needed.

District Report, Kabirdham

In order to get better prices for NTFP, the people want middlemen to be done away with. The people want afforestation through trees like *sal* and *saagwan*. Aromatic and medicinal plants are also mentioned as possible alternatives. The people say that they will play a role in the protection on forests.

District Report, Kanker

Other areas for intervention

- The credit needs of people are not adequately met by the formal sector. Most farmers are in some degree of debt and several are seriously indebted. Timely and adequate credit facilities are required.
- Organic farming is an alternative that the Government should promote. Organic farming provides an opportunity to build upon local traditions and knowledge as well as to enhance food and nutritional security. The priority however should be to ensure adequate production and access to food in households before venturing into other markets.
- Rural infrastructure also needs reinforcement. Basic rural access roads, local storage and warehousing facilities need to improve, especially if farmers are to have the choice to grow crops that do not have immediate local demand and can be stored.

Conclusions

The livelihoods segment of the *Jan Rapats* exhibit an extremely dynamic, interactive and informative discussion. The understanding of people and their enthusiasm to share the details of their existence is apparent from every Report. It is clear that people work through out their lives and they share an intimate attachment to work. Only a very small part of this work has an economic and employment dimension,

which has been described and differentiated as livelihoods in this Report.

People define, delve and dwell on the various economic and non-economic dimensions of livelihoods with an independence based firmly on their capacities, capabilities and skills, traditionally inherited, indigenously developed or learnt as apprentices. Interventions that are planned should therefore be holistic and cannot restrict themselves merely to the economics of livelihoods.

The State and its institutions will have to play a vital role in expanding the macro linkages and networks associated with livelihoods. These linkages have so far been poorly established and used, and have not allowed for a steady and stable growth of potentially viable work sectors.

People are unable to translate their lack of opportunities into a macro environment and context and therefore they look to the State for assistance.

The State, on its part, is unable to understand the dynamics of the micro-economic environment

and the intricacies of the relationships and interdependencies between types of livelihoods and more importantly the station of people in these livelihoods. Thus priorities based on broader principles are translated to micro action, which often distorts these relationships and interdependencies, without adequately compensating or replacing them with more suitable and equitable systems that are naturally successful and efficient.

In the institutional context, the potential in institutions of local self-government (LSG) in all the three tiers – village, *Janpad* and district – is quite substantial. Effective, genuinely empowered and strengthened LSG institutions have the capacity to sort out many issues, especially conflicts between different interest groups, between the people and State, between the people and the market. This will necessarily include strengthening local self-government systems within the PRI framework, which could lead to a better match between macro policies and the diversity of grassroots priorities and conditions.

