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The Role Of Information Systems In Development Planning
In India: A Case Study Of DISPLAN on NICNET

By

N Seshagiri
THE ROLE OF INFORMATION SYSTEMS IN DEVELOPMENT PLANNING IN INDIA

- A Case Study of DISPLAN on NICNET

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Presented at

Expert Group Meeting
on
Integrating Information Systems/Technology in Local/Regional Development Planning
Singapore
31 October - 4 November 1988
THE ROLE OF INFORMATION SYSTEMS IN DEVELOPMENT PLANNING
IN INDIA

- A Case Study of DISPLAN on NICNET

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I. INTRODUCTION

A carefully worked out optimal synthesis of the top down approach to planning and a bottom up approach to planning is being evolved by the Government of India as a strategy for the 8th Five Year Plan 1990-1995. The top down approach which has been traditionally followed in India since the First Five Year Plan has been found to have serious deficiencies in the perception of problems and aspirations at the grass root level - the district level, block level and village level. On the other hand, a purely bottom up approach may lose sight of inter-regional, inter-sectoral and global priorities of the country and may be non-optimal from the perception of maximisation of economic growth and social welfare. The local level plan optimisations need not necessarily aggregate to a global optimisation. In view of this, a careful reconciliation and optimal synthesis of the top down approach with the bottom up approach is essential.

As any plan cannot be more effective than the quality, quantity and timeliness of information fed into the optimisation process, there is need for designing a country-wide information system responsive to the necessities of such an integrated and optimally synthesised planning.
A decision support information system for the Indian Government is being evolved, based on the design of a predominantly query-based computer network with hierarchic distributed databases and random access communication. The four level hierarchy spans 439 districts at the lowest level, the Central Government headquarters in New Delhi, the set of 32 State capitals and Union Territories, and the set of four Regional Centres.

With interference tolerance and random access as two guiding principles behind the choice, spread spectrum transmission and Code Division Multiple Access System of Satellite Communication was adopted. Each node of the network is a 32 bit computer which is capable of local bulk storage of up to three units of 300 megabytes each for purposes of query accessible distributed databases. The design and implementation of such a distributed database has endowed the network within the capability to distribute the data related to such databases over various nodes in the network so as to be able to accept a query from any of the nodes.

From the genesis of the concept of the National Informatics Centre (NIC) in 1973 to its nucleation in 1975 followed by the commissioning of NICNET in 1977, it was a phase of innovation penetrating through barriers of conservatism in Governmental organisations.
The NIC, now an organisation structured around nearly 2000 personnel, including nearly 1500 computer specialists, is giving full-fledged Management Information System (MIS) and computerisation services to several Ministries/Departments and associated organisations in the Central and State Governments by catalysing the growth of computerisation where none existed earlier. The most important function of NIC is to put to use the new technology of computer networking to enable efficient exchange of information between the Centre and the States, between the States and their Districts and among the Ministries/Departments as well as between them and the public. With emphasis on appropriate computerisation, NIC has emerged as an agent of beneficial transition in the Government of India introducing computerisation in areas conducive to efficient functioning of the Ministries/Departments and their associated organisations.

Yet, it should be regarded that the entire NIC experiment is still in its formative stage of development considering the inertial factors that are invariably present in several user organisations. Too slow a rate of transition may discourage the innovative scientists, engineers and systems analysts of NIC whereas too fast a transition may create reactionary pressures from conservative and inertial forces within the user organisations. It is for this reason that every computerisation exercise by NIC is preceded by an analysis of the appropriateness of the problem area and the ability to assimilate new ideas and new methods by the concerned personnel in the user organisations. Recognising the need to give maximal involvement and participation to the
officers and staff of the user organisations, NIC has put in massive efforts for training the user personnel at every level so that they become progressively self-reliant in the use of the NIC network facility, releasing the energy of the personnel of NIC for catalysing newer areas of beneficial applications.

NIC provides total informatics services to various government departments and associated organisations in the country. These services include conducting feasibility studies, development of computer based Management Information Systems, design and Implementation of Databases, Analysis, modelling and optimization, training of government officials apart from design, development, installation and operation of computer systems and local area networks.

In the past ten years, NIC has developed and commissioned a large number of information systems in various socio-economic sectors. The initial efforts of NIC during this period have been devoted towards developing these systems for the use of Central Government Ministries and Departments. From this point of view, NIC has been able to make significant headway in creating awareness in central government departments on the use of computer based MIS for planning purposes. However, the macro level data, which is used for this purpose is based on micro level data collected throughout the country. This micro-level data follows a hierarchical path to the planning agencies at various levels. At each level of this hierarchy, the micro data is transformed into macro level and statistical data to be used at the respective higher levels for monitoring and planning purposes.
In general, the network would facilitate;
- Monitoring of vital socio-economic projects;
- Online retrieval from databases and updating
- Optimum utilisation of expensive computer resources;
- Emergency communication system;
- Sharing latest software tools;
- Dissemination of information;
- Exchange of messages and information between Central Government, State Governments and District Administrative units.

NICNET was conceived to provide the data communication capability to achieve the objectives mentioned above. It consists of a satellite based communication system, which is the inter-nodal backbone and a terrestrial network to provide communication capability around each node. The satellite Option was chosen to provide data communication between the districts, states, regional centres and the national headquarters.

The analysis of informatics requirements of the government agencies in the country requires decentralised collection and processing of information to meet the requirements at various levels of administration in the country. A typical nationwide management Information System requires information to be collected and processed at different places in the country. The NICNET computer and communication facilities provided nation-wide, make the computing resources
available at the places from where the information emanates. However, in order to effectively use the network facilities it is essential that the data captured at different places be integrated in the form of a single nation-wide database. The design- and implementation of such a database requires the capability to distribute the data over various nodes in the network and to be able to submit a query from any of the nodes. The distributed DBMS which provides such facilities should be capable of partitioning and posting of queries on to different network nodes and collect the results from these nodes and provide a unified answer to the query submitted from the originating node. It is primarily to meet this requirement of NIC that a distributed DBMS called UDMS is being implemented on NICNET.

II. HIERARCHY OF GOVERNMENT INFORMATICS

The hierarchy of government informatics is four fold:

a. National level informatics through the Central Government

b. State level informatics through the State Governments and Union Territories(32).

c. District level information through the District Administrations(439)

d. Grass-root level information through Block Development Agencies(5000)

National Level Informatics

During the last decade, NIC has been able to make headway in creating awareness in the Government sector of computer-based information systems as an
effective tool for decision support. NIC has played a promotional role in creating appropriate computer based information systems in various sectors such as:

Agriculture
Commerce
Communication
Finance
Financial Resources
Industry
Water Resources
Human Resources
Natural Resources
Energy
Urban Development
Personnel and Public Grievances
Steel and Mines
Law
Social Welfare, etc.

These systems provide macro level information in the respective sectors, for the purpose of project monitoring and national planning.

State Level Informatics

State Government Departments get about 700 reports in the prescribed proforma with different periodicity (monthly, quarterly/half-yearly, annual) regarding the financial achievement/physical achievement in respect of both plan and non-plan schemes being executed by the State. The NIC state centres
provides facilities to organise and process the information contained in these reports.

The information with respect to the sectors such as state revenue, law and order, education, agriculture, industry etc., which are under the direct purview of the states, is processed to meet the requirements of the State. However, macro information with respect to schemes for which central assistance is sought is sent to the centre on a periodic basis. Similarly, macro level information is sent by the states on the central schemes.

District Level Informatics

There are more than 20 major developmental agencies and departments on an average at the district level at present. Under the Seventh Five Year Plan, there are about 2000 schemes under implementation in a state of which about 1500 are mainly at district levels. In order to ensure that the resources and machinery are optimally utilized, effective monitoring is essential on a regular basis. The district administration, line and functional departments sent about 700 reports (monthly, quarterly or half-yearly) to various states and central government departments. The reports provide macro level information with regard to developmental activities. As there is no standardization of data format in these reports, no consolidation of information or comparison is possible, which is necessary for macro level planning purposes. In order to assess the comparative development of various districts in general, the central government has evolved guidelines in the form of "Indicators of Development" which include demographic indicators, agro-economic indicators and infrastructure indicators.
NIC is establishing district level information system called DISNIC to facilitate the development of information systems in the following disciplines:

1. Industry
2. Agriculture
3. District Planning
4. Health
5. Road and Bridges
6. Rural Development
7. Social Forestry
8. Animal Husbandry
9. Social Welfare
10. Building and Works
11. Power
12. Irrigation
13. Public Instruction
14. Collegiate Education
15. Town Planning
16. Transport
17. Employment and Labour
18. Fisheries
19. Water Authority
20. SC/ST Development
21. Civil Supplies
22. District Collectorate Functions
23. Census
The major advantages of DISNIC will be:

a) Access to detailed data in respect of:
   - Socio-economic indicators
   - demographic indicators
   - agro economic indicators
   - infrastructural facilities
   - plan schemes/non-plan schemes

b) improvement in quality of data, and

c) enhanced capability of analysis and its presentation through graphics

Grass-root Level Informatics

As the Block is the smallest developmental unit, especially for implementing development programmes, and the blocks generate basic information, the development of block level information system will go a long way in increasing the availability of such information for decision making purpose at the block level.

Block level computerisation is expected to be taken up by NIC in its third phase beginning with the first year of the Eighth Five Year Plan.
The Directorate of Economics and Statistics is the main agency in the State for the collection, compilation and dissemination of statistics on the different sectors of economy. So far the District is the lowest level for which important basic economic data required for planning are compiled and made available. Having shifted the focus of planning from macro to micro level through decentralization, it has become necessary to take steps to improve the data base for planning at the block and lower levels. Data base is to be established at District Headquarters, covering qualitative and quantitative information at all possible desegregate levels like (i) District (ii) Taluk (iii) Block (iv) Panchayat (v) Village, because District is the basic administrative unit in the country, consistent with the decentralized planning concept. The primary objectives of the planning process are broadly as follows:

(i) Increasing Production
(ii) Reducing Unemployment
(iii) Alleviation of Poverty

All the data for planning and decision making flow form the districts. The data is currently made available to Central Government Departments especially to the Planning Commission, after its consolidation first at the district level and then at the state level. This process has inherent delays. Experience shows that data is rarely available when it is required for decision making. Moreover, drawbacks with respect to completeness and accuracy of data is another fact as
acknowledged by the decision makers. Thus despite a lot of data has been collected, tabulated and published, from different users' views, the organization is not scientific at present and one has to do complex exercises to make out his portion of information.

The main functions of the District Planning Unit are the following:

(i) To assist the District Planning Committee/Sectorial Committee/Working Group, in drawing up district planning covering programmes and activities which have been decentralized to the district level. The task includes the allocation of resources among the different regions and guiding the Planning Committees in the formulation of development strategies at the district and block level, identification of appropriate schemes and ordering of priorities of projects and programmes.

(ii) To provide technical assistance and service to other departmental officers relating to development planning.

(iii) To assess the needs and potentials of the area for development through the conduct of studies.

(iv) To undertake monitoring and evaluation of development activities in
the district.

(v) To build up a data bank and develop a district information system and feed this information system to other levels as and when needed.

(vi) To draw up special projects and Plans required by the District Collector and Government.

(vii) To attend to special items of work assigned by the State Planning Board/Commission.

2. PLANNING COMMISSION GUIDELINES

The Seventh Plan's thrust on decentralization of planning makes it imperative for planners at various levels to be aware of the development which has already taken place in each village till the end of Sixth Plan and annual progress thereafter during the current Plan. With a view to helping the states in taking up comprehensive district planning during the Seventh Five Year Plan, a Working Group was set up by the Planning Commission in 1982 to prepare guidelines for planning at district level. The Working Group submitted its report in 1984. The concept of district planning adopted by the working group is akin to that of Integrated Area Planning. It is suggested that a single planning body should be established for this purpose which should take into account, the regional affinities
and perspectives. The group opinioned that with the devolution of more planning functions to the district level, the technical planning machinery will need to be augmented in both quantitative and qualitative terms. It is suggested that the methodology of district planning should be simple and the district plan itself concrete, specific and practical. The following steps have been suggested for the formulation of the district plan:

(i) Fixing the major objectives of the district plan
(ii) Compiling data for district planning
(iii) Bringing out a profile of the district in relation to the basic objectives
(iv) Formulating the main strategy and thrust of district planning
(v) Analysis of the existing programmes and projects with reference to the strategy outlined
(vi) Assessment of resources for allocation to various programmes and projects.
(vii) Statement of physical and financial components of the District Plan
(viii) Statement of special dimensions of the district plan
(ix) Statement of relationships and links between the district plan and regional and state development plans.

It is accordingly proposed that a system for preparing Data Base on selected Village Level Development Indicators should be developed in each State/Union Territory whereby these data could be maintained at the district level.

At present, no systematic arrangement exists for maintaining data on village level development parameters either at the block or at the district. In order to analyse
the current level of development of various villages and to have up-to-date information on major development aspects, it is necessary that a Data Base on Village level information is developed. In order to identify the data item for the Village Level Data Base, following considerations have to be kept in view:

(i) It should relate to key development areas, such as, Minimum needs, 20-point Programme and Rural Development.

(ii) The information on these items should already be available and the effect needed would be mainly to systematize compile and put it at one place.

(iii) The number of items should be small; these should be simple, easily understandable and requiring minimum effort in compiling and collecting data.

3. TOWN PLANNING AS A PART OF DISPLAN

INTRODUCTION

The Town and Country Planning Organisation, Government of India in consultation with the various Town Planning Departments in the Country has evolved a pattern for Urban Information System to be established by the State Government. This is found to be quite adequate as an Information Catalogue for an Urban area. It is emphasised that such information will have to be collected not only for the Statutory Urban areas, but also for all declared urban areas (under the census of India) and for all the Local Panchayat areas in the vicinity of each urban settlement.

Town Planning is a continuous process involving,
(i) Planning of Schemes
(ii) Collection of Data
(iii) Evaluation of Master Plans
(iv) Collection and Analysis of Planning Data
(v) Preparation of Plans
(vi) Continuous Review and reversion of plans whenever necessary

b. Programmes & Schemes

01. Enforcement of Town Planning Acts.
Department of Town Planning has the responsibility of enforcing various Town Planning Acts which are applicable for the various construction in every state.

02. General Town Planning Schemes.
   a) Preparation of Regional Plans for fast developing urban regions.
   b) Preparation of District Development Plans for all Districts in the State.
   c) Preparation of Master Plan for towns, cities, tourist and pilgrim centres, industrial and administrative townships etc.
   d) Preparation of detailed town planning schemes for priority areas in the State, their processing and revocation.

03. Preparation of traffic operation plans for various towns and cities, conducting of volumes and origin-destination survey to assess traffic problems needs evolution of short term and long term proposals for traffic improvement of towns, cities etc.
04. Town Improvement Scheme. Working out towns improvement schemes approval and preparation of layouts etc., for Municipalities, Townships & Corporations.

05. Housing Schemes.
Sanctioning of housing layouts prepared by State Housing Boards, Cooperative Housing Agencies, Quasi-Government Agencies etc.

06. Integrated Development of Small and Medium Towns Preparation of project reports.

07. Slum Improvement Schemes and Slum Clearance Scheme.

08. Socio-Economic Surveys and collection of data on Urban Information System.

09. Preparation of spatial development plan for the State.

10. To co-ordinate the activities of the Town and Country Planning Board, Local Bodies, Development Authorities etc contemplated in the Town Planning Act.


13. Environmental improvement and research projects, ecological studies etc.


15. Attending building committee meetings in municipalities, corporation and Development Authorities.


c. Need for Urban Development Plans (Master Plans)

a. Regional and urban planning is an essential part of any country's economic and industrial development planning, more so, in a developing country. Our five years plans have rightly recognised this by giving it due priority in its total concept.
On a national scenario, the total land available including hills, mountains, plateaus is 3287782 sq.km, which according to the 1981 census would mean a per capita availability of 1.16 acres. This when compared to the 1961 per capita availability of 1.84 acres, shows how fast land as a commodity is dwindling and as a corollary, how important it is becoming necessary to evolve ways and means of increased utilisation of this valuable resource.

b. The need to have regulatory guidelines for the city growth is far greater in our country where the pace of urbanisation has been phenomenal both in absolute terms as well as in the problems it has created for the people and the authorities. It is in the context of the concentration of urban population and the diminishing land, man ration that the intensity of pressure of population urban land assumes greater relevance. The prospects of urbanisation poses gigantic problems particularly keeping in view the demands it may make on urban land, the supply of which is very limited.

c. The territorial expansion of urban areas is a phenomenon commonly observed in most cities and towns. In all situations territorial expansion is caused due to the numerous activities taking place in the fringe areas and these phenomenon have serious implications of land use. The question, whether physical expansion of our urban areas is taking place in accordance with the desired short signated objectives and gains, is a matter which deserves serious considerations.

d. It is evident that the scarce land resource of the country is required to be put to different uses in such a manner that it leads to optimum economic and social
efficiency of both urban and rural land areas, so that extravagant use and misuse of urban land can be prevented/removed. Hence there is a need to have urban development programmes which should not only reduce the existing problems of congestion, traffic bottlenecks, squatting etc. but also help to guide future growth.

e. In states where the per capita habitable land is only about 6 cents, it is essential that all developments are properly guided and the best possible use of land derived. Where land is at a premium and the population is explosive, it is imperative that compact urban developments are envisaged to achieve optimum use and intensity of every parcel of urban land and to reserve land for future needs.

f. It is also observed here that the rural areas situated on the fringes of the cities, predominantly along the major transport corridors change in character and urbanisation take place. These areas, in some instances, are developing at faster rate than other parts of the city itself. This leads to leap frogging and ribbon development resulting in the ultimate wasteful pressure on the city services like water supply, sewerage, transport etc. The development in these rural areas are often in an unco-ordinated manner due to lack of proper control. If such a growth trend is continued, unabatedly, we may reach a point of no return and in this context also there is an urgent need to evolve guidelines for directing such growth in and around the cities.

d. Subject Coverage of development plans
A development plan shall generally indicate the manner in which the use of land in the area of planning authority/local body shall be regulated and also indicate the manner in which the development of land there shall provide so far as may be necessary for all or any of the following matters.

1. Proposals for allocating the use of land for purposes such as residential, industrial, commercial, agricultural, recreation.

2. Proposals for designation of land for public purpose such as schools, colleges, and other educational institutions, medical and public health institutions and places for public entertainment or public assembly museums, art galleries, religious buildings, etc.

3. Proposals for designation of areas for open spaces, playground, stadium, green belts, sanctuaries if any.

4. Transport and communication such as roads, railways, waterways and airports including their terminal facilities.

5. Water supply, drainage, sewerage, sewage disposal, other public utilities, amenities and service including electricity.

6. Reservation of land for cremation ground and such other facilities.

7. Proposals for designation of sites for heavy and light industries, industrial estates and such development on an extensive scale.

8. Preservation, conservation and development of areas of archeological and historic importance, natural scenery and landscape.


10. Provision for controlling and regulating the use and development of land within the jurisdiction of a local body/planning authority including imposition
of conditions and restrictions regarding:

a. Open spaces to be maintained around buildings and coverage i.e. the percentage of building area to plots.

b. Size, height, number of storeys and character of buildings and density of population allowed in a specific area.

c. Parking spaces and loading and unloading space for all types of buildings.

d. Sub division of plots.

e. The use and purpose to which buildings or specified areas of land may not be appropriated, and the discontinuance or objectionable uses of land in any area within the reasonable periods.

f. The size of projections and advertisement signs and boards and other matters as may be considered necessary for carrying out the objects of the act.

TOWN PLANNING AS ENVISAGED BY THE TOWN & COUNTRY PLANNING ORGANISATION, GOVERNMENT OF INDIA.

Urban Information System (UIS) has been designed in such a way as the information on a particular sector may be collected in a separate schedule, for each city/town in a state. The benchmark period for all sort of schedules is 1981 and then collection of data onwards annually from 1981 to 1986 except the census information which may have reference period of 1961, 1971 and 1981 and also the infrastructure facilities as available in 1986. The source agencies of data are:

i. Local Body in the Town

ii. State Town & Country Planning Department
iii. State Census Department

iv. Urban Development Authority and

v. Specific departments like Industries, Transport, Education, Health etc.

which may slightly vary from city to city.

Though the schedule are self explanatory, care should be taken so that the data pertains to totality of information in the city/town. For instance, if in a city/town, a multiplicity of certain organisations provide certain facilities, it is imperative to add all similar facilities. Further, the schedules have been prepared for one reference period only so that there may be the necessities of using few schedules on the same data for one city for annual figures of 1981, 1982 ....1986, though the efforts may be done to put the figures on one schedule itself for all the periods. If information not available for calendar year, the similar financial period like 1980-81 may be used. Mapping being an important aspect of Urban Information System,

i. Ward wise map of city/town,

ii. Land use map,

iii. Maps showing water supply, sewerage, electricity, transport network and the sites of health, education, recreational and other facilities may be provided.
IV. SYSTEM ANALYSIS

The chief function of the DISNIC is to decentralise the planning process at the District level. The Five Year Plans, form an integral part of the development process in India. At present, the five year plans are mostly based on the information which is collected during the Census survey. The conventional procedure involved in the processing of the basic data into a useful and meaningful Information is not scientific and prone to human errors, besides being very slow to such an extent that eight to ten years may elapse before a meaningful shape is given to the data in order to formulate the Planning process. By this time most of the Information available becomes obsolete, resulting in ineffective plans. Also due to inherent delays, Information is not available in the desired and suitable forms, when needed urgently or even otherwise. The manual ways of storing and transferring the Information is crude which may result in an apparent loss of the data.

So a carefully planned Information System Design has to be developed which besides providing an easy storing and retrieving of data, also provides better planning by the ways of queries, output reports and Plan monitoring schemes.

The Planning in a District includes the Planning of the Town or the Corporation within the District, hence the Town Planning sector is also included in the District Planning Information system.

A three level database is required in order to store and retrieve the information at all possible hierarchy of the District Administration viz,

* District level
* Local Bodies level

* Village level

This has been suggested because of the corresponding nature of work at the three levels.

A sound database in relation to all the major sectors of the economy and the various sections of the society is necessary for planning and decision making at the district level. An exercise in the formulation of a district plan would, therefore, require:

(i) Critical appraisal of the existing level of development

(ii) Formulation of an integrated strategy based on the availability of resources and

(iii) Hierarchy of priorities based on the analysis. While planning for a district, the following categories of input information become essential:

(i) the present human habits and their profile with respect to day-to-day living;

(ii) inventory of natural resources, such as water, minerals, terrain, agriculture and forest &

(iii) the extent to which some of the activities are linked to supply
of raw material, energy and human beings from outside and of finished products to users outside the district, thereby generating additional economic activities to improve the standard of living.

The existing level of information and availability of socio-economic and natural resources data varies considerably from organisation to organisation and is seldom compatible due to lack of an institutionalised system of standardization. Though vast amount of data is collected, it is not easily available to the planners in time. Moreover, the imperative need to ensure multi-disciplinary analysis and interweaving of the resources database with socio-economic data for planning purposes, particularly at the regional and urban levels, can not be ignored.

An integrated information system which comprises both socio-economic information base and the natural resources information base is imperative for rational decision making. The importance of the integrated information base lies in its efficient management. The data base should have the facility for periodic updating and for providing readily the required information in the desired format. Normally, district authorities deal with precise and micro-level data pertaining to villages which must be handled by the data base system. The database must function as a decision support system. This requires authentic data generation and an efficient data storage and retrieval system for making the required analysis. The data collection methods currently employed are based on table and ledger approach and hence the existing data collection format and database management system must be suitably modified to accommodate these enlarged parameters which would help to deal with the execution of schemes at village level.
It is convenient to view the district planning information requirement under three broad categories:

(a) Routine information requirement for monitoring of development plans, e.g.

   i. work force available category-wise

   ii. distribution of amenities like schools, post offices

   iii. industrial units

   iv. extension centres and their locations

   v. employment status

   vi. educational/literacy rate and

   vii. progress of the social welfare and development plans in a region.

(b) Preparation of special statistical reports for planning, e.g.

   i. trends of growth of industries

   ii. work force available

   iii. distribution of land holdings

   iv. cropping pattern
v. use of fertilizers

vi. number of tube wells

vii. nature of industrial units etc. in a given region.

(c) Analysis conducted to understand the dynamic interactions among various variables.

Hence the, logical grouping of database based on the quality can be achieved as below:

(i) MONITORING DATA BASE

Both Central and State Governments have sponsored a number of schemes to help the poor and backward classes, as well as, for the coordinated development of the villages and farms. In order to ensure that the resources are properly utilised, effective monitoring is necessary on a regular basis. Prominent among these schemes are IRDP, RLEGP, NREP and Drought/Flood relief. Rural development data on these schemes would be captured in appropriate formats and databases created on District Centres. Monitoring data of other kinds is also of equal importance to the State Governments. This includes district treasuries, agriculture, rainfall, power generation, revenue collection, law and order etc.

ii. ADMINISTRATIVE DATABASE

District administration is collecting data for regular administrative work in the district as well as for transmitting to the State Government. These are under the
following categories:

1. Agriculture

2. Irrigation

3. Education

4. Primary Health

5. Revenue Collection

6. Land Acquisition

7. Land Distribution

8. Functional Literacy Programme

9. Law & Order

10. Vigilance Cases

11. Pension Schemes

12. Implementation of Community development Schemes

13. Housing Schemes

14. Subsidiary and raw-material distribution to small scale industry
15. Public Grievances

16. Renewal of arms licences

17. Detection of bogus ration cards

18. Labour etc.

iii. SOCIO-ECONOMIC DATABASE

The socio-economic database includes vital statistical indicators on village development, population, agriculture and irrigation activities, small scale and cottage industry sectors etc. Developmental Indicators suggested by the Planning Commission are included in this database.

Salient points are given below in respect of building up all level Data Base.

1. Source level study of the data collection system

2. Simplification of existing reporting methods

3. Elimination of double reporting and redundancy

4. Effective coordination of Statistical Offices and Planning Offices.

5. Updation and enhancement of status Reports

The proposed set of databases to be organised at District level will cover the following sectors of economy. Grouping according to qualitative classification warrants additional exercise which can be avoided, because the user can effectively realign individual data elements at the time of retrieval. For example, indicators of district infrastructure are only the aggregation of selected data items from different sectors.

Keeping in view the above considerations we have broadly classified the parameters into two:

General: The general parameters require no planning but play an important role in the district planning.

Sectorwise: This contains parameters which require planning and other parameters directly related to them.

Both General and Sectorwise parameters can be divided sectorally as follows:

a. General

1. DISTRICT AT A GLANCE

2. POPULATION
3. CLIMATE

4. LAND USE

5. GEO-PHYSICAL DETAILS

b. Sector-wise database

1. HEALTH 2. EDUCATION

3. HOUSING 4. INDUSTRY

5. FISHERIES 6. FOREST

7. POWER 8. MINERALS

9. ENVIRONMENT 10. ANIMAL HUSBANDRY

11. REGISTRATION 12. CO-OPERATIVE SOCIETY

13. LAND REFORMS 14. LAND REVENUE

15. PRICE 16. SALES TAX

17. EXCISE 18. LOCAL BODIES
19. INSTITUTIONAL FINANCE & BANKING

20. EMPLOYMENT & TRAINING

21. AGRICULTURE & IRRIGATION

22. TRANSPORT & COMMUNICATION

23. FLOOD CONTROL & SEA EROSION

24. COMMUNITY DEVELOPMENT PROGRAMME

25. JUDICIAL & ADMINISTRATIVE

26. MARKETING, STORAGE & WAREHOUSE

27. RURAL DEVELOPMENT SCHEMES

28. SANITATION

29. SEWARAGE & DRAINAGE

30. WATER SUPPLY

31. RECREATION & CULTURE