Information Base and Human Development Concepts

Districts and development blocks are the primary level of development action in India. They are also a primary source of development information and data. For baseline information on indicators of human development, district administrations are supposed to be the fount of all data. However, the notion of human development as a technical concept has not yet filtered down to the state level in India, let alone districts. There is a considerable gap between the theoretical and highly aggregated concepts of human development and the reality of data collection, generation and provision at the level of the district.

It is instructive to look at the concepts and indicators of human development `from below', as it were, from the perspective of those who generate or gather the data on which the national statistics (and the state statistics) are based. This chapter attempts to juxtapose the reality of data generation at the field level by the patwari, the kotwar and the Panchayat with the concept of human development as conceived and discussed by planners and economists.1 Here we try to sketch the structure of information on `human development' and its sub-parameters, from the viewpoint of its functioning in a particular district, in this case, Raisen district.

In Madhya Pradesh, the district is important not only as an administrative unit but also as a reporting unit. An intensive study was conducted of Raisen district, to understand the process of data generation and reporting within a district. Raisen was selected for intensive study since it has a combination of developed areas as well as backward areas, it was accessible to the project headquarters and most programmes of the government are currently running in this district.

The following sections are not an analysis of human development in Raisen district. Here we attempt to understand the issues relating to the operationalisation of human development concepts in terms of district data, and to spell our possible strategies to ensure better provision of data pertaining to human development, given the criticisms and constraints of the existing setup.

The broad findings of the Raisen study can be summarized as follows:

- Although human development is an integrated notion, the provision of data relevant for it is organized departmentally. There is, therefore, considerable `fracture' and double counting in data provided for this purpose.
- Data on the internationally standard indicators such as mean years of schooling, life expectancy and per capita income (with or without `purchasing power parity') are not feasibly retrievable or available at the district level. Proxies or surrogate measures have to be employed.
- Data on physical infrastructure and on personnel in departments covered under the categories of human development are readily available at the district and block levels.
- Data on outcomes and on the quality of the infrastructure and services is not available at the district level.

Human development data does exist at the local levels in the district, except for vital statistics. Even outcome data such as school drop-out information is available at the local level (at the school level). This data is however not reported since the reporting proformas have no place r them. The bridging of this gap through more sensitive reporting formats can be a useful starting point in the attempt to collect better and more relevant data on human development..

The order of analysis followed in this section is as follows:

- Reporting of human development parameters in the districts.
- Salient issues in the structure of information in the districts.
- Strategies for improvement.

HUMAN DEVELOPMENT PARAMETERS AND DISTRICTS

The notion of human development is built upon a range of indicators pertaining to education, health and lively-hoods/income. These concepts are quantified to enable comparison and to provide a `measuring scheme' for planners and decision-makers. Quantification involves selection of measures for various parameters of human development. Mean years of schooling and drop-out rates are used as measures for quantifying attainments in education. Life expectancy (at birth or at age 5) is one measure for attainments in health. Per capita income (now adjusted according to `purchasing power parity') is the measure used for quantifying outcomes relating to livelihood.

These indicators, at the district level and at levels subordinate to the district, are derived from land records, revenue data, education data and vital statistics (birth and death rates), etc. It will be useful now to study the human development parameters in terms of collection and retrieval of information pertaining to each parameter will be identified, the sections will also suggest areas where reporting was found deficient and suggest measures for improvement.

At the very outset, however, it is necessary to point out that while human development is a concept, the data for it is provided by departments. Thus while the concept is holistic, the data is segmented according to government agency or department. This has important implications for the inter-section between activities of human development.

Education

The District Education Officer is the nodal source of programme implementation and monitoring in the district with regard to all government-sponsored education initiatives. The block level staff, mainly inspectors and supervisors who go about verifying school records, infrastructure conditions, supplies etc. in various schools run or accredited by the government, report to the Deputy Director Education (DDE), who in turn reports to the Department of Public Instruction in the state capital.

In Raisen district, the Rajiv Gandhi Mission on Basic Education is a high priority activity with the objective of improving access to basic education not only through the school system but through literacy campaigns and awareness initiatives. The District Collector has identified increasing social awareness as a catalyst for human development in Raisen (which has a historical legacy of feudalistic landlordism, inherited from the administrative structure of the kingdom of Bhopal whose military commanders had been given rights on land in the Raisen region). As a result of the emphasis placed by the state government and its execution by the District Collector, the reporting and monitoring of education-related initiatives have received considerable impetus.

Table 7-1 at the end of this chapter indicates the reporting of infrastructure and outcomes related to education in Raisen district. From the Table we see that at the district level, information on infrastructure, student enrolment, teacher recruitment, etc., is quite good, partly because budgetary allocations are required for them. On the other hand, information on outcomes such as mean years of schooling, drop-out rates, etc., is quite poor. Most data is not consolidated at aggregate district or block level, though it is available individually in schools or colleges. Some aggregation of figures is done by the district education office, and district data is also consolidated district-wise at the state level by the Departments of Education, but these pertain mainly to programme target achievements like enrollment, buildings constructed, teachers in a district, etc.

Health and Vital Statistics

Raisen's data administration with regard to health infra-structure and health-related outcomes (vital statistics) is headed by the Chief Medical Officer who presides over a large cadre of health officials and workers in the district. All hospitals and medical institutions report to the Chief Health and Medical Officer (CHMO). In Raisen, as elsewhere in Madhya Pradesh, birth-death registration arrangements have been made in the municipality/Municipal corporation for urban areas and the thana (police station) in rural areas. For urban areas, the Chief Municipal Officer/Health Officer and for rural areas the Thana In-charge, is declared as the Registrar for the areas under their jurisdiction. The District Statistical Officer is the District Registrar, whose responsibility it is to provide the district's birth-death statistics to the Chief Registrar of Births and Deaths.

For a better perspective on the generation of vital statistics, a look at the state-wide picture is in order.2 Today, Madhya Pradesh has 1,395 registration units, including 979 rural and 416 urban units. To facilitate registration in the forest areas, Forest Rangers have been appointed Registrars in 28 forest units. In the state, 165 police chowkis have been declared as Sub-Registration Centres so that rural residents and respondents do not have to cover long distances for registration. The Kotwar in villages, the Forest Guard in forests and the Ward Daroga in urban areas are the providers of information. At the divisional level, the Deputy Director, Divisional Statistical Office is the Divisional Registrar. At the state level, the Director of Economics and Statistics is the Chief Registrar and the Deputy Director of Vital Statistics is the Deputy Chief Registrar of Birth and Deaths.

Madhya Pradesh is a large state where there are several problems in the systematic management of the birth-death registration system. Despite all efforts, there is little quantum progress in registration because 76.8 per cent of population is non-urban, and there are several difficulties in improving registration in these areas. In rural areas, the Kotwar is the reporting officer. However, today, out of a total 71,526 inhabited villages in Madhya Pradesh, only 51,635 villages have a Kotwar. The remaining 19,891 inhabited villages have no Kotwar, and therefore their birth-death information goes unreported.3 The civil registration system (CRS), therefore, is subject to extremely heavy degrees of under-reporting. The sample registration system (SRS) provides more reliable data, but its coverage of districts is not statistically significant and therefore, its data cannot be used for inter-district comparisons of vital statistics.

Reporting of outcomes and infrastructure relating to health in Raisen district are outlined in Table 7-2 at the end of this chapter. Here we see that at the district level, the information on infrastructure is quite good. Information on outcomes, such as life expectancy, is non-existent. Information on crude birth and death rates, infant mortality, etc., is available but statistically unacceptable.

Livelihoods

Unlike health and education, livelihoods or income is a synthetic concept, not confined to any primary department. This is indicated by the large number of sources and organizations which have to be involved in the provision of data pertaining to livelihoods and income in a district.

Sectors comprising `income' and the sources for data on them in Raisen district are given in Table 7-3 at the end of this chapter. A look at this Table indicates that there is a sizeable contingent of data providers with regard to income and livelihood parameters of human development. In addition, there are the surveys of IRDP to measure and enumerate rural poverty; groundwater and resource mapping to generate information on the resource endowment of the districts. However, due to the departmental segmentation of these heads of information and the uneven quality and availability of information for these heads, computation of livelihood indices or measures of `district income' is fraught with problems, both in terms of logic and in terms of practicability.

The flow and sources of data on all three parameters of human development indicate that while data is avail-able at some level, and in some form, it is not generally relevant to outcomes and it is not uniform or singular, since it is provided by a variety of departments and functionaries. Thus, an `integration' of data provision from nodal officers is necessary for more efficient `human development' data reporting at the district level. However, even this integration is not sufficient to provide all the data, especially outcome-related data required for our purposes. Moreover, the streamlining of departments or officers providing this data and the increment of their skills and resources can only be undertaken in the light of the everyday reality of their functioning and of the use of data in districts and at super ordinate levels.

SALIENT ISSUES FOR THE STRUCTURE OF INFORMATION IN THE DISTRICTS

We now analyse data administration in Raisen district and the manner in which the government and people collecting data handle and perceive data. Although this analysis is based primarily on an intensive study of Raisen, some observations are drawn from the fieldwork conducted in the other districts of Madhya Pradesh.

The state government is the single largest unit administering human development in the state, both in implementing programmes and schemes relating to development. It also generates data pertaining to human development issues and conducts surveys, making estimates and assessments on indicators of human development. The state government at the apex level gets information form all sources on all development activities under its preview, for monitoring and for accounting. Except for some categories, all information is arranged either district wise or is available at the level of the state. In some cases like forests, the reporting unit for data and for accounting are regions different from districts.

Though the state government is the final reservoir of all data, at the districts, it is the office of the Collector where all data flows, and under whose instructions all data is collated and reported. The District

Collector is the main revenue and development head of the district. It falls upon the Collector's office to implement and monitor all programmes, schemes and missions. This is done directly as well as through other departments represented in the district such as the DRDA, the Forest Department, and the Agriculture Department. Drawing on its central and critical position in government in the district, data and information also gets focused in the Collectorate. Since all department and programme heads in a district ultimately report to the District Collector directly or indirectly, the Collectorate is the repository and suppository of all data and information. Apart from its administrative position, the Collectorate is also the office that coordinates all departments, and is finally responsible for virtually everything in the district. This further increases the Collectorate's need to have all data concerned with the government in any manner.

In a way, it is this centralized nature of collection of all data in a district in one office, that causes some of the problems concerned with data. There are various sources from which data is generated, and they in turn report directly to the collectorate and its offices, in prescribed formats, which are often developed in keeping in mind programme details, and department and accounting needs. Secondly, there is very little sharing of and use of data from other departments or programmes, which does cause duplication of data, multiple assessment of similar data, and problems of cross-referencing and correlating data from different sources.

Information flow is a one-way process without much top to down interaction in discussing data, in verification and in utilization of most of the data. The information flow has created platforms in the data system. First comes the gatherer or generator, who is the person who collects the primary data or is responsible for generating it. Then comes the first level of reporting where primary data sheets are maintained. This is followed by the block, tehsil or directly the district level, where primary sheets are turned into aggregated figures for the area. It is at this level that most data gets the shape in which it is then sent to the state level, and it is in this shape that it is used and interpreted, or analysed.

A major lacuna of data administration in India is that the person who actually collects the data does not know the purpose for its use. All data collection is generally a passive exercise in response to a fiat from the BDO, the Collector or the state government. Moreover, the efficiency of techniques also varies from the provider to the user. While the users in planning bodies, academic institutes and think-tanks run sophisticated statistical operations on high-tech machines, the providers of data often do not even possess calculators or the training to use computers. In Raisen district, the District Centre of the NIC was the sole node of government computerization. Computer literacy, computer use and the computer culture is yet to take root among the statistical officers, the departments in the Collectorate, the BDOs and the extension officers.

The platforms between the gatherer and end-users, have also separated the gatherer from the user of data. Those who are collecting data have rarely been a part of those who analyse data, and are not in the know of what the data is used for. This sense of separation from the data that primary data-gatherers feel, builds an alienation from data, and the process becomes target-oriented, where collection of data is more important than the validity and authenticity of data. 4 It is not that the data collected and reported by government departments is not always authentic, but the main focus in on being able to collect the data and present it in the manner necessary. Data collection becomes an end itself separate from all demonstration of practical use. This ritualisation

degrades the importance of data collection and provision .

Practices adopted to report data often distort the actual picture. Often corrections are made to data in order to see that totals match, and in cases where data is not available standard multipliers are applied to previous years or earlier available data to portray current figures. Another critical problem with the data systems is that the officers putting the data together and reporting it are not responsible for its authenticity, only for its proper presentation which is mathematically correct (proper totals and correlation with other reported data); and similarly those who generate or collect data are not responsible for its proper mathematical correctness, thus data is at times unrelated, there are problem of totals mismatch, lack of relationship across data and with previous years and so on. The lack of understanding of the purpose of the data and its utility leads to most of the problems associated with data

There are many other compelling reasons for which data gets changed or is made to reflect certain conclusions, such as conditions drought, growth in employment or generation of employment under programmes, reduction in poverty due to IRDP, etc. A related concern with data is that many activities of the government are reported in a manner that exhibits achievement of the targets and goals of government and the data that represents this information does not therefore, often reflect the actual status, but only the target status. For example, in school enrolment, the figures reflect the students who got enrolled anyhow in the school. The data does not show regularity in attendance, let alone quality of learning. Similarly, immunization figures may represent the number of vaccines given rather than child or mother-wise achievement of full immunization.

Most data that the government reports is quantitative data, and shows the quantum of work undertaken, infrastructure built, targets achieved, etc. There is very little data that shows a qualitative trend, such as utilization of infrastructure, access to infrastructure, quality of schools, level of education of children, and so on, and in this there is dependence on studies and surveys undertaken by central agencies or other quasi-government and funding bodies.

Another interesting aspect is that the government does not generally use data and information that is not released by an agency connected with the government. 5 Individual cases exist and often such data find their way into government through the use of experts and resource persons in government, but there is little official acceptance of such data, however definite, significant and scientifically valid they may be.

Sources of Demand for Data

There are certain standard sources of demand for data. These are related to programme monitoring, programme planning and target setting, as well as resource allocation and development planning. There is also a large demand segment of accounts-related reporting, which is usually the most carefully done data base as it can have a negative bearing on a person's career and future. Demand from these sources for data comes from various administrative levels both within and outside the district. 6 First, is the block, where development related information is needed for planning and reporting. Similarly at the district level there is reporting from all departments so that district plans can be made, reporting of programme achievements are done district-wise, and indicators of essential information are collected and sent up to the state level, so that the exercise of planning and resource allocation can be undertaken. These demands are standard, met under standard data formats.

Demand for data contained in standard reporting formats is rare. Furthermore, data administration is restricted to collecting and reporting data, and occasionally analyzing some of the data for district-level publications by the Collectorate. A more sensitive and detailed analysis of data in the district for wider planning purposes is yet to emerge from the Collectorate, given the passive, unilateral nature of the demand for data.

Data bases and Surveys

Apart from department-related data, there are also consolidated data bases developed in the state, the most important amongst them being the land records (now computerized), and the village and district-level querying systems developed by the National Informatics Centre (NIC). Other major data bases used by the district and even village-level information on a host of parameters.

The computerized land records are available in the districts, and have gone a long way to ensure a faster retrieval and data base management system of land records. However, in the absence of legislative sanction for land records computerization (and the fact that total coverage is not yet achieved throughout Madhya Pradesh), the land records data base is not being used by the land revenue administration, or by the law courts (which are themselves inadequately computerized), or even by the people.

The Computerised Rural Information Systems Project (CRISP) was developed as a data base for rural development monitoring, following the model set by Uttara Kannada district in Karnataka. This programme is provided by the NIC to the DRDAs in the district. However, the package is not used anywhere in Madhya Pradesh, let alone Raisen district. Apart from the cumbersome format and unfriendly user interface, the poor state of DRDA computerization is responsible for the non-use of CRISP in Raisen, as elsewhere in Madhya Pradesh.

NIC has created district data bases and village-wise querying systems, namely DISPLAN and the Village Information System (VIS) ----a village-level data base which provides information on infrastructure, employment, health and education services and facilities, etc., at the village block and district levels. In Raisen, though these data bases were available and indeed were demonstrated to the project team, the district administration rarely, if ever, used them in decision-making. The reasons for this are as follows:

- Indifference of staff in providing current data
- Doubts about the veracity of the data itself
- The disclaimer of all responsibility for its use by all concerned.

The district's sole comprehensive data base, it appeared, is an orphan. It is caught in a vicious circle where it is not used because it is not credible and it can never be credible because no one has ever used it.

What is interesting about the NIC data base is its owner-ship. NIC claims to have no responsibility towards its authenticity, and provides it on an `as is where is' basis, somewhat similar to the sale of used cars. Yet its retrieval is hardly an easy task for the computer illiterate or the lay government functionary, let alone private citizens. Further, since it is an NIC data base set in a centralized format, the utilization of this data base is scarce in the state government. Thus it lies idle as a data base without any value addition to the district administration. NIC claims knowledge of creating a data base but its personnel are ill equipped to understand and handle statistics and data analysis. On the other hand, the computerization and the esoteric nature of electronic data bases, the cultural and educational problems of computes, make the

data base virtually useless for most government functionaries in the districts.The disclaimer regarding the authenticity of data further puts the data base in a `fluid situation'. No one is comfortable using data which is not supported even by its managers and providers.

The one lesson from the experience of NIC in the district is the necessity of data training for data base managers and electronic data base utilization training for those who intend to use data bases. In the absence of this interface which will bring the data base managers and users together and make each responsive to the other, electronic data bases are nothing more than faster retrieval systems. Moreover, at the state level, NIC should be able to deliver their data bases to the state government departments on demand. Thus far, the NIC has been rather tardy in online provision of data to state government departments.7 The use of NIC data bases by state governments on a regular basis will provide an incentive to district administration to ensure greater validity and availability of current data in the NIC data bases.

The other significant source of information is the Census. The government prepares District Census Handbooks from the Census data, and all state-level publications contain data district-wise. However, except for the DSO, no one in the Raisen district administration knew the variety of information contained in the Census, and what could be done with this information.8 For example, an agency needing data on employment in `wood and leather' did not know that Census Economic Tables have these figures. District census tables are used mainly for population figures since they are benchmarks for allocation and monitoring of development schemes like JRY. The delay in the provision of the 1991 Census Economic, Household and Social Cultural and other Tables shows the basic lack of accountability of larger data base handlers, at all levels.9 In fact, the Census makes itself irrelevant for practical use by the inordinate delays in publishing data. The Registrar General and Census Commissioner has little accountability to the states, and the states in turn then rarely depend on them for information. This lack of availability leading to lack of use is even more acute in the districts. This `scarcity-based separation' of the data provider and user is symptomatic of data administration's malaise at every level.

The case of surveys with regard to states and districts is equally dismal. NSS national level surveys have nothing to offer to districts, and in Madhya Pradesh the state NSS has not been collated and published for the past fifteen years. In any case, access to NSS data is impossible for the ordinary citizen. A system of data provision that works only upon `orders from above' is either an excuse for idleness or allegedly a mechanism of `patronage for a select few economics' seeking to build up their publishing records.

In this scenario of non-use, officials in Raisen's development administration (and voluntary workers in NGOs such as RDSS Silwani) were not aware of the very existence of a state NSS. The state NSS did not appear concerned over this problem, citing unavailability of infrastructure for not working on state-level NSS surveys. The Economic Census of 1990 for Madhya Pradesh too has not been officially released five years after the Census was conducted. This delay evokes a similar response of cynicism and lack of utility by the district administration. The end result of the lack of surveys and the lack of any receptivity and importance attached to district-level data by survey agencies and by government is that the district administration sees data collection and collation as a low priority exercise.

Issues in Handling District-Level Data

- There is continuity of data across departments and across districts, that has built a very large volume of data, in time series. The compatibility of most data across districts and over time enables data analysis and gives comprehensive and in-depth information on districts.
- This data has the sanctity of the government and thus becomes an aid and a tool for planning, monitoring and assessing districts.
- There is continuity in data formats, ensuring that all departments collect standard data in standard formats.

In spite of these advantages, the data exercise has certain concerns that need to be addressed:

- There are questions of the validity and currency of data. This question of validity is not one reflecting the intentions or nature of the statistical administration, but shows the problems of data that is generated from different programmes with it. Most of the problems emanate from a lack of appreciation of what data is.
- There is a problem of compatibility between data bases, and the definitions of data and data heads under which information is collected. The wide variations between data make it impossible for most district officials to use it; they neither have the time nor the inclination to look at these data bases and spend time understanding the definitions to use these data bases. There is a lack of training in understanding data bases and in understanding definitions and categories of socio-economic surveys, the Census, etc.
- All government data is collected uniformly across districts, or across programmes. Due to this, the specificity of districts on certain issues often gets obliterated, and data specific to special categories of geography, small economies and social groupings get lost. Further, special characteristics or the uniqueness of districts are never exhibited by such data.
- The district as a unit of data collection and comprehension also poses some problems. First is the issue of further disaggregation. At the level of detail, the block is perhaps a more homogeneous unit and data representing a block is far more useful. The focus on the district has caused lack of data representing a block is far more useful.
- The focus on the district has caused lack of data at a further disaggregated level. The district is an administrative and not a natural economy level. The district is an administrative and not a natural economy unit, therefore data does not truly represent the economic characteristics of the area. Further, the dynamics of inter-district linkages is not visible, and information on commercial, social, geographic and market links as well as feeder and consumer districts is not collected. Most economic activities transcend districts, or are localized at units much smaller than districts (cluster basis); information on them is never available, except in special circumstances like industrial estates. In the same way, linkages with other states get obscured when border districts are linked with other states' border districts, and often linked to districts far away. Nevertheless, the district remains the most viable unit for data analysis below the state level, due to its institutional resources and credibility with the administration.
- Data is very weak on the informal sector and registered livelihoods. This large section of the economy and people gets left out of most data, and only estimates are available, mainly at the state level. This is one of the main limitations of state-sponsored and state-generated data.

- Data also misses out mainly visible and `invisible/ silent' issues of habitat, women's work, displacement, migration, etc. which may have been lost to the realm of data as they did not find a position amongst government criteria, and also because data collection and estimation exercises are limited and cannot assess them. Sources that address these issues are not considered relevant or acceptable to the government, which as mentioned earlier, is another limitation of the data government considers as reliable and indicative.

CONCLUSION: STRATEGIES FOR IMPROVEMENT

While there are several lacunae and many constraints in the provision of data at the district level, our assessment of the structure of information in Raisen district is that the files and records contain much data that is both current and relevant for Human Development Reports. Due to the orientation of the demand for programme or target data, the reporting of activities takes precedence over the reporting of outcomes and quality of performance. It is this orientation which has to be modified. Moreover, there are several structural problems of data provision and data use in Raisen, as elsewhere in Madhya Pradesh. These include insufficient resources, insufficient incentives for data collectors, inadequate technology, inadequate training and inadequate participation for data providers. In these conditions, they have to cope with the requirements of large data bases and cumbersome proformas which they never see being used fruitfully and regularly. The poor quality of data provision in these circumstances is not surprising.

It is possible now to work strategies for improving the generation and provision of data at the district and other levels such that future endeavors and planning exercises can benefit from better and more relevant data at the district level. Some steps in this direction may be as follows:

Access to information: the right to know

The user of data is often constrained by the lack of data or even the lack of awareness of what data is available. This needs to be remedied if we are to approach the issue of better data with any seriousness. The state government can enshrine the `right to know' in its agenda for action. The state government's commitment to an `Open Government' can be actualized in this form. The vision that the truth can set us free is more than rhetoric. All public domain data should be readily available and its existence must be made publicly known. Government, its departments, institutions and the people should be able to access data on demand.

Relevant and current data

The data collected and provided should be relevant to the user and should be current. If data is not current it loses its relevance for practical use. The thrust should be on the validation and regular updating of data. The emphasis should be to minimize delays in the collection of data and its provision to users. The unfortunate situation of the NSS and 1991 Census data should be remedied at the earliest.

\Methodology and design of data and information

In spite of the vast amount of data generated by the state at all levels, the data collected has not seen

changes over the last many decades. In spite of the practical and procedural problems of much of the data collected, sustained and regular problems of validity, and lack of use of some data, they continue to be collected without much initiative to improve methodology and data not used or needed is not dropped from collection. Further there is little change towards collecting new kinds of data that address new concerns of the government and of development, principally human development. There is immediate need for an exercise in developing a new design for data collection and data formats for districts, that is sensitive and responsive to new demands from data, that reflects and contributes to new concerns, and that uses better methods of collection and calculation.

People's participation in data collation

The earlier situation of passive supply of data on orders from the authorities can be remedied if the people and the users themselves are encouraged to provide information and data from their work to the data provider agencies. An interactive relationship between users and providers can be promoted by using data generated from initiatives where the government and people's initiatives work together e.g., the National Literacy Mission and TLC campaigns. Moreover, the confidence of users in the credibility of the data will be enhanced if they feel part of the process where data is generated. If this credibility is built up over time, then the frequency of use of data will increase and consequently the quality and relevance of the data will increase exponentially.

Better maintenance of reporting mechanisms and equipment

Attention should be paid to the upkeep of reporting equipment and systems of reporting. While improved management of reporting mechanisms can ensure regularity in provision of data, accuracy and credibility of data depends on ensuring that equipment such as rain gauges (which are kept to measure average rainfall), weighing mechanisms at agricultural marketing yards, soil sample testing equipment, weighing equipment at PHCs, etc., are maintained with due diligence.

Intensified computerization: beyond the Collectorate

The demands on data providers for regular and recent data requires a greater focus on computerization. While the NIC and the state government have taken several steps to promote computerization at the district level, now the need is to go beyond, to the block and (with the empowerment of the Panchayats) the Panchayat level. The success of land records computerization in Madhya Pradesh shows the feasibility of motivating and training village-level staff such as patwaris to accept and use computerized platforms. After all, in a system where information flows from the bottom upwards, computerization at the grassroots level can provide quicker, regular and more credible data.

Leaner data bases

One lacuna of centrally prescribed and designed computer data bases is that they have too many parameters and too many fields within each parameter. Given the large number of villages, households and people in each district, data entry for these large data bases is a cumbersome task. One reason for the non-use of CRISP in Madhya Pradesh is that its parameters are too many for the single data entry operator in the DRDA to handle. DISPLAN has made slow progress in Madhya

Pradesh precisely because every District Information Officer (DIO) had to oversee the data entry over all the blocks and villages in the district. In the case of large districts such as Bastar, this is clearly a huge task, requiring resources beyond the reach of the DIO. By the time the data base is filled, data in it becomes `dead'. Problems of validation and upgradation are compounded by these large data bases. Therefore, it is necessary to prepare leaner data bases which can be filled, validated and updated regularly.

Simplifying reporting formats: according to outcomes not programmes or process

Analogous to simplifying the structure of data bases, the reporting formats for the actual data collector must also be simplified. Often the reporting formats contain concepts and language which are not comprehensible to the data collector. Adequate training and motivation of the data collector and data providers is necessary here. This can be another level for people's participation in the provision and collection of data.

Strengthening the sample survey through more reporting units in each district

With regard to vital statistics, fuel wood use and other information about the daily lives of people, the Sample Survey method has been found quite useful, especially in assessing the actual outcomes of target-oriented programmes. The Sample Survey at the state level needs to be enlivened to the needs of the users. While this may have the implications for the methodology of the NSS at the national level, an increase in reporting units of the NSS in each district may help provide more reliable district-level data on vital statistics, etc.

Strengthening the DSO

Finally, the District Statistical Officer is a key resource person in the data administration at the district level. In most districts, however, the role of the DSO in his or her official capacity is quite marginal. Few officials and staff take the office and functions of the DSO seriously. Steps (such as compulsory training workshops) should be taken to ensure that the importance of providing data on a regular basis to the DSO is grasped by all departments and block-level officials. Better infrastructural support (including better office space, telephones, computers, etc.,) will enhance the DSO's ability to provide data promptly to decision-makers, and thus become more relevant to their requirements.

TABLE 7-1
DATA SOURCES OF EDUCATION

Level	*Head*	*Source/Programme*
District	Enrollment	Primary-High Secondary-Deputy Dir. Education (DDE)
		Colleges-Principal
		Consolidated data available with DSO
	Exam performance	I-XII-DDE
		College—Principal
		Not available in a consolidated form in the district.
	Retention/drop-out	I-XII-DDE
		College—Principal
		Not available in a consolidated form in the district.
	Mean years of schooling	None
	Physical Infrastructure	DDE
	Human Infrastructure	I-VII-DDE
		X-XII—School Principal
		College—Principal
Block	Enrollment	I-VIII—Block Education Officer (BEO)
		IX-XII—Principal
		College—Principal
		Consolidated data for all classes is not available at block level
	Exam performance	I-VIII-BEO IX-XII—Principal
		College—Principal
		Consolidated data is not available for any class at block level
	Retention/drop-out	I-VIII-BEO
		IX-XII—Principal
		College—Principal
		This data is not consolidated for a block as a whole
	Mean years of schooling	None
	Physical Infrastructure	I-VIII-BEO
		IX-XII—Principal
		College—Principal
	Human Infrastructure	I-VIII-BEO
		IX-XII—Principal
		College—Principal
Village/Urban Area	Enrollment	School headmaster or Principal
	Retention	School headmaster or Principal
	Exam performance	School headmaster or Principal
	Mean years of schooling	None
	Physical infrastructure	School headmaster or Principal
	Human infrastructure	School headmaster or Principal

Source:DSO Raisen, district level state government departments at Raisen and fieldwork by Project Team.

TABLE 7-2

DATA SOURCES FOR HEALTH

Level	*Head*	*Source/Programme*
District	IMR	DSO (from general registration, CRS)
	Life expectancy	None (can be estimated from Census data, but is not available in districts)
	Birth and death rates	DSO (from general registration, CRS)
	Nutrition	Chief Medical Officer (CHMO/District Woman and Child Dev Officer (ICDS) on programme related data. Exact estimates on level of malnutrition, etc. is not available.
	Sanitation	Urban—Project officer DUDA
		Latrine—Project Officer (DRDA) and Zilla Panchayat—mainly pertaining to data on programme targets of sanitation related programmes.
		Data on rural infrastructure construction is available with PHED
		No data estimating access and use of sanitation facilities is available, urban or rural
	Epidemiology	CHMO, District Woman and Child Dev Officer
	Infrastructure	PWD/Rural Engineering Service, PHE
Block	IMR	None
	Life expectancy	None
	Birth and death rates	None
	Nutrition	Block Medical Officer (BMO) and ICDS Project Officer on data related to programmes
		Estimates on levels of malnutrition, etc, is not available
	Sanitation	Urban—Chief Municipal Officer
		Rural—Block Development Officer or Janpad Panchayat
		This data also pertains to programmes of health and estimates of targets, but little data on use, and access to sanitation facilities and status of sanitation in urban and rural areas
	Epidemiology	BMO and ICDS Project Officer
	Infrastructure	SDO PWD, BDO
Village/Urban Areas	IMR	No calculations are undertaken or possible. Registration by Kotwar; reporting unit of CRS
	Life expectancy	None
	Birth and death rates	Registration by Kotwar; reporting unit of CRS
	Nutrition	Panchayati Raj Institutions (PRIs), aanganwadi worker on programme data. In a village aanganwadi and other programme staff have approximate idea of nutritional status of individuals, specially mothers and children, who are programme beneficiaries
	Sanitation	PRIs
	Epidemiology	Multi Purpose Worker (MPW)
	Infrastructure	PRIs

Source: DSO Raisen, district level state government departments at Raisen and fieldwork by Project Team.

TABLE 7-3
DATA SOURCES ON INCOME

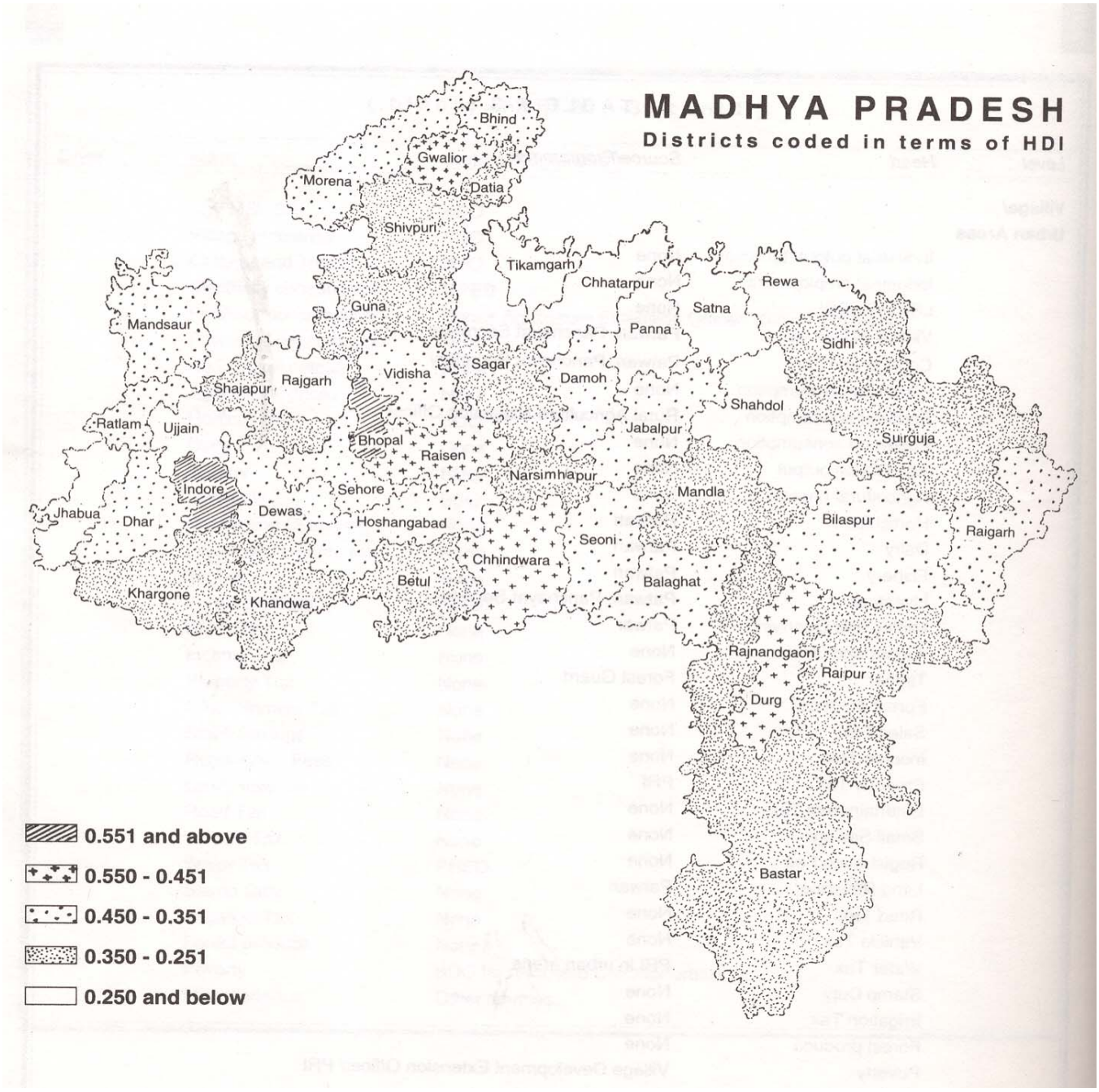
Level	*Head*	*Source/Programme*
District	Industrial output/turnover	None
	Industrial employment	DIC
	LSI/MSI/SSI	DIC
	Village Industries	DIC, KVI Officer, Hast Shilp Nigam
	Cottage and Tiny	DIC, KVI Officer, Hast Shilp Nigam
	Electricity consumption	MPEB
	Fertilizer consumption	Deputy Director Agriculture (DDA)/Krishi Upaj Mandi
	Fuelwood	Divisional Forest Officer (DFO), Forest Department/Social Forestry
	Agricultural output	Superintendent Land Records (SLR)
	Agricultural prices	Collector's Office
	Horticulture	Assistant Director, Horticulture
	Dairy	Deputy Director, Veterinary
	Fishery	Assistant Director, Fisheries
	Livestock	Deputy Director, Veterinary
	Mining and Quarrying	Mining Officer
	Liquor and Opium, etc.	District Excise Officer
	Timber	DFO
	Sales Tax	District Sales Tax Officer
	Income Tax	Income Tax Officer
		This data is available circle wise, and district divisions are not made available
	Property Tax	District Registrar
	Entertainment Tax	District Excise Officer
	Small Savings	District Small Savings Officer
	Registration Fees	District Registrar
	Land Revenue	Collector's Office
	Road Tax	Transport Office
	Vehicle Tax	Transport Office
	Water Tax	PHED/Chief Municipal Officer (CMO)
	Stamp Duty	District Treasury Officer
	Irrigation Tax	Executive Engineer, Irrigation (Water Resources)
	Major and Minor	
	forest produce	DFO, Commercial Office
	Poverty	DRDA for rural and DUDA for urban
	Miscellaneous	Other sources
Block	Industrial output/turnover	None
	Industrial employment	None

TABLE 7-3 (contd.)		
Level	*Head*	*Source/Programme*
	LSI/MSI/SSI	BDO
	Village Industries	BDO
	Cottage and Tiny	BDO
	Electricity consumption	MPEB
	Fertilizer consumption	Senior Agriculture Extension Officer/Krishi Upaj Mandi
	Fuelwood consumption	None
	Agricultural output	None
	Agricultural prices	None
	Horticulture	BDO
	Dairy	None
	Fishery	BDO
	Livestock	BDO
	Mining and Quarrying	None
	Liquor and Opium, etc.	None
	Timber	None
	Forest produce	None
	Sales Tax	None
	Income Tax	None
	Property Tax	None
	Entertainment Tax	None
	Small Savings	None
	Registration Fees	None
	Land Revenue	None
	Road Tax	None
	Vehicle Tax	None
	Water Tax	PHED
	Stamp Duty	None
	Irrigation Tax	None
	Forest produce	None
	Poverty	BDO for rural, and CMO for urban
	Miscellaneous	Other sources

TABLE 7-3 (contd.)

Level	*Head*	*Source/Programme*
Village/Urban Areas	Industrial output/turnover	None
	Industrial employment	None
	LSI/MSI/SSI	None
	Village Industries	Patwari, Panchayat Secretary
	Cottage and Tiny	Patwari, Panchayat Secretary
	Electricity consumption	None
	Fertilizer consumption	Rural Agriculture Extension Officer
	Fuelwood consumption	None
	Agricultural output	None
	Agricultural prices	None
	Horticulture	Patwari
	Dairy	Patwari
	Fishery	Patwari
	Livestock	Patwari, Panchayat Secretary
	Mining and Quarrying	Patwari
	Liquor and Opium, etc.	None
	Timber	Forest Guard
	Forest produce	None
	Sales Tax	None
	Income Tax	None
	Property Tax	PRI
	Entertainment Tax	None
	Small Savings	None
	Registration Fee	None
	Land Revenue	Patwari
	Road Tax	None
	Vehicle Tax	None
	Water Tax	PRI in urban areas
	Stamp Duty	None
	Irrigation Tax	None
	Forest produce	None
	Poverty	Village Development Extension Officer/PRI
	Miscellaneous	Other sources

Source: DSO Raisen, district level state government departments at Raisen and fieldwork by Project Team


MADHYA PRADESH
Districts coded in terms of HDI
Bhind
Gwalior
Morena
Datia
Shivpuri
Tikamgarh
Chhatarpur
Rewa
Satna
Guna
Mandsaur
Panna
Sidhi
Sagar
Vidisha
Damoh
Rajgarh
Shajapur
Shahdol
Ratlam
Ujjain
Jabalpur
Bhopal
Surguja
Raisen
Narsimhapur
Indore
Sehore
Mandla
Jhabua
Dhar
Dewas
Hoshangabad
Bilaspur
Raigarh
Seoni
Chhindwara
Betul
Balaghat
Khargone
Khandwa
Rajnandgaon
Raipur
Durg
Bastar
0.551 and above
0.550 - 0.451
0.450 - 0.351
0.350 - 0.251
0.250 and below