

# **India Statistical Strengthening Project (ISSP)**

## **State Statistical Systems**

**Synthesis of the 35 Study Reports  
on  
Identifying Specific Requirements for  
Strengthening  
of  
State Statistical Bureaus**

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**Government of India  
Ministry of Statistics and Programme Implementation  
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## **State Statistical Systems:**

### **Synthesis of the 35 Study Reports on Identifying Specific Requirements for Strengthening State Statistical Bureaus March 2007**

1 This document is expected to serve, among other uses, as a reference document for states when they are preparing their individual State Strategic Statistical Plans.

2 The document has a forward-looking focus. Thus the main contents focus on the proposals for a national benchmark for norms and performance standards for the state statistical system, and recommendations, consistent with current capacity of the states, concerning what has to be done to fill gaps in state statistical capacity. This main focus is supplemented by a brief summary of the key characteristics of the state statistical system and the estimated costs of strengthening the information technology base and physical infrastructure as part of the necessary capacity building.

3 The draft on the national benchmark and some parts of the common recommendations are largely based on a synthesis of the 35 Study Reports on Identifying Specific Requirements for Strengthening State Statistical Bureaus March 2007 (called the DES Report (2007))

4 The Strategic Statistical Plan also contains estimated costs for cost elements in addition to information technology base and physical infrastructure contained in the 35 state reports, such as costs for coordination, statistical infrastructure, human resource development and other cost items.

5 It is anticipated that the existing individual state reports will remain the repository of the individual state recommendations and details of the estimated costs of strengthening the information technology base

and physical infrastructure, until superseded by the individual State Strategic Statistical Plans.

6 This document consists of the following

Chapter 1 Introduction

Chapter 2 Key characteristics of the state statistical system

Chapter 3 A national benchmark for norms and performance standards for the state statistical system

Chapter 4 Part I Recommendations consistent with current capacity of the states (what has to be done to fill gaps in state capacity) - Recommendations common to all or most states

Chapter 4 Part II Recommendations consistent with current capacity of the states (what has to be done to fill gaps in state capacity) - Recommendations unique to one or a small number of states

Chapter 5 Estimated costs for information technology and physical infrastructure for capacity building

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## **Chapter 1 Introduction**

### **1.1 National Statistical Commission**

1 The National Statistical Commission was constituted in January 2000 to review the Indian statistical system and make recommendations for revamping it. The Commission made a number of recommendations in its report (referred to as NSC (2001) subsequently) submitted to the Government of India in August 2001 to bring about operational efficiency of the institutions involved and improvements in quality of data collected<sup>1</sup>.

### **1.2 Genesis of the Present Study**

2 In the above context, the Ministry of Statistics and Programme Implementation (MOSPI) in the Government of India (GOI), initiated the India Statistical Strengthening Project (ISSP), with assistance from the World Bank, the long-term objective of which is to help in achieving the proposal of the National Statistical Commission that " The mission of the Indian Statistical System shall be to provide, within the decentralized structure of the system, reliable, timely and credible social and economic statistics, to assist decision making within and outside the Government, stimulate research and promote informed debate relating to conditions affecting people's life"<sup>2</sup>.

### **1.3 The ISSP**

3 The project is being implemented in two Tiers; Tier I comprises assessments and recommendations, and Tier II comprises implementation to take place over a longer time frame and which requires the successful completion of Tier I activities.

### **1.4 Tier I, Phase I**

4 Tier I Phase I, included inter alia, a study to "Identify the Specific Requirements for Strengthening of State Statistical Bureaus" (subsequently referred to as SSBs in this document). The objective was to

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<sup>1</sup> Report of the National Statistical Commission, 5 September 2001

document the status of data collection, processing and standards followed in each state<sup>3</sup>, to assess the infrastructure and human resources available, and make recommendations for improving statistical capacity in each state. This has been completed and resulted in 35 reports, one for each state (referred to as the DES Report (2007)).

### **1.5 Details of the Tier I Phase I study**

5 MOSPI assigned the study to a consultancy agency, which identified and constituted study teams for undertaking the field study. Each team comprised a Project Director, an Expert in Official Statistics and an Information Technology Expert.

6 In the study the assessment of and recommendations for states were made in the framework of the following 20 core statistical activities:

- (i) State Domestic Product Estimates
- (ii) Estimate of Capital formation and Savings
- (iii) Estimates of District Domestic Product
- (iv) Estimates of the contribution of local bodies
- (v) Data on major fiscal variables (Release of data on receipts, expenditure and fiscal balance in relation to the budget estimates on monthly, quarterly and annual basis)
- (vi) Participation in the conduct of Annual Survey of Industries - Field survey, tabulation and pooling)
- (vii) Compilation of Index of Industrial Production
- (viii) Crop area and production statistics
- (ix) Compilation of Wholesale Price Index numbers
- (x) Compilation of Consumer Price Index numbers
- (xi) Health, morbidity and mortality and family welfare statistics - infant mortality and under 5 mortality by sex, maternal mortality, prevalence and death rates associated with malaria and tuberculosis by sex, and prevalence and rate of HIV/AIDS
- (xii) Education and literacy statistics - adult literacy rate and enrolment ratio in primary education by sex

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<sup>3</sup> In this document the term states, unless the context indicates otherwise, should be taken to refer to all 35 States and Union Territories.

- (xiii) Labour and employment statistics (labour force and work participation rates by sex and proportion of women in wage employment in the non-agricultural sector)
- (xiv) Housing statistics - housing stock and additions to stock, investment in housing
- (xv) Birth and death registration and population
- (xvi) Electricity production and distribution statistics
- (xvii) Environment and forest statistics (Land area covered by forests, protected land area, proportion of people with access to safe drinking water and improved sanitation)
- (xviii) Participation in the surveys of National Sample Survey Organisation (NSSO) - field survey, tabulation and pooling
- (xix) Transport statistics - urban and rural road length, registration of vehicles, vessels and inland water transport equipment, passenger and goods transport by road
- (xx) Statistics for local area planning - economic and social infrastructure, population distribution by age, sex, education, employment etc.

7 The assessment covered technical statistical parameters such as periodicity, timeliness, methodology, flow of information, data gaps, deficiencies and associated problems. It also covered organizational and functional structure, coordination, human resources, information technology, physical infrastructure and outputs and dissemination. The reports included recommendations for improving state-level statistical capacity.

8 The study was based on information gathered through a) a structured questionnaire from the Directorates of Economics and Statistics (DES) or equivalent, as well as the line departments in the state governments concerned with statistics pertaining to any of the core areas identified for the purpose of the study and b) discussions with the concerned officials to obtain their qualitative assessment. In addition to officers in the state level offices, officers at the district and lower levels were also covered taking two districts

- one at either end of performance level - in each State.

9 The draft questionnaire was cleared by MOSPI was used, with certain additional changes. Broadly, the information sought from each of the offices covered relates to:

- (i) Organizational and functional structure
- (ii) Details of statistical activities undertaken regarding their periodicity, concepts, methodology, time lag, etc.
- (iii) Availability and use of Information Technology (IT) tools,
- (iv) Mapping of resources and output
- (v) Prioritization of outputs and impact assessment
- (vi) Reprioritization of outputs/activities
- (vii) Requirement of additional sources
- (viii) Coordination and data flows between departments in the state and between states and the Centre
- (ix) Data gaps and views of the State.

10 The questionnaire was supplemented by discussion eliciting qualitative responses.

11 All the States and Union Territories in the country were covered by the Study

12 The work resulted in 35 reports being prepared, one for each state. The reports built on Draft Reports submitted to MOSPI and incorporate the suggestions made by the Task Force, the State DESs, and participants of a de-briefing Workshop.

### **1.6 Tier I Phase II**

13 The objective of Phase II was to consolidate the 35 reports of Phase I into a single report, providing (i) an overall assessment of the situation for statistics in the states identifying differences among groups of states, (ii) recommendations made for the states to improve their statistical capabilities, and (iii) the capital investment estimated to be required over the next about five years. Completion of Tier I Phase II

activities has allowed for progression onto the Tier II activities of implementation.

14 The work on Phase II was assigned to a group of national and international consultants working closely with MOSPI and the World Bank.

15 The report retains the focus on the 20 core statistical series.

16 For analytical purposes, in the current report, MOSPI decided to divide the states into three groups based on an assessment of their current statistical capability which was made on the basis of whether they participated in the National Sample Survey (NSS) Rounds, and the extent of their processing and dissemination of the results of those Rounds.

17 This approach provided the following three groupings

**Group I - Not participating in NSS**

Andaman & Nicobar, Dadra & Nagar Haveli, Lakshadweep,

**Group II - Participating in NSS, not tabulating results**

Arunachal Pradesh, Bihar, Chandigarh, Jharkhand, Madhya Pradesh, Manipur, Mizoram, Nagaland, Puducherry, Punjab, Sikkim, Tripura,

**Group III - Participating in NSS, tabulating results**

Andhra Pradesh, Assam, Chattisgarh, Delhi, Damman and Diu, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnakarta, Kerala, Maharashtra, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal

18 In this report, assessments and recommendations have been made as far as possible for the states as a whole, and for each of the three Groups of states, identifying differences among the Groups.

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## **Chapter 2 Key characteristics of the State Statistical System**

### **2.1 The role of State Statistical Bureaus (SSBs) and their responsibilities for the 20 core statistical series.**

#### **The State Statistical System (SSS)**

1 The system of official statistics in the states of India is, like in the Government of India (GOI), a decentralized one. The SSBs (variously named Directorate of Economics and Statistics, Department of Economics and Statistics, Economics and Statistics Office and other names, but in this report referred to as State Statistical Bureaus (SSBs)) collect, compile, analyse and disseminate general socio-economic statistics across a range of fields; the individual line departments are responsible for collection, processing and releasing of the data in their own subject fields.

#### **The SSBs**

2 The SSBs are primarily engaged in collection and compilation of basic socio-economic data relating to the states and carrying out surveys and censuses as assigned by the GOI and State Administrations.

3 The SSBs are responsible for providing essential data required for formulation of plans, programmes and policies by the State Government. Statistical data on various socio-economic activities of the state are being collected, processed, analysed and published by the SSBs. They are responsible for bringing out statistical aggregates like State and District Gross Domestic Product, conducting surveys and censuses, and disseminating compilations of statistics on the range of activities in the state economy. The SSBs collect data directly by their own staff in respect of their sample surveys, evaluation studies and other data collection activities, while the information required for compilation of State/District Domestic Product and

for inclusion in publications and other outputs of the SSB, is obtained from state line departments.

4 The main functions of the SSBs may include, among other functions (see below for separate treatment for the functions of acting as a nodal agency for statistics and managing the statistical cadre):

- (i) Collection, collation, compilation, tabulation, analysis of data on various socio-economic aspects of the state in a systematic manner and dissemination of the same through periodic publications and electronic means
- (ii) Conducting censuses, sample surveys and other ad-hoc surveys on various aspects of socio-economic developments
- (iii) Maintain a data bank of relevant statistics for the state government
- (iv) To conduct training for statistical staff.
- (v) To advise the state government on economic and statistical matters for formulation of policies and plans
- (vi) To assist planning departments in the planning process on matters referred to the SSB by the planning department
- (vii) To advise the state government on various statistical activities
- (viii) To act as a member of various committees constituted by the state or central government.
- (ix) To maintain liaison with the Central Statistical Organisation (CSO) of the GOI, and other SSBs of the country.

### **SSB and participation in decision-making**

5 The Director of the SSB is generally the representative of the State in all technical deliberations organised by the CSO through various working groups/steering committees.

### **The State line departments**

6 In the states, large numbers of state line departments collect, process, maintain and disseminate statistical information required for their functioning (for example 22 in Punjab, 13 in Sikkim, 30 in Assam,

24 in Meghalaya ). They also provide their statistics to the SSBs for dissemination and inclusion in state aggregates such as State Gross Domestic Product and to the central line ministries for inclusion in national aggregates.

### **The SSB as nodal agency**

7 Given the decentralized nature of the statistical system in all states, the majority of states have declared the SSB as a the Nodal Agency in the state for all statistical activities in the State, including responsibility to coordinate the work of statistical units in different departments of the State Government and to give them technical guidance.

### **Statistical cadre and its management by SSB**

8 In just under half of the states, a statistical cadre exists and staff in the statistical units of the line departments are part of the cadre; the SSB or its parent department frequently manages the statistical cadre. In other states, a statistical cadre does not exist and departments with statistical units are functioning independently through their own staff which may include statisticians and non-statisticians; these departments recruit their own staff; these statistical units are not under the administrative or technical control of the SSB. However, in a number of states, in the absence of a statistical cadre, the SSB provides statistical staff to line departments on deputation.

### **Institutional arrangement**

9 The SSBs function in general as part of a larger department such as a Department of Planning and Statistics.

### **SSB responsibilities for the 20 core statistical series**

10 There is a wide variability in the number of the core series that are assigned to the SSBs. It ranges from zero (one state) to fourteen (one state), with the most common number being six series (6 states) and the majority of states being responsible for between five

and ten series (28 states). In virtually all states, responsibility for one or two of the series is shared by the SSB with a line department.

11 The series that are most often under the responsibility of the SSB (singly or jointly with other departments or entities) are:

- (i) State Domestic Product Estimates
- (ii) Estimate of Capital formation and Savings
- (iii) Estimates of District Domestic Product
- (iv) Estimates of the contribution of local bodies (jointly)
- (v) Data on major fiscal variables (Release of data on receipts, expenditure and fiscal balance in relation to the budget estimates on monthly, quarterly and annual basis) (jointly)
- (vi) Participation in the conduct of Annual Survey of Industries - Field survey, tabulation and pooling)
- (vii) Compilation of Index of Industrial Production
- (viii) Crop area and production statistics (jointly)
- (ix) Compilation of Wholesale Price Index numbers
- (x) Compilation of Consumer Price Index numbers
- (xi) Birth and death registration and population
- (xii) Participation in the surveys of National Sample Survey Organisation (NSSO) - field survey, tabulation and pooling
- (xiii) Statistics for local area planning - economic and social infrastructure, population distribution by age, sex, education, employment etc. (jointly)

12 The other core activities are carried out by the state level line departments eg school enrolment data by the Directorate of Education. (see section 2.2 below)

#### **Activities of SSBs in addition to the twenty core activities**

13 In general, responsibility for the core statistical series represents a small proportion of the responsibilities of the SSBs. The general range of activities is set out in para 4 above but at the more

detailed level the SSB can be involved in many or most of the following:

Group I Andaman and Nicobar

Collection of Retail Prices

Collection of Farm Harvest Prices

Collection of Wholesale Price of Food Grains

Census of Government Employees

Agricultural Census

Economic Census

Monitoring of Annual Plans

Group II Punjab

Economic Survey of Punjab State highlighting the important developments in different sectors of the State economy

Economic and Purpose Classification of the State Budget  
Budget in Brief

Preparation of the Municipal Year Book containing data in respect of municipal corporations and municipalities of the State.

Conduct of the annual Census of State Government and Local Bodies employees

Conduct of the five-yearly Economic Census

Evaluation studies

Monitoring of the MPLAD Scheme

Data collection on physical achievements under the 20 Point Programme

Compilation of Official Statistics

Publications - compilation and publication of the Statistical Abstract of Punjab State

Group III Gujarat

Socio-Economic Review of Gujarat State

Budget at a Glance

Economic-cum-Purpose Classification of Budget

Preparation of the Municipal Year Book

Village Amenities Survey

Economic Census

Cost of Construction studies

Collection of prices

Dissemination of statistical information

Coordination of statistical activities

**2.2 Roles of state line departments in the states and their responsibilities for the 20 core statistical**

## series

### State line department responsibilities for the 20 core statistical series

14 While collecting, processing, maintaining and disseminating statistical information required for their functioning, the line departments also provide their statistics to the SSBs and the central line ministries. Typically the following of the 20 core statistical series are produced by line departments (singly or jointly, and where jointly most often with the SSB)

- (xiv) Estimates of the contribution of local bodies (jointly)
- (xv) Data on major fiscal variables (Release of data on receipts, expenditure and fiscal balance in relation to the budget estimates on monthly, quarterly and annual basis) (jointly)
- (xvi) Health, morbidity and mortality and family welfare statistics - infant mortality and under 5 mortality by sex, maternal mortality, prevalence and death rates associated with malaria and tuberculosis by sex, and prevalence and rate of HIV/AIDS
- (xvii) Education and literacy statistics - adult literacy rate and enrolment ratio in primary education by sex
- (xviii) Labour and employment statistics (labour force and work participation rates by sex and proportion of women in wage employment in the non-agricultural sector)
- (xix) Housing statistics - housing stock and additions to stock, investment in housing
- (xx) Electricity production and distribution statistics
- (xxi) Environment and forest statistics (Land area covered by forests, protected land area, proportion of people with access to safe drinking water and improved sanitation)
- (xxii) Transport statistics - urban and rural road length, registration of vehicles, vessels and

inland water transport equipment, passenger and goods transport by road  
(xxiii) Statistics for local area planning - economic and social infrastructure, population distribution by age, sex, education, employment etc. (jointly)

15 Typically the above series are produced by departments of revenue/finance, municipalities, health, education, labour, housing, environment, and transport.

### **Activities of the state line departments in addition to the twenty core activities**

16 The above mentioned line departments also produce statistical series outside of the 20 core series. Other line departments are also involved in collection of statistics; they are enumerated below for just three of the States/UTs, one from each Group of states as examples;

#### **Group I Andaman and Nicobar**

Animal Husbandry & Veterinary Services Department

Data on Veterinary Infrastructure ;Livestock Survey;  
Integrated Livestock Survey

Information, Publicity and Tourism Department

Collection of data on Tourists; Preparation and monitoring of Plans related to Tourism

Directorate of Social Welfare

Directorate of Fisheries

Directorate of Shipping Services

Port Management Board

Directorate of Tribal Welfare

Registrar of Cooperative Societies

#### **Group II Arunachal Pradesh**

Horticulture

Veterinary and Animal Husbandry

Fisheries Directorate

Department of Social Welfare

Directorate of Agriculture

Textile and Handicraft Directorate

Irrigation and Flood Control Department

Rural Development and Panchayati Raj Department  
Industries Department  
Tourism Department  
Public Distributions System  
Chief Electoral Office

**Group III Delhi**

Agriculture Department  
Director of Animal Husbandry  
Directorate of Social Welfare  
Tourism

## **Relative size of SSBs and the line departments**

17 In general, the scale of statistical operations of the line departments is large, based on staff numbers, although the relative size of the SSB in relation to the line departments is variable. The following states are indicative

State	SSB	Line Depts	Total
Himachal Pradesh	166	<b>292</b>	458
Rajasthan	129	<b>694</b>	823
Assam	<b>876</b>	85	961
Chattisgarh	<b>195</b>	144	339
Maharashtra	642	<b>697</b>	1339
Bihar	<b>695</b>	72	767

### **2.3 The Regional, District, and Block Structure of the statistical activities**

#### **The structure of the SSOs**

18 The SSBs most commonly have a multi-tier structure, involving a headquarters, District Statistical Offices (DSO) and representation at the Development Block level. When the structure is of this kind, there is statistical representation in all or nearly all of the DSOs and Blocks. Some of the SSBs have a regional structure above the DSOs (9 states). There is a small number of SSBs with just one District and without representation at the Block level (3 states) and two states with only a headquarters structure.

#### **Functions of Regional offices**

19 The following functions are indicative of what the Regional Offices of SSBs usually perform:

Regional Office Functions (Maharashtra)

Coordination of the activities of District Statistical Offices in the Region

Administrative and technical control of the District Statistical Offices in the Region

Compilation and consolidation of certain data required

at Divisional level

Overall supervision of National Sample Survey work in the Region

### **Key Function and Activities of DSOs.**

20 The key function of DSOs is to act as the field agency of the SSB for data collection in the district, and for survey work; it includes collection, compilation of primary data at block and district level and processing and dissemination of data, and collection of data from offices of line departments. A range of detailed activities are normally done by DSOs ; they are enumerated below for three of the states (one from each Group) as examples;

#### **Group I Andaman and Nicobar**

Collection, scrutiny and preliminary compilation of data.

Collection of official statistics, district and Tehsil-wise and bringing out annual publication.

Collect statistical data from other district level offices relating to the social, economic and infrastructure parameters, and publish them in District Statistical Outline.

Prepare and publish "Important Statistics" of the district.

Collect data from Municipality.

Collect retail prices/ wholesale prices of various commodities.

Assistance in various censuses like the Population Censsus, Economic Census, Agricultural Census by carrying out field operations.

Collect data on census of Government employees from district level offices and send it to DES.

Undertake other work assigned by the District Collection/ Dy. Commissioner from time to time.

#### **Group II (Manipur)**

Collection of wholesale and retail prices from district headquarter market

Conduct of crop cutting experiments in selected villages

Preliminary scrutiny of data collected (NSS, Agriculture statistics, Prices etc.)

Collection of official statistics relating to district  
Preparation of District Statistical Hand Book  
Supervision of fieldwork  
Assistance in various census like population census,  
economic census, etc.

**Group III (Maharashtra)**

Collection, Scrutiny and preliminary compilation of  
primary data  
Collection of secondary data, district and Taluka-wise  
and bring out -District Statistical Abstract, Municipal  
Year Book and Taluka Indicators.  
Collection of retail and wholesale prices of various  
goods and wage rates  
Assistance in various censuses like the Population  
Census, Livestock Census, Economic Census, Agricultural  
Census Collection of data for Census of Government and  
Local Bodies Employees.

21 Some of the district offices are both planning and  
statistical offices and carry out all the planning  
functions of the districts in addition to their  
statistical functions.

**The statistical structure of state line departments**

22 Many of the line departments have their own  
formations at the district level and below (for example  
Bihar, Chattisgarh, Madhya Pradesh, Manipur, Tripura).

23 Some of the states have special features that are  
worth noting, as follows

**Andhra Pradesh (also Karnataka)**

As part of the State Government's e- Governance  
initiative, the DES has been designated as a "Data  
Warehouse". This implies that DES is required to create  
a comprehensive database on Andhra Pradesh. Also, this  
entails that all government departments and agencies  
provide all data collected and compiled by them to DES  
for inclusion in the Data Warehouse.

**Goa**

The nodal agency for all statistical activities in the  
State of Goa is the DPSE, which is responsible for not

only various statistical functions but also for all activities relating to planning viz., preparation of the Five Year Plans and related work. (ie the main statistical entity has to do planning as well as the statistical function.

### **Gujarat**

There is a District Statistical Office in each District (25), but it does not function as a part of DES, though headed by a District Statistical Officer in the cadre controlled by DES. These offices function primarily as a part of the District Panchayat Office under the Panchayat Department. The DES has no staff at Taluka or village levels. The statistical activities at the Taluka Development Offices are handled by a Statistical Assistant of the Panchayat Department. Similarly, at the village level, the village Panchayat Secretary (Talati) and 'Gram Sevak' perform the statistical functions of supplying information to the Taluka Development office upwards.

### **Orissa**

There is a Statistical Training Institute, the Regional Institute of Planning, Applied Economics and Statistics, under the administrative control of the DES. This institute imparts in-service training to the statistical personnel of various categories working in different departments of the government and public sector undertakings.

## **2.4 Observations on each of the Groups of states**

24 Observations on each of the three Groups of states follow:

### **Group 1**

All of the three in this Group are Union Territories.

In two of the three, the statistical responsibility is with the Department of Planning) and the Department of Planning and Statistics rather than a dedicated SSB; where there is a dedicated SSB it is located in the Planning Department

Two of the three statistical entities (one SSB and one

Department of Planning have been declared nodal agencies for statistics;

Two out of the three of these Union Territories have a statistical cadre in place and the SSB manages the cadre.

These three Union Territories are among the smallest of all the states in terms of staff (81, 18, and 30).

Two of the three are uni-district Union Territories without representation at the district level or below, and the third has just 2 DSOs with representation in 7 tehsils.

In these Union Territories, the SSB is responsible for fewer of the core statistical series (2, 3, 0; average 2) than is typical of states in Groups II (5) and III (8).

Of these Union Territories, two are those with the largest numbers of core statistical series not compiled (6, 9, and 15) with an average of 10 (compared to averages of 5 for Group II and 3 for Group III).

Of the core statistical series produced by these Union Territories, a larger percentage are judged to be of low quality (72%) than for the states in Groups II (55%) and Group III (52%).

### **Group II**

Two of the twelve states in this Group are Union Territories and one is a Newly Formed State.

In all but one of this group of states, there is a dedicated SSB; in that one state, the responsibility is in the Department of Economics, Statistics, Monitoring, and Evaluation. In two cases, the SSB is a separate department, in the others, where there is a dedicated SSB, it is part of departments such as the Planning Department, Finance Department, Department of Development Planning, Economic Reforms and NE Council Affairs, Planning and Programme Implementation Department, and the Health Department.

Ten of the twelve statistical entities (9 SSBs and one Department of Planning, Economics, Statistics, Monitoring, and Evaluation) have been declared nodal agencies for statistics; the other two SSBs are considered to be the apex organization in their state but are not empowered.

Four out of the twelve of these states have a statistical cadre in place and the SSB manages the cadre.

The majority of this group have a structure with a headquarters, and DSOs in all or most of the districts (10 states with districts numbering from 4 to 48); half of these have representation in all or most of the Blocks and half have no block representation or it is unclear as to whether such representation exists. Two states have regional offices; One of the states is a uni-district state without representation at the district level or below,

In these states, the SSB is responsible for, on average, 5 of the core statistical series compared to 2 for Group I and 8 for Group III

Among these states, the number of core statistical series not compiled averages 5 (compared to 10 for Group I and 3 for Group III) with a range from 1 to 7 series not compiled; 6 and 7 were the most common numbers of series not compiled.

Of the core statistical series produced by these states, a smaller percentage are judged to be of low quality (55%) than for the states in Group I (72%) and a larger percentage than Group III (52%).

### **Group III**

Two of the 20 states in this group are Union Territories and two are Newly Formed States

In sixteen of the 20 states in this group, there is a SSB; in the four other states the responsibility for statistics is with a Department of Planning, Department of Planning, Statistics and Evaluation, Department of Evaluation and Statistics and a Bureau

of Applied Economics and Statistics rather than a dedicated SSB; in the cases where there is a dedicated SSB, it is part of a department such as a Department of Planning, Department of Planning, Finance and 20 Point Programme, Department of Planning Statistics and Evaluation, General Administration Department, Planning and Development, Planning and Economic Affairs, Planning and Coordination,, Planning, Development and Special Initiatives, and a State Planning Institute,

Fifteen of the sixteen SSBs and three of the departments responsible for statistics have been declared nodal agencies for statistics;

Ten of these states have a statistical cadre in place; in most cases the SSB or its department manages the cadre but in other cases responsibility is not specified.

In general, the Group III states tend to be the largest states in terms of statistical staff with half of them exceeding 1000 staff, of which two exceed 4000 staff. The smaller ones exceed 200 staff with two outliers at 14 and 113 staff.

Just over half of this Group have a structure with a headquarters, and DSOs in all or most of the districts (11 states with districts numbering from 39 to 395); all of these have representation in all or most of the Blocks. Another six states have DSOs but no representation below the District or no information about representation below that level. Six states have regional offices; there are three states with only headquarters level activities and without representation at the district level or below,

In these states, the SSB is responsible for, on average, 8 of the core statistical series compared to 2 for Group I and 5 for Group II

Among these states the number of core statistical series not compiled averages 3 (compared to 5 for Group II and 10 for Group I) with a range from 1 to 8 series not compiled.

Of the core statistical series produced by these states, a smaller percentage are judged to be of low quality (52%) than for the states in Group I (72%) and Group II (55%).

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## Chapter 3

### A national benchmark for norms and performance standards for the state statistical system

#### 3.1 Introduction

1 The Mission Statement of the Indian Statistical System includes " to provide within the decentralized structure of the system, reliable, timely and credible statistics...." <sup>4</sup>. To ensure this, and given the decentralized structure of the statistical activities, it is necessary to establish a national benchmark for norms and performance standards for the statistical offices of the states, including the SSBs and the statistical operations of the state line departments; this will help to ensure as uniform as possible statistical results across the states and appropriate aggregates at the national level.

2 It is useful to view the proposals for a national benchmark in the structure/context of accepted international standards or frameworks, namely the International Monetary Fund (IMF) Special Data Dissemination Standard (SDDS), General Data Dissemination System (GDDS), and the Data Quality Assessment Framework (DQAF). To the extent that the SDDS/GDDS do not cover all of the 20 core statistical series, separate benchmarks may be set drawing on the SDDS/GDDS principles. This approach takes advantage of the considerable amount of thought that has been given to the matter of standards by official statisticians around the world from both developed and developing countries and the experience that national statisticians have accumulated in applying them in their countries. These standards are also in use in international organizations such as the IMF for assessing the status of a country's statistics, and are reflected in the World Bank's recommendations on Statistical Master Plans for statistical capacity building. The SDDS and DQAF have been used in the 35 state reports (DES Report (2007) for a number of analytical purposes.

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<sup>4</sup> NSC (2001) para 14.5.7

3 Using the above framework, the norms and standards need to cover such elements as methodological soundness, accuracy and reliability, usefulness /serviceability (including periodicity and timeliness), accessibility, integrity and quality, and a number of legal, institutional professional, transparency and ethical issues.

### **3.2 Methodological soundness, accuracy and reliability**

4 Methodological soundness, accuracy and reliability require strict application of the technical guidelines/manuals/instructions (referred to as technical specifications for brevity) issued centrally by the CSO given its responsibility and authority under the Allocation of Business Rules, for evolving, notifying and enforcing standards for all fields of statistics. This work on evolving the standards is done with the relevant central line ministries or other relevant institutions. These technical specifications should exist for all of the 20 core statistical activities and should provide for various levels of compatible technical compliance based on the statistical capacity of each state. They should cover the concepts, definitions, level of disaggregation, sampling method and other technical aspects of the statistical work. They should be compatible with existing international guidelines in fields where such guidelines exist. Where technical specifications do not presently exist for some of the 20 core statistical activities, they will need to be developed.

### **3.3 Usefulness /serviceability (including periodicity and timeliness)**

5 The GOI subscribes to the IMF SDDS at the national level and is in compliance with the requirements of the SDDS. The SDDS may be used, in the long term, as a national benchmark for norms and performance standards at the state level. However, till then, if the CSO-issued technical specifications including standards on periodicity and timeliness could be used in the shorter and medium term. Again, in the long run, adopting the

SDDS standards at the state level would provide serviceable statistics at the state level and help make state statistical effort supportive of the national compliance with the SDDS.

6 The SDDS makes recommendations concerning dissemination of 18 data categories including component detail for the four main sectors of the economy (real, fiscal, financial and external, with population as an added category), and prescribes periodicity and timeliness of publication of the data. Of these eighteen data categories, 11 are relevant to the 20 core statistical activities. They are the data groups in the real and fiscal sectors and population. The periodicity and timeliness specified by SDDS at the national level seem appropriate and achievable at the state level (possibly with some modification for state-versus-country differences and for differences among states which would become apparent only during implementation of the standards in the states).

7 The GDDS also provides guidance on desirable performance for the same data groups that are in the SDDS, and other data groups, especially in the socio-demographic fields of statistics. The GDDS applies to (at least part of) an additional four of the 20 core statistical activities. Where both the SDDS and the GDDS cover the same statistical activity, the GDDS requirements which are generally less stringent than the SDDS may be appropriate in statistical operations of some states.

8 The remainder of the 20 core statistical series are not covered by the SDDS or GDDS or any other system or standard. These statistical activities may be assigned periodicity and timeliness norms similar to what GDDS assigns to other similar activities, or taken from CSO-issued technical specifications, or in consultation with relevant central line ministries based on their policy needs. These statistical activities are:

- i. Estimates of the contribution of local bodies
- ii. Crop area and production statistics
- iii. Housing statistics - housing stock and additions to stock, investment in

- iv. housing
- v. Electricity production and distribution statistics
- vi. Part) Environment and forest statistics (Land area covered by forests, protected
- vii. land area, proportion of people with access to safe drinking water and
- viii. improved sanitation)
- ix. Transport statistics-urban and rural road length, registration of vehicles, vessels and inland water transport equipment, passenger and goods transport by road
- x. (Part) Statistics for local area planning - economic and social infrastructure, population distribution by age, sex, education, employment, etc.

9 As regards the two remaining core statistical activities:

- i. Participation in the conduct of Annual Survey of Industries - Field survey, tabulation and pooling; may be done annually and with timeliness as specified by the CSO; and
- ii. Participation in the surveys of National Sample Survey Organisation
- iii. NSSO) - field survey, tabulation and pooling: may be done according to schedules and timeliness set by the NSSO.

10 The standards that can be considered (in the long run) for periodicity and timeliness based on the above considerations are set out in Table 2 below

**Table 2: Standards for periodicity and timeliness**

	<b>Core Statistical Activity</b>	<b>Standard</b>	<b>Periodicity</b>	<b>Timeliness</b>
1	State Domestic Product Estimates	SDDS GDDS	Q A (Q encouraged)	Q 6-9M
2	Estimate of Capital Formation	SDDS GDDS	Q A (Q encouraged)	Q 6-9M

	<b>Core Statistical Activity</b>	<b>Standard</b>	<b>Periodicity</b>	<b>Timeliness</b>
	and Savings			
3	Estimates of District Domestic Product	SDDS GDDS	Q A (Q encouraged)	Q 6-9M
4	Estimates of the contribution of local bodies	See para 8		
5	Data on major fiscal variables	SDDS GDDS	M Q	M Q
6	Annual Survey of Industries	As per CSO	As per CSO	As per CSO
7	Index of Industrial Production	SDDS GDDS	M (or as relevant) M	6W (M encouraged or as relevant) 6-12M
8	Crop area and production statistics	See para 8		
9	Wholesale Price Index	SDDS GDDS	M M	M 1-2M
10	Consumer Price Index	SDDS GDDS	M M	M 1-2M
11	Health, morbidity, mortality and family welfare statistics	GDDS	A	3-6M following end of reference period
12	Education and literacy Statistics	GDDS	A	6-12M following beginning of school year
12.	Statist			

	<b>Core Statistical Activity</b>	<b>Standard</b>	<b>Periodicity</b>	<b>Timeliness</b>
A 12. B	ics on educational institutions School enrolment data			
13. A 13. B	Labor and employment statistics Labor statistics Employment statistics	SDDS GDDS	Q A	Q 6-9M
14	Housing Statistics	See para 8		
15	Birth and death registration statistics and population	Populatio n-SDDS  Populatio n; birth and death rates-GDDS	A(Population key distributions)  A(Population key distributions).Ce nsus every ten years	SDDS no specificat ion  3-6M for annual updates;9-12 M for Census
16	Electricity production and distribution statistics	See para 8		
17. A 17. B	Environment and forest statistics Forestr y Statistics Water Supply and Sanitation	See para 8 GDDS	A	3-6M followin g end of

	<b>Core Statistical Activity</b>	<b>Standard</b>	<b>Periodicity</b>	<b>Timeliness</b>
	Statistics			reference period
18	Participation in surveys of the National Sample Survey Org.	As per NSSO	As per NSSO	As per NSSO
19	Transport Statistics	See para 8		
19. A	Motor vehicle registration statistics			
19. B	Road statistics			
19. C	Traffic accident statistics			
19. D	Passenger traffic statistics			
20	Statistics for local area planning	Population-SDDS  Population-GDDS  See para 8	A(Population key distributions)  A(Population key distributions). Census every ten years	SDDS no specification  3-6M for annual updates; 9-12 M for Census

***M is Monthly or Months; Q is Quarterly or Quarter; A is Annually or Annual***

### **3.4 Accessibility, integrity and quality**

11 The SDDS and the GDDS also prescribes practices relating to access to data, integrity and quality which can be considered as national benchmarks for norms and performance standards of the states for all the core statistical activities. These practices are part of the DQAF. They are:

### **Access**

- the dissemination of advance release calendars providing at least one-quarter advance notice of approximate release dates, and at least a one-week advance notice of the precise release dates; and
- the simultaneous release of data to all users.

### **Integrity**

- the dissemination of the terms and conditions under which official statistics are produced and disseminated;
- the identification of internal government access to data before release;
- the identification of ministerial commentary on the occasion of statistical release; and
- the provision of information about revision and advance notice of major changes in methodology.

### **Quality**

- the dissemination of documentation on statistical methodology and sources used in preparing statistics; and
- dissemination of component detail and/or additional data series that make possible
- cross-checks and checks of reasonableness.

12 Further, following the SDDS requirement, it is proposed that the states be required, in the long term, to:

- Undertake post descriptions of their data dissemination practices (metadata) on their own and MOSPI websites. Summary methodologies, which

describe data compilation practices in some detail should also be disseminated on these websites, and

- Maintain a website, referred to as the State Summary Data Page, which would contain the actual data described in the metadata and to which the state and MOSPI websites would be electronically linked.

### **3.5 Application of the Data Quality Assessment Framework**

13 So far, benchmarks have been proposed for such elements as methodological soundness, accuracy and reliability (Section 3.2), usefulness/serviceability (including periodicity and timeliness) (Section 3.3), and for some critical aspects of access, integrity and quality (Section 3.4) for the 20 core statistical activities. These benchmarks find expression in the IMF DQAF. The DQAF includes other important benchmarks relating to quality. The DQAF benchmarks convert the general concept of quality into specific tasks which when achieved individually represent an improvement in statistics. The DQAF is listed in the Annex-II to this report, with some modification for the state-oriented focus of this work, (the benchmarks already mentioned above in sections 3.2 Methodological soundness, accuracy and reliability, 3.3 Usefulness /serviceability (including periodicity and timeliness), and 3.4 Accessibility, integrity and quality, are underlined).

### **3.6 Proposals for the national benchmark**

14 In the long term, given the stated Mission of the Indian Statistical System to "provide, within the decentralized structure of the system, reliable, timely, and credible social and economic statistics...." it is proposed that all the elements of sections 3.2 to 3.5 above be adopted as the national benchmark. This all inclusive approach is appropriate for strengthening the statistical capacity at the state level to contribute towards meeting the Mission.

15 In the short and medium term, however, the benchmarks for methodological soundness, accuracy and reliability (section 3.2 above), for usefulness

/serviceability (including periodicity and timeliness) (section 3.3 above) and for access, integrity and quality (section 3.4 above), could be adopted as the immediate limited national benchmark. States that find themselves able to implement more of the DQAF (as described in section 3.5 para 13 above) immediately would be encouraged to do so.

16. It is recognized that a modified long term national benchmark is feasible, namely, to include only sections 3.2, 3.3 and 3.4; this would leave the additional elements of the DQAF (as described in section 3.5, para 13 above) not specified as a part of the long term national benchmark but noted for possible inclusion at an appropriate time in future.

### **3.7 Timing and the national benchmark**

17 The long term objective is that all states will have the capacity to carry out the 20 core statistical activities meeting the national benchmark for norms and performance standards set out above in this Chapter. It is recognized that, given the current capacity differences and priorities among the states, and unique economic/social characteristics of each state, the states will approach the long term objective at different rates and with different emphasis on various elements of the national benchmark and with differences in the mix of interventions that they will undertake including interventions affecting coordination and management of statistical activities; human resource development; developing statistical infrastructure; investing in physical infrastructure including information technology; and improving statistical operations, especially operations supporting improvement in the quality and dissemination of statistical data. States will require different levels and type of support and will have different capacities to absorb and effectively deploy the support. While focusing on the ability to carry out the 20 core statistical activities, it is recognized that the SSSs have responsibilities above and beyond those activities that need to be reflected in their State Strategic Statistical Plans.

18 States in each of the three Groups of states outlined in the Introduction (Chapter 1) would all have the same long term national benchmark; it is expected that there will be similarities in time frame, emphasis, and needs among the states in each of the three Groups, notwithstanding the differences from state to state.

19 Setting of specific targets and time frame for attaining the benchmarks is reflected in the Strategic Statistical Plan and will be further refined in the State Strategic Statistical Plans.

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## Chapter 4 Part I

**Recommendations consistent with current capacity of the states ( what has to be done to fill gaps in state capacity) - Recommendations common to all or most states**

### **4.1 General**

1 From the reports on the 35 states (DES Report (2007)) there are recommendations that are common to all states and recommendations that are unique to each state. The common recommendations are listed immediately below in section 4.2; the recommendations are listed according to a framework of critical issues for statistical development; the headings are retained even in cases where no recommendations are made; this approach works as a check list of possible important interventions. Additionally there are recommendations made by the NSC in its report NSC (2001); these are extremely important and are recorded here separately in section 4.3 even though some of them have already been picked up in the Common Recommendations from the state reports. Additionally there are recommendations which have emerged during the process of reviewing the 35 state reports; these are in section 4.4. The unique recommendations, with indications of any differences among the three Groups of states, are summarized in Chapter 4 Part II.

### **4.2 Common recommendations**

#### ***1 Prerequisites for statistical activities for a state***

**1.1 Legislation for collection and dissemination of statistics; institutional framework including policy making arrangements; organizational structure;**

##### **1.1.1 Legislation for collection and dissemination**

2 No common recommendations are made on this issue.

##### **1.1.2 Institutional framework**

**Establishment of a SSB**

3 In states where a SSB does not exist, one may be established.

#### **Institutional status of a SSB**

4 Serious considerations need to be given to the National Statistical Commission's recommendation of creating "a separate Department of Statistics by elevating the existing Directorate of Economics and Statistics to the level of a Department and the Director of the existing Directorate of Economics and Statistics to the level of Secretary to the Government. The Department of Statistics should have complete freedom in statistical work. The head of the Department of Statistics should be a professional statistician or a professional economist with experience in large-scale data collection and empirical analysis of data." This means making the SSB an independent department, like MOSPI in the Central Government, with adequate authority and statutory support for collecting statistics.

#### **SSB as the nodal agency for statistics**

5 The SSB should be the nodal agency for all statistical activities and be appropriately empowered it so that it is suitably equipped to perform. To enable the SSB to play its role more effectively consideration may be given inter-alia to the following functions:

1. Advising the State Government with respect to the approval or otherwise of any proposal for data collection submitted to the Government as a plan / non-plan scheme programme by any department.
2. Rendering advice to all departments in respect of their data collection programme and other statistical activities including tabulation.
3. For maintaining one unique set of data, the data sent by Government and other offices to Central Government and other offices should be routed through the SSB so that duplication of data is avoided.

4. Assisting in the evolution of a sound statistical system.
5. Standardization/ clearance of all schedules/ formats meant for collection of statistical data.
6. Ensuring adoption of uniform concepts and definitions of terms for collection of statistical data.
7. Ensuring the elimination/ minimization of duplication of statistical work among other departments.
8. Suggesting ways and means for optimum utilization of resources deployed for collection of statistics.
9. Imparting training to the intermediate primary level statistical personnel of all departments.
10. Tabulation and digitization of data for all surveys.

6 The Director of the SSB may be associated with all major data collection programmes like the Agriculture Census and Livestock Census.

#### **Representation of the Director of the SSB in State Level Committees**

7 The Director of the SSB may be made a member of various state level committees constituted by different departments so as to participate in decision making on vital issues of the government. This will facilitate the SSB in exercising its authority as the nodal agency

1.2 Mechanisms for coordination of producers; feedback from users; consultations with providers;

1.1.3 Organizational Structure

8. No common recommendations are made on this issue.

Improving coordination between the SSB, line departments and CSO

9 It is important to structure a mechanism/system for coordination and to institutionalize it. In order to take a holistic approach towards the State Statistical System (SSS) and to enhance its utility to the state government, as recommended by the National Statistical Commission, the SSBs should be formally entrusted with the responsibility for a periodic review of the

content, methodology and output of the statistics of all state departments and to make suggestions for further improvement of these statistics. A forum should be established by the state government for regular structured meetings of state departmental statisticians to review the performance of the statistical system of the state. <sup>5</sup>

10 In order to make co-operation between the SSBs and the central government/ ministries and also among the SSBs more effective and fruitful, it is required that periodical meetings are held by the GOI with SSBs to overcome some of the problems faced by the SSBs, including through the Instrument of COCSSO.

### **Feedback from data users**

11 Reaching out to data users, both in the government and the nongovernmental sectors, requires attention. A modest start can be made by inviting key users to participate in short seminars hosted by the SSB at which the role, functions, and challenges faced by the SSB could be spelt out. Such seminars would serve three broad purposes:(a) develop closer relationships with users;(b) serve as a forum for receiving user feedback, and (c) remove common misconceptions about particular statistical series, e.g. the data on consumer and retail prices, and other series

## **1.3 Quality awareness**

### **Managing Data Quality**

12 Given the central importance of data quality to the SSSs, and the fact that most of the twenty core statistical activities have been evaluated to be of medium or low quality using the International Monetary Fund's Data Quality Assessment Framework (DQAF), the management of quality must be built into the management and technical practices of the SSBs and the line departments. Quality management should be built and mainstreamed with the design of individual statistical activities and programs. For this the SSBs need to develop appropriate policies, procedures, and guidelines to promote, facilitate, and fortify

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<sup>5</sup> NSC (2001) para 14.5.24 (57)

activities and behavior consistent with the concern for quality.

#### **1.4 Assuring integrity, adherence to professional ethics and international standards of statistical work.**

13 No common recommendations are made on this issue.

### **2 Resources**

#### **2.1 Resources (human, statistical infrastructure, physical infrastructure, financial,) and their sustainability**

##### 2.1.1 Human resources

##### 2.1.1.a Quantity of human resources

#### **Providing adequate human resources**

14 All the recommendations, to be implemented effectively, will require adequate skilled manpower resources; it is recommended that the issue of additional manpower required by the SSBs and the line departments should be examined and addressed by the State/UT Governments at their level, using their resources in any manner that they deem appropriate. The recommended additional manpower will be required for undertaking activities to close data gaps, strengthen collection and compilation of source data, data scrutiny and validation, among other critical tasks like timely data dissemination. The recommendations on manpower resources for SSBs and the line departments have been developed from the perspectives of (i) strengthening the SSSs through the much required improvements in quality of statistical outputs, (ii) capacity/capability of the statistical system to effectively respond to new demands for data arising from national economic and governance reform processes like privatization and devolution of power and authority to local bodies, and external factors like globalization. The assessment of optimum manpower required has factored in the use of increased information technology resources.

##### 2.1.1. b Quality and development of human resources

#### **Developing Manpower Skills**

15 In addition to having adequate staff levels, the SSBs should have appropriately skilled staff for improving data quality in terms of adequacy/coverage, accuracy, reliability and timeliness.

16 It is imperative for SSBs to have a detailed training programme to upgrade the staff skills in two broad areas, namely at the operational level - routinised methods of data collection, processing and summarization - and statistical methods to improve the practice of statistics, that is, use of "applicable theoretical techniques". The areas of training are indicated below, and the first step that SSBs should take is to establish a structured training programme.

### **Statistical and management skills**

17 Some specific recommendations for skill development are given below.

18 SSBs should develop a training programme focussed on the following distinctive areas and linked with the on-going and planned statistical activities:

1. Induction training course for all new statistical staff
2. Training for middle level staff
3. Refresher training programmes for all officers
4. Specialized training programmes to develop a core group of specialists who can also serve as trainers
5. Management of the Statistical System

### **Induction Training**

19 All new statistical staff should be given induction training, preferably after an initial period of six months to one year. The induction training modules could include inter-alia the following, among others:

1. An overview of the National and State Statistical Systems
2. Basic economic, social sector, and local area planning statistics
3. Fundamentals of national accounting
4. The role of sample surveys, censuses, administrative data in a statistical system

5. Management of statistical programs - data flow, coordination etc. - including
6. Planning, budgeting, organizational principles
7. Use of standard computer packages and data presentation

**Training for Middle Level Staff:**

20 As the middle level staff plays a critical role in execution of statistical activities, it needs to be formally trained to enhance their productivity and efficiency. Given the functions of middle level staff, they should be trained in the following areas, among others:

1. Techniques of data validation and verification
2. Use of standard computer packages in data editing and tabulation
3. Interview techniques in household surveys
4. Database maintenance and other core operations.

21 It is further suggested, that training should be supplemented by special training associated with particular surveys and statistical computations so as to get hands-on training. It is suggested that the above training be provided by the SSB at the DSO and sub-district level personnel, who have the responsibility for generating source and field level data. The preparation of training materials could be done with the assistance of the CSO so as to maintain uniformity of standards across all states. The training module should preferably be interactive making use of computer assisted instruction techniques.

**Refresher Training Programmes**

22 Periodic refresher training programmes should be periodically conducted for all the officers and staff of the SSB. Refresher training could be conducted in house in collaboration with CSO and focus on the following areas, among others:

1. Principles of economics
2. System of national accounts
3. Time series analysis and forecasting
4. Classificatory analysis

5. Techniques of pooling NSS central and state sample data;
6. Information technology
7. Geographical Information System

### **Specialized Training**

23 It is suggested that specialized training be provided in the following areas, among others:

1. Statistical Methods
2. Advanced Statistical Methods/Techniques
3. Survey Methods and Data Collection
4. Data Processing
5. Data Tabulation
6. Data Analysis
7. Data Management
8. Report Preparation

24 Specialized training should be provided through nationally organized courses by the CSO. However, some key professional staff may be sent abroad to be trained in new and advanced statistical methods and approaches. This could be through study tours and participation in overseas courses or through courses and seminars delivered by foreign experts or a combination of the two approaches. The staff thus trained should be used as part time specialist trainers.

### **Management of Statistical System**

25 To improve the management of the SSSs, it is imperative for the SSB Director and functional heads within the SSBs to have a through understanding of the role and functioning of a modern statistical system so that appropriate reform measures, as required, are planned and initiated. It is suggested that courses in the following areas are developed and organised:

1. Management principles
2. Project planning and management in the context of overall priorities with respect to Statistical activities and operations.
3. Financial management
4. Human resource management

### **Training Venues**

26 While in-service training can be provided within an SSB, advanced training may be provided by CSO, and various statistical institutes.

**Information technology skills**

27 To enhance the IT skills of SSB staff, the following areas of training are suggested in the Table below:

**Suggested Areas of Training in IT**

SN	Title	Duration	Frequency	Description
1	Computer Orientation - Basic	1 week	Regular	Introduction / refresher with concepts, terms, Introduction to MS Office, particularly to MS Word & MS Excel and Email usage. To be taken by all Group A, B and C personnel except support staff like drivers etc.
2	Computer Orientation - Advanced	1 week	Regular	Computer Usage - Level 2 course. With advanced features of MS Word & MS Excel, Presentation skills, Internet usage skills, introduction to a statistical package like SPSS. 10 to 20 % of the staff could undergo this training

SN	Title	Duration	Frequency	Description
				every year
3	RDBMS - Basics	2 weeks	Request	Grade B & C. Basics of Access and Oracle
4	RDBMS - Advanced	2 weeks	Request	EDP staff
5	Statistical Analysis - SPSS	1 - 2 weeks	Request	All staff in data analysis and interpretation.
6	Hardware Troubleshooting	1 week	Limited	2 per office
7	GIS - Arc Info	As per vendor	Request	GIS
8	Software development - Microsoft Technologies - Basic		Request	Visual Basic, VBA; system design
9	Software development - Microsoft Technologies - Advanced		Request	.NET; associated courses; system analysis; documentation requirements
10	Website development usage		Request	Tools like Flash, Cold Fusion, Go Live, Dream weaver etc.;
11	Data warehousing and mining		Request	Storage; tools; concepts; optimization
12	Data center maintenance		Request	For EDP staff, Administrative tasks, backup and archival tasks and procedures; system log maintenance; etc.

28 The training requirements outlined above apply equally to staff in the state line departments carrying out statistical and functions and IT services for statistics.

### 2.1.2 Statistical infrastructure

#### **Data Bank**

29 The SSB could be the repository of all data on the state and have a "Data Bank" for use by policy makers, researchers, educational institutions, and members of civil society. The primary and secondary data collected/available could be stored in the form of time series data. The proposed Data Bank could have data regarding all sectors from all government and private agencies not only for the state but also for district level and below. The Data Bank could be created in the SSB with suitable staff using Internet facilities.

### 2.1.3 Physical infrastructure

#### **Strengthening IT Infrastructure and Use**

30 Urgent steps may be taken by SSBs to procure and activate the configuration of required and appropriate hardware and software for electronic compiling, tabulation and processing of data **which** was determined on the basis of the assessment of the current IT infrastructure vis-à-vis activity-based need and is critical for ensuring accuracy of data as well as its timely release and dissemination . Simultaneously, steps may be taken to train all statistical staff including officers in the SSBs in the use of IT tools.

31 Also, to ensure accountability and long-term sustainability of the recommended IT infrastructure, an Electronics Data Processing Centre may be established within the overall control and authority of the SSBs (where the scale of operations make this feasible).

32 SSBs need to be provided with a robust IT infrastructure, an IT-based communication network using an integrated architecture linking all stakeholders to support networking and establishing strong communication links within the SSB and including the

DSOs with (i) the state's line departments; (ii) the Central Statistical Organisation (CSO) and all its constituent units; (iii) all Central ministries with substantial statistical output; (iv) all SSBs; and (v) the National Sample Survey Organization viz. Survey Design and Research Division, Data Processing Division, Field Operations Division and Coordination and Publication Division, among others and other institutions like the Indian Statistical Institute.

33 Simultaneously, with the above steps, a number of measures for creating an enabling IT environment should be taken: (i) the working environment for IT should be improved; (ii) relevant strategies for regular equipment maintenance and data backup, should be introduced, for example, a standard RDBMS; (iii) web based solutions should be implemented to take advantage of centralized data access and control - this will require connectivity between various locations; (iv) a procurement system with well articulated processes and full transparency and accountability should be developed to make IT related procurement timely and efficient; and (v) electrical panels should be avoided in areas where IT equipment is installed as the magnetic rays, which are emitted from the transformer of the electric panel, can harm the computer hardware and can lead to the corruption of storage devices like hard disks.

**Buildings, office equipment, power backup and air-conditioning, transportation and other physical infrastructure needs**

34 The physical infrastructure of the SSBs including the DSOs should be improved, as per the detailed recommendations in each of the 35 state reports, so that they provide adequately sized and functional office space with an employee friendly work environment that permits smooth interaction among staff, and appropriate office equipment and machinery and transportation. Also, the IT related work environment should be upgraded to improve staff efficiency; this includes refurbishing the computer room facilities - improving air conditioning, computer furniture, and other facilities. The work area needs to be conducive

for efficient functioning and dust free for ensuring longevity of the computers and related equipment. A proper and adequate power backup system needs to be installed.

## 2.2 Management, including human resource management

### **Common Statistical Cadre**

35 A Common Statistical Cadre could be constituted in each state, as per the recommendation of the NSC. Each major department should have a statistical cell, headed by a suitable officer from the statistical cadre and supported by subordinate staff, also from the statistical cadre. While administrative control of the statistical cells in line departments could be with the respective HOD, the technical control and regular technical reviews of the working of these statistical cells should be given to the SSB.

36 For implementing a common statistical cadre the SSB should have the expertise in cadre management, which should be developed and institutionalized.

### **Cadre and Recruitment Rules**

37 In order to ensure that suitably qualified individuals are recruited to meet the additional manpower needs of SSBs and line departments, the cadre and recruitment rules should be suitably amended. For example, a bachelor's degree in statistics/economics could become the minimum qualification for recruitment to any technical post in a SSB and statistical cells of line departments.

## **3 Operational issues**

### **3.1 Type and purpose**

38 The 20 core statistical activities should be compiled by all states, taking account of state priorities and capacities, and special circumstances. The allocation of the 20 core statistical series across broad subject matter areas is set out below:

- A. Economic statistics (DSDP, DFCF, DDP, CLBs, WPI, CPI, )
- B. Social and Demographic indicators (Health, Education, Labor, Housing, BDR,)
- C. Key sector statistics (ASI, IIP, Crop area and production, Electricity production, Transport statistics,)
- D. General statistics (Environmental statistics, Participation in the NSS, Local Area Planning statistics)

### **3.2 Methodological soundness in collection, processing, review, archiving, and database management**

39 No common recommendations are made on this issue.

### **3.3 Balance between national and international standards**

42 No common recommendations were made on this issue.

## **4 Main statistical products**

### **4.1 Dissemination and release policy; Accessibility and Analysis**

Dissemination of Statistics

40 The SSSs could improve data dissemination in the following ways:

- 1.Improvements in coverage, periodicity, and timeliness. The International Monetary Fund's Special Data Dissemination System (SDDS) specifications could be adopted and enforced in the long run, to the extent feasible, by the SSSs so that their data dissemination is mainstreamed with the national efforts to meet SDDS requirements
- 2.Making data easily accessible
- 3.Introducing electronic means of data dissemination.
- 4.In order to reduce the time in printing of statistical publication, the SSSs may be allowed to engage the services of government approved private printing firms/establishments.
- 5.To enhance people's perception about the integrity of disseminated data, the SSSs may disseminate technical notes concerning methods, concepts, and data limitations

6. Reaching out to data users, both in the government and the nongovernmental sectors, represents another area requiring attention. A modest start can be made by inviting key users to participate in short seminars hosted by the SSB at which the role, functions, and challenges faced by the SSB could be expounded. Such seminars would serve three broad purposes: (a) develop closer relationships with users; (b) serve as a forum for receiving user feedback, and (c) remove common misconceptions about particular statistical series, e.g. the data on consumer and retail prices and other series

#### **4.2 Relevance, accuracy, and reliability of data**

##### **Filling data gaps**

42 While particular attention should be paid to filling up the data gaps in respect of those activities that have been rated as medium and low quality, data gaps in respect of high quality outputs also need to be closed.

43 In addition, data gaps arising from new demands for statistics arising from the 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendment, requirement of data for monitoring the Millennium Development Goals, among others, also need to be closed.

##### **Quality of data**

44 The quality of statistical activities should be improved by addressing their key weaknesses by:

1. Improvements and modification in methodology.
2. Ensuring that source data are obtained from comprehensive data collection programmes and are timely
3. Routine assessment of source data for coverage, non response error, sample and non sampling errors
4. Validation of intermediate results including validation against other information as applicable
5. Assessment of intermediate data in terms of statistical discrepancies.

6. Strengthening supervision, compilation, scrutiny, and validation processes
7. Establishing and adhering to data dissemination standards
8. Ensuring that periodicity and timeliness follow dissemination standards as established in consultation with CSO
9. Ensuring that timeliness follows the scheduled calendar of activities

45 SSSs may give priority attention to improving data quality by taking steps to fill data gaps, improve the accuracy of source/field data; use computers with relevant software for data compilation, processing and report generation; reducing time lag; strengthening supervision for data collection at field level; instituting mechanisms for data scrutiny and validation, among others.

### **Quality and form of Raw Data**

46 To improve the quality and form of raw data and ultimately the quality of final data it is imperative to take steps to address the inadequacies in the collection of raw/source data which generally flow from field staff to controlling officer at block / district / State level through prescribed format / return / on a periodic or ad hoc basis.

Some of these inadequacies are:

- (i) Unskilled manpower
- (ii) Weak supervision; in some cases there is no supervision
- (iii) Manual compilation
- (iv) Manual tabulation
- (v) Near absence of scrutiny and validation
- (vi) Inadequate coverage.

47 This not only requires deployment of required optimum resources for source data collection, but also establishing systems and mechanisms for fail-safe supervision for data collection and compilation, scrutiny, and validation.

### **Mode of Data Transmission**

48 The SSSs may implement the robust IT infrastructure that has been recommended including a configuration of hardware, software, and networking and connectivity protocols for, among others, facilitating transmission of raw data.

## **General**

49 The challenges facing the state statistical systems warrant a rationalization of the current work program through consolidation and harmonization of surveys and data reporting; balancing State and local needs based on demand driven and prioritized work programs; the adoption and enforcement of unified concepts, standards and methods; greater use of sampling and effective application of IT; and in-service training.

### **4.3 Recommendations by the NSC in 2001**

50 The NSC made specific recommendations concerning the SSSs; some of these are directed to the state statistical institutions and others to the State Governments. The Commission also made general recommendations which had implications for the states. The recommendations directed specifically to the states and two under information technology with special relevance to the states are set out below.

#### **The States' Statistical Systems (Para 14.6.34)**

51 Recommendations directed to the state governments are:

a) The breakdown of the Administrative Statistical System needs the immediate attention of the highest authorities of State Governments. They are urged to take steps to reduce the burden of the additional work given to lowest-level government functionaries such as *patwaris* and primary teachers so that they can

effectively carry out the statistical functions assigned to them.

b) The authorities should also instruct the offices implementing different Acts and Rules to be vigilant that all relevant units file with them regularly the statutory statistical returns required by the Acts and Rules, and take necessary action under the Acts against the defaulting units.

c) The State Governments should accord priority to computerisation of administrative offices that generate administrative statistics.

d) The State Governments should support the Directorate of Economics and Statistics in the creation of sample survey capabilities by creating sample survey divisions in them.

e) The State Governments should make the necessary resources available to the Directorate of Economics and Statistics for computerisation and development of necessary software to make the Directorate of Economics and Statistics self sufficient in this respect. This will help them to undertake tabulation of NSS data, which they are collecting in their matching samples.

f) For strengthening the effectiveness of the statistical system of the Government, the State Governments should create a separate Department of Statistics by elevating the existing Directorate of Economics and Statistics to the level of a Department and the Director of the existing Directorate of Economics and Statistics to the level of Secretary to the Government. The Department of Statistics should have complete freedom in statistical work. The head of the

Department of Statistics should be a professional statistician or a professional economist with experience in large-scale data collection and empirical analysis of data.

g) The State Governments should closely involve the Director of Directorate of Economics and Statistics in its decision-making processes by making him a member of or an invitee to committees and groups dealing with plans and programmes in substantive fields

h) The State Governments should strengthen the role of the Directorates of Economics and Statistics as coordinators of their statistical activities by empowering them to take a technical review of the statistical activities of all departments every year. The Directorates of Economics and Statistics should also be asked to make a report to the Government of its comments on and suggestions for these activities. The Directorates of Economics and Statistics should also be authorised to convene a biennial conference to review the State statistical system and its activities.

i) The State Governments should take steps to create a common statistical cadre and State Statistical Service for manning statistical posts in all departments.

j) The heads of the departments of the State Governments should closely involve their departmental statisticians in their decision-making process. To give institutional support to their role, the departmental statisticians should be placed directly under the head of the department.

k) In view of the renewed importance of the Block Statistical organisation in the

context of local area planning, the State Governments should bring it directly within the fold of the States' Statistical System by either transferring the organisation to their Directorates of Economics and Statistics, or by making it responsible for its statistical work to the Directorate and bringing it under the Directorate's technical supervision through the district statistical organisation.

l) The State Governments may consider setting up commissions or committees to advise them on the manner of implementation of these recommendations and on other issues relating to States' statistical system

**m)** To improve the coordination within the state statistical systems, the state Directorates of Economics and statistics must be made responsible (by the state governments) for technical coordination with all state departments in respect of the content, methodology and dissemination of statistics.

51(A) The Recommendations directed to the SSOs are:

a) The State Directorates of Economics and Statistics (DESS) should develop capabilities to tabulate data on demand and to analyse data from different sources. For this they should organise all the data that the State's statistical system possesses in an appropriate manner.

b) The Directorate of Economics and Statistics should fully exploit the potential of their participation in the National Sample Survey programme by using the survey data as a data-bank and by utilising the survey mechanism for *ad hoc* collection of additional simple data required by the Government.

c) The Directorate of Economics and Statistics should develop the necessary

analytical capabilities to carry out data-analysis relevant to the problems of decision-making of the Government.

### **Information Technology in the Indian Statistical system (Para 14.7.31)**

52 The recommendations are:

a) It is essential to establish strong communication links between:

- o The National Statistical Organisation (NSO) and all its subordinate offices;

- o The National Statistical Organisation and all Central Ministries with substantial statistical output; ,

- o The National Statistical Organisation and all State Directorates of Economics and Statistics (DESSs);

- o The National Sample Survey Office and its Survey Design and Research

Division, Data Processing Division, Field Operation Division and

Coordination and Publication Division;

- o Headquarters of Data Processing Division, Field Operation Division and

their respective subordinate offices;

- o State Directorate of Economic and Statistics and statistics divisions of the departments.

b) These offices should be networked through one or more Internet Service

Providers, and for one or more Virtual Private Network.

A dedicated computer

network is neither necessary nor desirable and would not at all be cost effective.

c) Urgent steps must be taken to strengthen computer hardware and software

systems in the State DESSs.

d) There should be regular computer training programme for statistical personnel at

all levels.

**Recommendations emerging during the recent review process, which supplement those made in the state reports<sup>6</sup>**

53 These recommendations are presented in the same structure as the Common Recommendations above.

### **1.1.1 Legislation for collection and dissemination**

#### **United Nations Fundamental Principles of Official Statistics**

54 SSSs may act within the guidelines of the United Nations Fundamental Principles of Official Statistics as the overarching set of guiding principles in order for users, especially the government, to have trust in the official statistics issued by the SSB and other state statistical institutions.

#### **Supportive Statistics Act in place**

55 A state level statistics legislation should be enacted or the existing legislation revised, complementary to the national legislation .

### **1.1.2 Institutional Framework**

#### **Statistics Steering Committee**

56 SSSs may establish a Statistics Steering Committee comprised of users and producers and other stakeholders to guide the development of statistics at state level.

### **1.1.3 Organizational structure**

#### **Organizing for more efficient operations**

57 A common task faced by all the statistical organizations at state level is to get the maximum output/results from available resources. The SSS may ensure that the available resources are organized and supervised optimally and compatible with the necessary IT support and change the organization structure as needed.

1.2 Mechanisms for coordination of producers; feedback from users; consultations with providers

**Coordination of statistical activities at state level**

58 The SSB may be empowered by statistical legislation to bring about effective coordination, collaboration and partnerships among different statistical agencies within the state statistical system. This will lead to an efficient and cost-effective statistical system in which the outputs of various data collection activities are comparable or can at least be meaningfully related to one another, duplication of effort is avoided, undue burdening of respondents is avoided, and the coherency of official statistics is maintained.

59 Possible mechanisms for coordination of the SSS include:

- A statistical coordinating committee, a data producer committee, a data user-producer committee, and technical advisory committees or taskforces in all key sectoral statistical areas. These committees should meet periodically, with specific agendas, and their recommendations should be implemented in a timely manner;
- Budget coordination by the SSB over the statistical activities of the line departments and other government producers of statistics,
- The seconding of statistical professionals from the SSB to work in the statistical agencies of line departments.

60 Where the size of the SSB permits doing so, a separate coordination division may be established within it, with a separate budget allocation. The division should be headed by an experienced statistical manager with both technical competence and leadership qualities. Where the size of the SSB does not allow for a separate division, a senior officer of the SSB may be assigned the responsibility.

61 Harmonization of databases is critical. Within the framework of the state statistical plan, the development of general databases within the state by the SSB and of sectoral databases by line departments

should be harmonized or the SSB should maintain a state database.

### **User needs**

62 Strong rapport should be developed between key users and producers of data in order to articulate needs (coverage, detail, periodicity and timeliness and availability of meta data), facilitate assessment and prioritization of their needs, and develop strategies for meeting these needs. A Main User Committee at state level may also be established

#### 2.1.1 Human Resources

##### **Human resources**

63 In the states, the SSSs will have to intensify their efforts to overcome/ or work successfully within the significant gap that exists between the needs for trained personnel in statistics and related fields, as estimated in the 35 state reports, and the available human resources, given constraints on increases in staff numbers.

64 Human capital needs to be developed. Doing so involves increasing knowledge, broadening skills, and raising the motivation levels of staff. A comprehensive strategy on human resources should be drawn up in each state, and implemented, to attract and retain competent and well trained staff.

65 A critical assessment of training needs should be carried out and a training plan developed in each state (consistent with the recommendation above from the 35 state reports). Training should be systematic and ongoing, following a well designed training program. A training calendar should be planned well in advance, and selection of officers for training should be done judiciously. Once they complete their training, as far as possible, staff may be assigned to duties that they can perform most efficiently on the basis of the knowledge acquired in their training.

66 An in-house training center with adequate manpower, equipment and scholastic materials may be established as an integral part of the SSB. As much as possible,

experienced statistical personnel should teach in the training centers. Where establishment of a state training center is not required or feasible, facilities already available in another state or centrally should be used. Additional thought be given to setting up regional training centers, or establishing centers in particular SSBs which could also serve training needs of nearby states.

#### 2.1.2 Statistical infrastructure

##### **Scientific methods, codes, classifications, and sampling frames**

67 SSBs may work to enhance statistical infrastructure; this involves developing appropriate scientific methods and applying them, preparing codes and definitions that ensure both internal consistency in the way data are defined and classified and adequate interstate comparability, and creating and maintaining sampling frames (such as business registers and master samples) required to sample businesses, households, agricultural holdings and physical facilities.

#### 2.2 Management, including management of human resources

##### **Statistical advocacy**

68 The SSS should engage in advocacy aiming for a more statistically aware/ data-sensitized population. This process creates demand for statistics and pushes government to be accountable and to give appropriate priority to statistics in the budget process. Statistical advocacy should be done at every level, but especially at the highest level of state government. Meetings of secretaries and political leaders at state level may also contribute to this cause of advocacy for statistics.

##### **Use of administrative records**

69 To meet the priority needs of key data users in a timely, cost-effective and efficient manner with data of adequate quality, the SSSs may use a balanced mix of administrative records, censuses and sample surveys. Taking account of any limitations in the quality of administrative data in terms of concepts and coverage, maximum use of administrative records should be made. SSBs should institute mechanisms for statistical audit

of administrative records to improve the quality of information derived from them. Advantage should be taken of the attractive features of administrative records as sources of statistical data, such as their availability to statistical agencies at no or minimum cost and their ability to yield disaggregated data on a continuous basis at sub-national (for example, district) levels to meet the data needs of decentralization policy. The SSB should, therefore, have mechanisms to:

- Keep abreast of administratively collected data held by other parts of the government.
- Evaluate each new data request to determine the extent to which it can be met by available administrative records without resorting to a new or expanded sample survey.
- Negotiate with the custodians of the relevant data to determine how the data held can be shared within the legal framework imposed on government information activities.
- Assist other state agencies in designing and exploiting their administrative systems in order to provide good-quality statistics that are as compatible as possible with the other data available in the state statistical system.

70 In a situation of shortage of manpower to carry out censuses and surveys and process the basic data derived, attention should be given to the possibility of expanding the utilization of administrative records for statistical use. The SSB should become the centre of knowledge on available administrative records and statistics.

#### **Review sample size and content of schedules and number of questionnaires**

71 In a situation of shortage of manpower for collection and processing of raw data, attention must be given to the possibility of reducing sample sizes; this also includes replacing complete censuses with sampling approaches; to reduce the costs of data generation through censuses, complete enumeration could be limited to a few topics, with other items investigated on a sample basis; also schedules should be reviewed to ensure that the minimum necessary sets

of data are being collected and that a minimum number of questionnaires and surveys are being conducted.

**Project/programme planning and monitoring and decision making (including delegation of authority) to get jobs done on time.**

72 The SSS may establish work programmes that are in line with priorities and resource availability and involve all levels of staff in their planning. They should monitor implementation and take the necessary decisions when deviations from plan occur. They should identify trade-offs over time, where necessary or desirable, for example between accuracy and speed, and delegate as much as possible to empower staff at all levels,

### 5.3.3 Balance between national and international standards

#### **International standards**

73 The SSB may promote and work towards compliance with current CSO general and sectoral technical specifications. Preferably, it should also be empowered by a statistics act to enforce compliance with statistical standards by all data producers in the SSS in order to enhance the quality and usability of statistical information. Emphasis should be placed on clear and unambiguous documentation of statistical standards applied in data collection, and mechanisms may be established for monitoring quality in data collection. All surveys conducted by statistical agencies have also to be based on sound designs, and the information necessary to gauge the reliability of the results produced should be intelligible and accessible to all data users. To facilitate the interpretation of data, the statistical agencies should indicate the sources, methods and procedures used. These approaches assist users to correctly interpret the published statistics. The SSB may ensure that CSO

technical specifications are made available to the appropriate staff.

#### 4.1 Dissemination and release policy: accessibility and analysis

##### **Dissemination**

74 Statistical agencies need to prepare and distribute user-friendly reports. They should also use web sites and other electronic products as dissemination channels. Efforts should be made to improve the presentation of statistics in the various kinds of outputs in order to promote better understanding and use of the statistics. Regular press releases should report important statistical data, such as SGDP, employment, wages, the consumer price index and key sectoral indicators. Dissemination seminars should be conducted for release of census and sample survey results. Workshops should be organized to educate the media on how to present statistical results in an accurate and clear manner and on how to use data in public debate.

##### **Establish an advance release calendar for statistical series**

75 This should be done to help promote planning and performance on the part of management and staff, and to enhance confidence on the part of users concerning the integrity of the statistics and the political independence of the statistical function

## **Chapter 4 Part II**

**Recommendations consistent with current capacity of the states (what has to be done to fill gaps in state capacity) - Recommendations unique to one or a small number of states**

### **1 Introduction**

1 The specific detailed recommendations made for states are presented here. Many of these recommendations are extensions of, or more detailed expressions of, or nuanced versions with special emphasis on some aspect of, the common recommendations presented in Chapter 4 Part 1 above. The recommendations are arranged according to the same structure as were the common recommendations in Chapter 4 Part 1 above. The number of states for which each recommendation is made is indicated at the end of each recommendation. The recommendations are presented according to the Groups of states as far as possible.

### **2 The detailed/unique recommendations**

2 The recommendations are:

1 Prerequisites for Statistical Activities for the State Statistical System as a whole (All State level Institutions)

**1.1 Legislation for Collection and Dissemination of Statistics; Institutional Framework including Policy Making Arrangements; Organizational Structure;**

**1.1.1 Legislation for Collection and Dissemination**

#### **Group II**

Enact a state law to facilitate collection of statistics 1

In order to give statutory power to DSO to call for data from different departments in the district the State Government may issue orders to all Heads of Departments to instruct their district offices to supply a copy (to the DSO) of all statistics collected

by them. This will help DSO to become storehouse of statistics for the districts. 1

#### 1.1.2 Institutional Framework

##### **Group II**

Make it mandatory for all line departments to get approval/consent from the DES for undertaking independent census or sample survey or any other statistical activity. 1

DSOs should use their staff rather than rely on Revenue staff over whom they have no control (to improve the quality of agricultural statistics). 1

The District Collector / Deputy Commissioner should closely involve the DSO in meetings relating to plan progress; he should also be associated with the preparation of district plans and made a member of District Planning Board. 4 Group II 2 Group III 2

The DSO should collect data village-wise for Local Area Planning and for the use of other departments.

There is a need of technical guidance from the DESME to the line department statistical staff. 1

The DSOs may be inducted as a Member-Secretary of the Sub-divisional level Standing Committees on Statistics that have been constituted by the State Government to generate required data for planning for economic and social development. This will enable DSOs to be mainstreamed with development activities and get incisive insights with respect to data requirements at the District level and below. 1

##### **Group III**

A key improvement area is the communication between various departments and between line departments and the DES. Statistical officers deputed to line departments should have direct interaction with the parent department (DES). This would greatly improve the data requirement identification and perceptions). 2

The 11 labour inspectors covering 28 labour laws need to be supplemented by statistical staff viz., compiler/checkers and investigators to attend to non-statutory statistical activities required from time to time, like children working in hazardous industries (required under the ILO project), minimum wages actually paid etc. 1

On balance, it seems better to have the existing system to continue in which DSOs function as a part of District Panchayats and also serve the data needs of DES; there are two distinct advantages in having the existing set up. Firstly, in the existing set up, the DSOs are directly involved in the district planning process, apart from being mere data suppliers. This also enhances their data gathering capabilities in virtue of their close relationships with the other line departments. Secondly, they also have a direct relationship with the Taluka Development Offices and the Statistical Assistants in them who compile taluka/village level data, both being in the same Panchayat Department.

Line Departments without a statistical cell should establish one.

The statistical set up for the Directorate of Economics and Statistics should be reviewed to improve the official cadre so that other state government departments recognize the importance of statistical work. 1

### 1.1.3 Organizational Structure

#### **Group II**

Block level statistical cells need to be created (under the supervision of the DSO) to facilitate collection of village level statistics for local planning 2

#### **Group III**

The present staff of sub-divisional offices could be shifted to the newly formed districts in Assam where the DSO office has not been set up. (There is no need of separate sub-divisional statistical offices below the District Statistical Office). 1

It is recommended that DPSOs should be answerable to the DES for both the planning and statistics functions of the district and the DES in turn will be answerable to the State Planning Board and the State Department of Finance, Planning and Twenty Point Programmes for both the functions.

### **Directed towards the NSSO**

Although the schedule and the instructions adopted for the Central sample as well as the State sample are the same, the State DES takes its own initiatives for tabulation of State sample data. The NSSO has a major role to play in regard to tabulation and pooling of results. The Centre could develop the tabulation plan and the data entry package sufficiently in advance and supply the same to the State. This will reduce cost as well as time. Data entry part can be done by the Centre and the State in respect of their respective samples and pooling can be done by the Centre or the State as would be decided by NSSO. 1

A DSO should be set up in the 3 districts where they do not presently exist. 1

1.2 Mechanisms for Coordination of Producers; Feedback from Users; Consultations with Providers;

#### **1.2.1 Producers**

##### **Data Flow**

##### **Groups II and III**

A coordinating mechanism needs to be developed and institutionalized to ensure that other line departmental offices/organizations/corporations/authorities/local bodies/private institutions furnish accurate data needed by DES and in time (10) Group II 6 Group III 4

### **Group III**

The Deputy Commissioner of the District could review the work of DSO in the District Co-ordination Meeting (with all district heads) so as ensure regular and timely flow of data from different offices. 4 Group II  
1 Group III 3

### **Coordination**

Group II

There should be a District level Committee on Statistics and Planning, preferably with DM as Chairman and DSO as Member-Secretary to coordinate statistical activities and planning at district level. All BDOs of the districts should be members of the state committee.  
1

### **Group III**

A coordination mechanism could be established to create a productive synergy among the DSO, line departments and DES (aimed to strengthen DSOs).

#### **1.2.2 Users**

#### **1.2.3 Providers**

### **1.3 Quality Awareness**

### **1.4 Assuring integrity, Adherence to Professional Ethics and International Standards of Statistical work**

## **2 Resources**

2.1 Resources (Human, Statistical Infrastructure, Physical Infrastructure, Financial,) and their Sustainability

### **2.1.1 Human resources**

#### **2.1.1a Quantity**

#### **Human Resource Gaps by states**

3 The estimated optimum staff levels, available staff and resource gaps (from DES Report (2007) are set out in the table below for all states for each of Groups I, II and III.

## Available Staff and Optimum Staff and Resource Gaps

States	Available Staff	Optimum Requirement	Resource Gap	Gap % of Available
<b>Group I</b>				
Andaman & Nicobar	81	126	45	36
Dadra Nagar Haveli	18	32	14	44
Lakshadweep	30	47	17	36
<b>Total</b>	<b>129</b>	<b>205</b>	<b>76</b>	<b>37</b>
<b>Group II</b>				
Arunachal Pradesh	222	306	84	27
Bihar	736	849	113	13
Chandigarh	21	32	11	34
Jharkhand	337	474	137	29
Madhya Pradesh	737	772	35	5
Manipur	159	288	129	45
Mizoram	110	172	62	36
Nagaland	384	426	42	10
Puducherry	154	206	52	25
Punjab	872	967	95	10
Sikkim	82	128	46	36
Tripura	206	233	27	12
<b>Total</b>	<b>4020</b>	<b>4853</b>	<b>833</b>	<b>17</b>
<b>Group III</b>				
Andhra Pradesh	1431	1820	389	21
Assam	934	1117	183	16
Chhattisgarh	290	371	81	22
Daman & Diu	14	38	24	63
Delhi	278	282	4	1
Goa	113	138	25	18
Gujarat	4118	4143	25	1

Haryana	720	791	71	9
Himachal Pradesh	326	395	69	17
Jammu & Kashmir	1281	1368	87	6
Karnataka	704	758	54	7
Kerala	1987	2005	18	1
Maharashtra	1181	1273	92	7
Meghalaya	217	294	77	26
Orissa	4032	4193	161	4
Rajasthan	823	952	129	14
Tamilnadu	1201	1255	54	4
Uttar Pradesh	1761	2049	288	14
Uttarakhand	274	415	141	34
West Bengal	1472	1515	43	3
<b>Total</b>	<b>23157</b>	<b>25172</b>	<b>2015</b>	<b>8</b>
<b>Total all Groups</b>	<b>27306</b>	<b>30230</b>	<b>2924</b>	<b>10</b>

4 The average staff size of Group I states is 43. In Group II it is 335 and in Group III it is 1158. Overall the average is 780.

5 In Group I the staff resource gap is 37% of the optimum; in Group II it is 17% and in Group III it is 8%. Overall the gap is 10 % of the optimum level.

#### **Human Resource Gaps by core statistical activities**

6 The DES Report (2007) set out where the major gaps of human resources were in each state according to the 20 core statistical activities and implicitly the areas where additional human resources should be applied, if available. Across all states, the core areas that are most frequently identified for additions of human resources to fill resource gaps are:

Statistics for local area planning (17 states);

Health statistics (16),

State Gross Domestic Product and other aggregate economic series (13),

Crop area and production statistics (13)

NSSO Rounds (11),

WPI and CPI (10)

Industrial Statistics (10)

Forestry (9)  
Education (7)  
Labour and Employment (7)  
Birth and Death Registration Statistics (40)

7 Group I states had no common areas of human resource needs with needs spread over economic statistics, education, forestry, NSSO and local area planning.

8 Group II states had large gaps in health, education, crop area and production statistics, local area planning, and forestry (but not including economic statistics and NSSO work).

9 Group III states had large gaps in local area planning, health, economic statistics, crop area and production, NSSO work, and industrial statistics.

10 The point is made in many state reports that, given that there are vacant posts, no new posts will need to be created to move to the optimum level of staff resources. However, action will be required to rescind the ban on new recruitments, to the extent feasible, in respect of statistical employees.

### **2.1.1b Quality and Development**

#### Statistical Training

Adequate training should be given to cope with the modern trends in peripheral level planning and monitoring needs. 2 Group I 1 Group III 1

Regular training of field staff like Inspectors and Sub Inspectors of Statistics is recommended in evaluation survey methods; refresher training for officers should be provided twice a year. 2 Groups II 1, Group III 1

The training curriculum should be updated regularly, integrating all the time new software, techniques and requirements. 3 Group I 1, Group III 2

#### **Group II**

DES should activate its Training & Coordination Division lying defunct since long. 1

### **Group III**

There should be a regular programme of training Village Level Workers in Statistical concepts and methods and completion of such training should be made a pre-condition for promotion as Statistical Assistants in Taluka Development Offices. Similar training is essential for Statistical Assistants in Taluka Development Offices. 1

Training of officers for improving their skill for analysis and report writing should be provided by statistical staff, professional experts, academicians and retired officers 1

### **Computer skills and Software**

Each official in DES should be using computers. Everybody should be connected with their local servers, and should be at least partially proficient in all IT standard software. It therefore becomes imperative that the key person in each department has a higher level of IT knowledge than the others. 3 Group II 2, Group III 1

### **Group I**

Proper training also needs to be provided on specific software like RBD ( Registration of Births and Deaths)

### **Group II**

Technically trained manpower people are required to improve the quality and speed of data entry. The main problem at DES is of trained Data Entry Operators. It has been observed that Staff who become proficient in data entry over a period of time are later on shifted to other departments. This reduces the Department's efficiency which breaks the work flow and affects the output. There is a major work load from the NSS Data Entry requirements. 1

### **Group III**

Regular training of the staff of the EDP Centre is required in modern software development and applications 1

All the technical officers of the DPSOs should be made

computer literate by training 3

Training of the staff is required in using the off-the shelf software and the application software developed by EDP Centre 1

The Computer Division of DES has to be manned with officials in the department qualified in IT to support the department in data processing. The training has to be on a continuous basis to fill in the gaps of the new softwares and IT tools being introduced and implemented 1

The training should be need based and iterative, with periodic refresher modules. It is required to rationalize and restructure some posts. For instance, there is still a post of an 'Autographer' for map and graph making. 1

### **Statistical Infrastructure**

Data base

#### **Group II**

It is suggested that DPSOs should be tasked with the responsibility of developing a data base for village, block, and District level statistics. This will substantively improve the quality of GSDP, DDP, and gross fixed capital formation and savings, among other statistical estimates. 1

#### **Group III**

Statistical data should be in a one state level database A data mining tool should allow users to access and analyse the data. Data could be extracted in a standard format and other statistical tools like Stata could also be used for analysis. 1

Data warehouse

#### **Group III**

Formation of a state level committee to oversee the formation of a state level data warehouse, to be formed at the DES 3 Group II 1 Group III 2

Expectations from the data warehouse should be defined - reports to be generated, publications, dissemination to authorized users, definition of authorized users,

purposes eg storage of data for posterity for the purposes of long term analysis; as well as for reprocessing using more sophisticated techniques. 4  
Group II 1 Group III 3

Data warehousing techniques to be adopted should be decided. (Data mining tools may also be used for this purpose). 3 Group II 1 Group III 2

Guidelines for data collection to be set out. Protocols for data transfer and periodicity and controls over data receipts to be defined. Validation procedures should also be clarified. 2 Group II 1  
Group III 1

The road map for enhancement in data complexity should also be defined. 2 Group II 1 Group III 1

Quarterly review meetings under the aegis of the ESO 2  
Group I 1 Group III 1

The technical head of the warehouse should be well versed on all IT issues, and should have a working knowledge of software techniques, data center maintenance, hardware installation and data warehouse storage and delivery models; as well as a working knowledge of web related issues. 3 Group II 1 Group III 2

## **Statistical support**

### **Group III**

A copy of the village map and record where new settlement/consolidation is being taken should be sent to District Statistical Office for undertaking EARAS work properly. 1

### **2.1.3 Physical Infrastructure**

11 Extensive detailed recommendations are made for each state in the DES Report (2007). Some are more extensive than others, but most cover Information Technology Infrastructure (Hardware, including Training Centre), Software, Requirements of line Departments, and Physical Infrastructure (Office Space, Office Equipment

and Machinery, Vehicles, Working Environment, and Management and Organization). The Common Recommendations in Chapter 4 Part 1 on Information Technology Infrastructure and Physical Infrastructure are rather broadly expressed while the specific recommendations below provide some detail. For full detail for each state refer to the DES Report (2007).

## **Information Technology Infrastructure**

### **Hardware**

#### **Group III**

The network needs to be strengthened, both in terms of reliability and security. 1

It is critical for the firewall to be put in place. 1

Higher capacity dedicated Uninterruptible Power Supply (UPS) with remote warning capability, or a self-starting generator, are required for this to function properly. 1

A proper backup system needs to be implemented to ensure security and safety of data. The concept of scheduled backups, incremental and complete backups, backup storage procedures, recovery systems have all to be understood and inculcated into the functioning of the organization. 3

**The possibility of providing desk-top printing/publishing facilities in the EDP Centre of DES should be explored to speed up statistical publications and their quality 4.**

A centralized web-server with sufficient number of client machines at Regional Offices is recommended to speed up NSS data entry, validation and tabulations 1

Broadband connections and dedicated lines are recommended to ensure efficient connectivity 1

The necessary hardware should be provided to strengthen the Cartographic Unit 1

The introduction of Web server and Website of the Bureau is essential. 2

Provision of separate computers and printers in the NSS Section of DSO would help in timely data entry and validation as well as generating quick tabulations of important items at the District level.1

**All the officers of various departments in the Directorate should be provided with computers to work with speed and accuracy. 1**

### **Training Centre**

#### **Group II**

It is recommended that a training center be established at Guwahati for the benefit of all the N-E states 1

#### **Group III**

An Institute of Applied Statistics has been requested to be established in Tamilnadu at Chennai to provide periodical training for officers and staff working both at State and District levels in Department of Economics and Statistics, and also act as a Statistical learning hub in South India. 1

### **Software**

**General :** whenever software is provided, adequate training in its use is essential.

#### **Group III**

DES needs some basic GIS tools to improve the software functionality. 1

It is necessary to make arrangements for threats from viruses, spam, bugs, internet security problems etc. For this they require latest virus scanners and internet security packs which need to be updated regularly on the net to ensure proper protection from the new viruses and bugs. 4

It is extremely important, with the growing focus on e-Governance, for the department to set up a complete messaging and workflow system within its 'virtual' premises. This would be essential for all communication to be instantaneous, reliable and authenticated. Responsibility and accountability would be the result

and this would also be essential for the long term convergence of data into a single database. 1

It is also relevant to mention here that with the large size of this department; focus be maintained on standardizing the platforms and development aids of choice; so that every individual is not found working on different systems and technologies. 1

Provision of latest software like SPSS and software like DB2 and SQL is recommended -Server 3

To optimize the new machines they require latest operating systems like MS windows XP and Windows NT for networks. Apart from this, full featured MS office packages in regional languages is also required. 1

Full fledged software with detailed tabulation and report generation is required for the NSSO work. Along with the complete software a rigorous on job training is also required. Desktop publishing software like Adobe PageMaker and Adobe Photoshop are recommended for the DTP unit. 1

There is a need for RDBMS software to ensure smooth and trouble free database management. This will also strengthen the databases from different offices and manage it effectively on a single server located in the headquarters. 1

The Directorate needs to be provided with the latest versions of basic programming languages and training to efficiently develop and update their customized software. 1

## **Line departments**

### **Group II**

It is recommended that the line departments be provided with required IT infrastructure exclusively for their statistical activities. 1

### **Group III**

None of the Line Departments have been recommended any additional IT resources in view of the adequacy of the

IT resources in them. 2

Physical infrastructure

Office space

**Group III**

Centralization of the data in the Directorate is very important. 2

There is a need to provide residential quarters to the Officers manning the DSO's in remote locations due to insurgency conditions prevailing in the state; 1

There should be a record room for Talkau level officers and district officers for storing the records of vital statistics, national sample survey schedules and other registers. 1

There is a requirement to provide adequate and functional office space to DES to accommodate all the different sections/divisions under one roof. It should have earmarked space for EDP, data bank, records room, library, conference-cum-training hall, and well equipped and furnished work stations for officers and staff. Likewise each of the seven DSOs should be provided with appropriate office accommodation with specific areas marked for EDP, data processing, data storage, conference hall and work stations. 1

A small rented room should be provided to SFI and SSFI at block level to hold their office for better coordination and supervision 1

Office equipment and machinery

**Group III**

An A3 colour printer or optionally, a plotter, is recommended, as some of the outputs required need to be of a larger size.1

The DSOs should be provided with a photocopier for taking copies of publications prepared at DSOs and for photocopying other important documents.1

A Resograph machine to improve the quality of publications at Regional and District levels and a

vehicle to facilitate access to remote villages for field work.1

Vehicles

**Group II**

Every Joint Director/Deputy Director should be provided independent vehicle to undertake tour in the state and carryout supervision work effectively.1

**Group III**

An independent vehicle should be provided for NSS work to facilitate the field work. 1

Increase to 18 (from 12) the number of days the DSO is allowed to hire a vehicle 1

**Working Environment**

Group III

Improve the present electrical wiring for it to be in a position to properly supply electricity to the IT equipment. There is temporary wiring with plastic pipes mounted on the wall. There is no proper earthing and circuit breakers in case of short circuit 1

**Management and Organization**

**Group II and III**

Current programming techniques, tools (including design, analysis and testing tools) should be available with the department; along with the services of an IT organization that can provide vital insight into the proper use and operation of these tools. An inventory system for all products developed, along with version control, should be implemented. 2 Group II 1 Group III 1

**Group III**

To resolve small day to day IT and networking problems and ensure smooth functioning of the computers and the network, appointment of a system administrator, whether in-house or outsourced or contracted, is required. 4 Group II 1 Group III 3

**It is suggested that professional inputs be obtained, maybe on contractual basis, from an IT organization in**

**the form of some basic facility management - outsourcing of some of the tasks as well as planning aspects 4 Group II 1 Group III 3**

Professional advice should be sought in relation to back up issues. Backup philosophy and methodology are to be understood and implemented. The storage of media; the place of storage of media; the system of backup; the system of restoration; emergency procedures - all need to be defined in detail. Backup scheduling has to be planned properly; and care has to be exercised in its execution. It should be started in a simple and comprehensive manner; and as the organization gains in maturity on this front; more sophistication can be incorporated. 2

Data redundancy should be avoided. All departments should use similar coding schemes (defined at warehouse level). 2 Group II 1 Group III 1

Data entry can be done at field (or one level higher). Consolidation can be performed progressively till the data enters the warehouse after adequate validation. 2 Group II 1 Group III 1

Data exchange protocols can be grounded through a mix of practical physical means, web technology and WAN and VSAT systems. 2 Group II 1 Group III 1

Data ownership should be clearly defined. Data sharing rights need also be to clearly spelt out. 2 Group II 1 Group III 1

Proper archival and backup procedures performed by adequately trained staff need to be performed. 3 Group II 1 Group III 2

Security and encryption systems to be integrated into the data handling and dissemination 3 Group II 1 Group III 2

Provide for digitization of legacy data, which may be outsourced. 3

The proximity between the source of data and its digitization should be enhanced 1

Better management of computers maintenance should be made so that the maintenance is done quickly and availability of the facility remains unobstructed to the staff. An in-house maintenance team, along with proper hardware and software maintenance contracts; and a clear system of drawing up specifications for outsourcing development needs to be finalized. 4 Group II 1 Group III 3

Focus should be maintained on standardizing the platforms and development aids of choice so that every system is not on a different technology.1

#### **2.1.4 Financial Resources**

2.2 Management, including Human Resource Management

#### **Management Human Resources Levels**

##### **Groups I, II and III**

The re-designation/upgrading of posts of DSO to be on par with district officers of other line departments and to have an effective interaction and liaison with other district level heads, is recommended 6

The re-designation/upgrading of other posts is recommended. 4 Group II 2 Group III 2

##### **Group II**

The field work of NSS should be entrusted to Inspectors of Statistics who are graduates. 1

There should be a norm of statistical staffing pattern in different departments taking into account major, medium and minor departments. This will preclude the possibility of posting higher ranking officer to minor departments and lower ranking officer/ official to major departments. This status differential effects the coordination efforts of DESME. 1

Management Approach

##### **Group II**

There is need for training, coordination of tasks assigned, and documentation. 1

**Group III**

Clear mandate and guidelines should be given for all statistical staff on deputation.1

Quarterly review meetings under the aegis of the DES is recommended 1

Prior to posting to DSOs, the concerned staff should be given an orientation on the District. 2

Proper computerization of the Administrative Units with properly trained staff is necessary to increase their efficiency for better performance of the technical Units. 1

Deficiencies in writing of Pahani should be addressed through appropriate supervision, and reduction in ad hoc tasks assigned to the village accountant. 1

Simultaneously with augmenting human resources, the State Government may take steps to reduce the burden of the additional work given to lowest-level government functionaries such as patwaris and primary teachers so that they can effectively carry out the statistical functions assigned to them. 1

To generate proper awareness about the statistical activities mobilization is required in every sphere. At the district level, there must be strong liaisoning with Collector and district administration but there is no scope and opportunities on the part of the DSO to keep constant liaisoning with the district administration. Most importantly to motivate the village people, it is required to train the statistical people. The local leaders like Sarapanch, Ward Member and officials like BDO, GPO and R.Is could be also associated with the data collection process in a manner where they can help mobilize the local people to cooperate with the statistics personnel and make them understand the importance of the statistics. 1

**Cadre  
Group II**

To enable DES to effectively function as the Apex Agency, a Common Statistical Cadre may be constituted in the state with the proviso that all recruitments of statistical staff by line departments must be done with the consent and approval of DES.

Avenues of promotion for the Inspector of Statistics level should be explored as many of them have completed more than 15 years of service without any promotions, which leads to frustration and inefficiency in work 2 Group II 1 Group III 1

The statistical posts in some major departments/offices like agriculture, etc. should be brought into the ambit of DES's cadre as in quite a few cases, the statistical posts in those offices are manned by non-statistical personnel. 1

In the current scenario, it is desirable to perhaps do away with an IT cadre in DES altogether. Use of IT is now decentralized and more and more a way of life, a tool to be used by every individual in every walk of life. So it would perhaps make more sense to train all statistical staff to use IT as a tool to do their work more efficiently rather than have a separate IT cadre to provide them with centralized IT services. Where ever required and feasible, software needs could be got developed by software companies and the statistical staff need to be trained to use it effectively. 1

**Funding**

Adequate funds should be provided to DES for deputing officers and officials for various training courses within and outside the state. 1

**Group III**

The DSO should be provided with adequate funds (budget provision) for repairs of vehicles, POL, petrol allowance to enable staff to undertaking field

visits/tours for data collection, and supervision and undertaking tours by staff. 2

A loan for purchase of Motor cycle may be given to the field staff so as to facilitate them to carryout the field work. 1

Opening of budget head for hiring from time to time the services of subject experts of various fields 1

### **3 Main Statistical Products**

#### **3.1 Dissemination and Release Policy; Accessibility and Analysis**

##### **Group II**

A District Statistical hand book should be brought by every DSO furnishing statistical information at sub divisional level. 3

##### **Group III**

All statistics in the public domain and of general interest may be published and updated regularly on the website created for the DES. 3 Group II 1 Group III 2 This should be linked to all departmental web-sites. 2 Group II 1 Group III 1

Printing of Publications may be outsourced to ensure timeliness and improved dissemination. 3 Group II 1 Group III 2

#### **3.2 Relevance, Accuracy, and Reliability of Data**

##### **Group II**

There is a need for reconciliation of area statistics. 1

The DSO, Zilla Parishads and DMS may collectively ensure the submission of statistical returns and annual plans by Gram Panchayats, BDOs and Nagar Panchayat to the State Planning Board on proforma developed by the Board. As of now, this required information is not provided uniformly and their reliability is also not satisfactory. If the data required by State Planning Board is fully made available then a comprehensive and robust base line data can be compiled and tabulated for

planning at the village level. This will also form the building block for village level statistics. 1

**4 The most commonly recommended action areas among the 20 core statistical activities**

a) Of the 20 core activities, those most frequently identified (in the largest number of states) as needing technical measures for bridging the data gaps or new activities for strengthening the statistical system, are shown in the table below.

b) Action on SDP and DDP and GFCF and S are recommended with high frequency in all Groups. Housing statistics and Health/BDR comes up reasonably often for both Groups II and III but not for Group I. Action on WPI and CPI also is recommended reasonably often for all Groups. There are more recommended areas for action in Groups II and III compared to Group I. No major pattern of differences among the three Groups is apparent.

<b>Most commonly recommended action areas (among the 20 core statistical series) for bridging gaps according to Groups of states</b>							
Group I	% of states	Group II	% of states	Group III	% of states	Total	% of states
State & District DomProduct	100	State & District DomProduct	100	State and 7 District DomProduct	100	State & District Dom	100
Gross Fixed Cap Exp & Savings	66	Local Area Planning Statistics	100	Poverty Statistics	95	Poverty Statistics	99

Contrib of local bodies	66	Poverty Statistics	100	Gross Fixed Cap Exp & Savings	80	Gross Fixed Cap Exp & Savings	80
Wholesale Price Index	66	Gross Fixed Cap Exp & Savings	83	Type studies	80	Local Area Planning Statistics	78
Consumer Price Index	66	Wholesale Price Index	75	Housing Statistics	75	Type studies	66
District Block Vill Statistics	66	Health Statistics	75	Local Area Planning Statistics	70	Housing Statistics	63
Poverty Statistics	66	Birth Death Reg Stats	75	District Block Vill Statistics	55	Wholesale Price Index	60
District Dom Prod	33	Contrib of Local Bodies	66	Wholesale Price Index	50	Health Statistics	57
Agriculture Statistics	33	District Dom Prod	58	Health Statistics	50	Birth Death Reg Stats	57
Health Statistics	33	Housing Statistics	58	Birth Death Reg Stats	50	District Block Vill Statistics	49
Birth Death Reg Statistics	33	Consumer Price Index	58	Environment Statistics	50	Contribution of Local Bodies	46

Environ men Statist ics	33	Type studies	50	Consume r Price Index	35	Consume r Price Index	46
Water Supply & Sanitat ion	33	Below Poverty Line Stats	50	Contrib ution of local bodies	30	District Dom Product	38
Local Area Plannin g Statist ics	33	Agricul ture Statist ics	50	Below Poverty Line Statist ics	30	Environ ment	38
Type studies	33	Forestr y Statist ics	25	Annual Survey of Industr ies	25	Below Poverty Line Statist ics	34
		Annual Survey of Industr ies	17	Index of Industr ial product ion	25	Agricul ture Statist ics	29
		Environ ment Statiti cs	17	District Dom Product	25	Annual Surv of Industr ies	20
		Water Supply & Sanitat ion	8	Forestr y Statist ics	15	Index of Industr ial Product ion	17
		Nationa l Sample Survey	8	Agricul ture Statist ics	15	Forestr y Statist ics	17
		Index of Ind Product ion	8			Water Suppl & Sanitat ion	6

						National Sample Survey	3
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**The most commonly recommended action areas (beyond the 20 core statistical series) for bridging gaps according to Groups of states**

c) Statistical activities outside the 20 core activities that were recommended as requiring action were as follows Improvement in Services and Tourism statistics is highly recommended in each of the Groups. Fisheries require improvement in Group I and II states and improvements in Gender statistics is recommended in both Groups II and III.

<b>Most commonly recommended action areas (beyond the 20 core statistical series) for bridging gaps according to Groups of states</b>							
Group I	% of states	Group II	% of states	Group III	% of states	Total	% of states
Fisheries	66	Services	25	Services	85	Services	60
Tourism	66	Tourism	17	Tourism	50	Tourism	40
Services	33	Gender	17	Gender	25	Gender	20
Disaster Mgt	33	Fisheries	8	Disaster Mgt	10	Fisheries	11
Gender	0	Disaster Mgt	8	Fisheries	5	Disaster Mgt	11

**5 Detailed information by states on the technical measures for bridging data gaps and new activities for strengthening the statistical system**

Details on the recommended actions for the 20 core statistical activities and the supplementary series for all states according to the three Groups of states are shown in the tables below. Recommended actions relating to Type Studies, District, Block and Village Statistics, Poverty Statistics, and BPL Statistics are considered to be relevant to the 20 core statistical series and are listed and counted among them.

	Core Statistical Activity	Group I			Group II											Total Group II
		A & N	DL HK	Total Group I	A R P	B H	C HH AA N	J A P	M A N	M A Z	M I G	N A D	P U	PS I UK N	T R I	
1	State Domestic Product Estimates	x	xx	3	x	x	xx	x	x	x	x	x	x	xx	x	12
2	Estimate of Capital Formation and Savings	x	x	2	x		xx	x	x	x	x	x		x	x	10
3	Estimates of District Domestic Product	x		1			x	x	x	x	x			x	x	7
4	Estimates of the contribution of local bodies	x	x	2	x	x	x		x	x	x			x	x	8
5	Data on major fiscal variables															
6	Annual Survey of Industries					x	x									2
7	Index of Industrial Production							x								1
8	Crop area	x		1		x	x			x	x			x	x	6

	Core Statistical Activity	Group I			Group II											
		A & N	DL HK	Total Group I	A R P	B I H	C J H A A N	M A P	M A N	M I Z	N A G	P U D	P S I U K N	T R I	Total Group II	
	and production statistics															
9	Wholesale Price Index	x	x	2	x	x	x	x	x	x	x		x	x	9	
10	Consumer Price Index	x	x	2	x		x	x	x	x	x			x	7	
11	Health, morbidity, mortality and family welfare statistics	x		1	x	x	x	x	x	x	x		x	x	9	
12	Education and literacy Statistics															
12.A	Statistics on educational institutions															
12.B	School enrolment data															
13	Labor and employment statistics															
13.A	Labor statistics															
13.B	Employment statistics															
14	Housing Statistics				x	x	x	x	x		x			x	7	
15	Birth and death registration statistics	x		1	x	x	x	x	x	x	x		x	x	9	

	Core Statistical Activity	Group I			Group II											
		A & N	DL HK	Total Group I	A R P	B I H	C J H A A N	M A P	M A N	M I Z	N A G	P U D	P S I U K N	T R I	Total Group II	
	and population															
16	Electricity production and distribution statistics															
17	Environment and forestry statistics		x1									x	x			2
17. A	Forestry Statistics				x				x						x	3
17. B	Water Supply and Sanitation Statistics		x1												x	1
18	Participation in surveys of the National Sample Survey Org.								x							1
19	Transport Statistics															
19. A	Motor vehicle registration statistics															
19. B	Road statistics															
19. C	Traffic accident statistics															
19. D	Passenger traffic statistics															
20	Statistics	x		1	x	x	xx	x	x	x	x	x	xx	x		12

	Core Statistical Activity	Group I			Group II											
		A & N	DLHK	Total Group I	A R P	B I H	C J H A A N	M A P	M A N	M I Z	N A G	P U D	P S I U K N	T R I	Total Group II	
	for local area planning															
21	Type studies	x		1		x	xx					x	x		x	6
22	District, Block and Village statistics		xx	2					x		x	x	x			4
23	Poverty statistics	x	x	2	x	x	xx	x	x	x	x	x	xx	x	12	
24	BPL statistics				x			x	x		x		x	x	6	
	<b>Total 1-24</b>	1	5	6	23	1	1	6	1	1	1	1	7	7	1	134
		2				2	1	3	2	5	1	4		0	6	
	<b>Additional areas</b>															
25	Fisheries statistics	x	x	2								x			1	
26	Gender statistics						x						x		2	
27	Tourism statistics	x	x	2								x	x		2	
28	Services statistics		x	1			x					x	x		3	
29	Disaster Mgt statistics			x	1							x			1	
	<b>Total 25-29</b>	2	1	3	6	0	0	2	0	0	0	0	4	2	1	9
	<b>Total 1-29</b>	1	6	9	29	1	1	8	1	1	1	1	1	9	1	143
		4				2	1	3	2	5	1	4	1	1	6	



		Group III																Total	
	Core Statistical Activity	A	A	C	D	D	G	H	H	J	K	K	M	O	R	T	U	W	Total Group B III
		N	S	H	E	&	O	J	R	P	K	R	A	E	R	A	A	T	
1	State Domestic Product Estimates	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	20
2	Estimate of Capital Formation and Savings	x	x	x	x	x	x	x	x			x	x			x	x	x	16
3	Estimates of District Domestic Product		x	x			x	x									x		5
4	Estimates of the contribution of local bodies		x			x							x	x		x		x	6
5	Data on major fiscal variables																		
6	Annual Survey of Industries							x	x	x				x			x		5
7	Index of Industrial Production			x		x	x			x				x					5
8	Crop area and production statistics		x										x	x					3
9	Wholesale Price Index	x	x	x			x	x	x	x			x	x			x		10
10	Consumer Price Index			x			x			x			x	x	x		x		7

		Group III																			
	Core Statistical Activity	A	A	C	D	D	G	H	H	J	K	K	M	O	R	T	U	W	Total		
		N	S	H	E	&	U	A	I	&	A	A	E	R	A	A	T	T	E	Group	
		P	S	A	L	DA	O	J	R	P	K	R	E	H	G	I	J	N	P	B	III
11	Health, morbidity, mortality and family welfare statistics		x	x	x			x					x	x	x	x		x		x	10
12	Education and literacy Statistics																				
12.A	Statistics on educational institutions																				
12.B	School enrolment data																				
13	Labor and employment statistics																				
13.A	Labor statistics																				
13.B	Employment statistics																				
14	Housing Statistics	x	x	x	x			x		x	x	x	x	x	x	x	x	x	x	x	15
15	Birth and death registration statistics and population		x	x	x			x					x	x	x	x		x		x	10
16	Electricity production																				

		Group III																	
Core Statistical Activity	P	A	A	C	D	D	G	H	H	J	K	K	M	O	R	T	U	W	Total
		S	S	H	E	&	O	J	R	P	K	R	E	H	G	I	J	N	T
		T			DA							R					P	B	III
	and distribution statistics																		
17	Environment and forestry statistics	x		x	x				x	x	x	x				x	x	x	10
17.A	Forestry Statistics		x	x										x					3
17.B	Water Supply and Sanitation Statistics																		
18	Participation in surveys of the National Sample Survey Org.																		

		Group III																		
	Core Statistical Activity	A	A	C	D	D	G	H	H	J	K	K	M	O	R	T	U	W	Total	
		N	S	H	E	&	U	A	I	&	A	A	E	R	A	A	T	T	E	Group
		P	S	A	L	O	J	R	P	K	R	E	G	I	J	N	P	B	III	
19	Transport Statistics																			
19.	Motor vehicle registration statistics																			
19.	Road statistics																			
19.	Traffic accident statistics																			
19.	Passenger traffic statistics																			
20	Statistics for local area planning	x	x	x			x	x	x	x	x	x					xx	x	14	
21	Type studies	x		x	x	x	x	x	x	x	xx		x	x	x	xx	x	16		
22	District, Block and Village statistics			x		xxx	x	x	x		xx					xx		11		
23	Poverty statistics	x	x	x	x	xxx	x	x	x	x	xx	x	x	x	x	xx		19		
24	BPL statistics		x							x	xx	x				x		6		
	<b>Total 1-24</b>	8	1	1	8	6	5	1	1	1	7	7	1	1	8	7	7	1	8	191
	<b>Additional areas</b>																			
25	Fisheries statistics					x													1	
26	Gender	x			x					x					x	x			5	

		Group III																		
	Core Statistical Activity	A	A	C	D	D	G	H	H	J	K	K	M	O	R	T	U	W	Total	
		N	S	H	E	&	U	A	I	&	A	A	E	R	A	A	T	T	E	Group
		P	S	A	L	O	J	R	P	K	R	E	H	G	I	J	N	P	B	III
27	statistics Tourism statistics	x			x				x	x	x		x			x	x	xx		10
28	Services statistics	x		x	x	xx	x	x	x	x	xx				x	x	xx	x		17
29	Disaster Mgt statistics					xx														2
<b>Total 25-29</b>		3	0	1	3	13	2	1	2	2	3	12	0	0	3	3	22	1		35
<b>Total 1-29</b>		1	1	1	1	78	1	1	1	1	1	81	1	1	1	1	91	9		226
		1	3	6	1		4	1	2	4	0	2	3	2	1	0	5			

Summary table of recommendations by Groups of states

	Core Statistical Activity	Total Group I	Total Group II	Total Group III	Grand Total
1	State Domestic Product Estimates	3	12	20	35
2	Estimate of Capital Formation and Savings	2	10	16	28
3	Estimates of District Domestic Product	1	7	5	13
4	Estimates of the contribution of local bodies	2	8	6	16
5	Data on major fiscal				

	<b>Core Statistical Activity</b>	<b>Total Group I</b>	<b>Total Group II</b>	<b>Total Group III</b>	<b>Grand Total</b>
	variables				
6	Annual Survey of Industries		2	5	7
7	Index of Industrial Production		1	5	6
8	Crop area and production statistics	1	6	3	10
9	Wholesale Price Index	2	9	10	21
10	Consumer Price Index	2	7	7	16
11	Health, morbidity, mortality and family welfare statistics	1	9	10	20
12	Education and literacy Statistics				
12.A	Statistics on educational institutions				
12.B	School enrolment data				
13	Labor and employment statistics				
13.A	Labor statistics				
13.B	Employment statistics				
14	Housing Statistics		7	15	22
15	Birth and death registration statistics and population	1	9	10	20

	<b>Core Statistical Activity</b>	<b>Total Group I</b>	<b>Total Group II</b>	<b>Total Group III</b>	<b>Grand Total</b>
16	Electricity production and distribution statistics				
17	Environment and forestry statistics	1	2	10	13
17.A	Forestry Statistics		3	3	6
17.B	Water Supply and Sanitation Statistics	1	1		2
18	Participation in surveys of the National Sample Survey Org.		1		1
19	Transport Statistics				
19.A	Motor vehicle registration statistics				
19.B	Road statistics				
19.C	Traffic accident statistics				
19.D	Passenger traffic statistics				
20	Statistics for local area planning	1	12	14	27
21	Type studies	1	6	16	23
22	District, Block and Village statistics	2	4	11	17

	<b>Core Statistical Activity</b>	<b>Total Group I</b>	<b>Total Group II</b>	<b>Total Group III</b>	<b>Grand Total</b>
23	Poverty statistics	2	12	19	33
24	BPL statistics		6	6	12
	<b>Total 1-24 Additional areas</b>	23	134	191	348
25	Fisheries statistics	2	1	1	4
26	Gender statistics		2	5	7
27	Tourism statistics	2	2	10	14
28	Services statistics	1	3	17	21
29	Disaster Mgt statistics	1	1	2	4
	<b>Total 25-29</b>	6	9	35	50
	<b>Total 1-29</b>	29	143	226	398

**6 The nature of the technical measures for bridging the data gaps and new activities for strengthening the statistical system.**

a) Frequently the technical contents of the recommendations were identical or similar for many states. Listed below are sample recommendations for each of the subject matters for which recommendations were made; (states can refer to the DES Report (2007) for their own state for their own specific set of recommendations).

**(1) SDP and DDP (Mizoram)**

As suggested by the CSO ESD should initiate type studies for updating ratios / rates in agriculture and allied fields as well as to include new emerging income generating areas like horticulture and floriculture. These studies should be taken up on a priority basis so as to enable the ESD to fill up data gaps in SDP and DDP estimates. The quality of estimates of SDP suffers

in terms of accuracy and reliability on account of applying old ratios to current data set. For example, old ratios / rates relating to agriculture and livestock as supplied by the CSO are used in computation of SDP as these ratios have not been updated either by the CSO or the State.

**(2) GFCF and S (Tamil Nadu)**

Estimates of Gross Fixed Capital Formation are compiled only for the public sector. With increasing globalisation and liberalisation, the private sector today has become an important player vis-à-vis economic growth and development. To ensure information based macro economic policy decision making for overall management of the Indian economy estimates of capital formation in the private sector are warranted. Accordingly, steps should be taken by DES to include the private sector for preparation of estimates of gross fixed capital formation.

**(Meghalaya)** An important and major segment of the economy i.e. private sector has not been included in estimation of capital formation and savings. This gap needs to be filled in on a priority basis. Steps should be initiated to (i) streamline the methodology for factoring in private sector contributions to capital formation and savings; and (ii) design a frame/system/process for appropriate data collection with the help of the Chief Inspector of Factories and other bodies. Estimation of Savings should also be commenced.

**(3) Estimation of DDP (Jharkhand)**

This activity is recommended for reasons similar to those cited above for estimating gross fixed capital formation and savings.

**(4) Analysis of the Transactions of Local Bodies (Manipur)**

Estimates of contribution of local bodies are required for estimation of SDP, GFCF, and DDP. To enhance the quality of these estimates, DES may engage itself in statistical activities related to contribution of local bodies. Yet another reason is the demand for statistics on local bodies, given the increasing emphasis of the State Government on local area planning, and the need for such statistics vis-à-vis implementation of devolution of finances, personnel, and responsibilities

to local bodies in pursuance of the 73rd and 74th Constitutional Amendments.

DES may begin conducting a detailed analysis of transaction of local bodies at the block and Panchayat levels in addition to its current focus on urban local bodies.

**(5) Annual Survey of Industries (Uttaranchal)**

DES should participate in ASI as it provides data on various vital aspects of registered factories for use in the estimation of national income, studies of industrial structure and policy formulation on important indicators like number of factories, employment, wages, invested capital, capital formation, input, output, value added etc.

**(Jharkhand)**

A detailed database on industrial parameters is required to facilitate formulation of industrial development strategy and plan. While some data is available on industrial activities, there is inadequate data on investment, returns on investment, financial health of industries, industrial inputs - demand and supply - and labour absorption, among others. DES may initiate activities to bridge these data gaps, which will also enhance the quality of SDP estimates.

**(6) Compilation of Index of Industrial Production IIP (Madhya Pradesh)**

As the State of MP is rapidly moving towards industrialisation, demand for IIP has arisen from the policy makers. This data is required not only to monitor the growth pattern of industries but also required for planning of infrastructure.

**(Orissa)** Orissa's industrial growth is currently on a fast track, and the State Government has a number of projects in the pipeline for mineral-based industries, sea transport, and IT products, among others. These activities have generated a demand from the State Government planners for IIP as a measure of industrial growth and productivity for monitoring the State's industrial growth and taking appropriate actions for sustaining the industrial growth rate. In view of this,

DES may begin compilation of IIP towards which initial steps have already been taken....

**(7) Agricultural Statistics (Meghalaya)**

The quality of data with respect to crop area is unsatisfactory. This is primarily a result of the methodology adopted for estimating crop area - the conventional method (forecast method) based on impressions of cultivators and field staff (VLWs) rather than actual and scientifically measured field position. Also, the quality of estimates of yield rates of crops, though better than crop area estimates, is not robust in terms of accuracy and reliability. The key factor responsible for this is the poor quality of field work. This is because the compilation of crop statistics is not meticulously done by the designated field staff of CD Blocks as they are over burdened with their own routine department work (agricultural extension) extending over a large geographic area and are not able to spare quality time for collection and compilation of crop statistics, which are generated as a by product of administration.

While, use of remote sensing technology can substantially improve the reliability of estimates of crop area and condition of the crop at various stages of growth for forecast purposes, this will have to await the outcome of the Space Application Centre's (SAC) "Forecasting Agricultural output using Space, Agro-meteorology and Land based observations" (FASAL).

In the interim and the immediate run, land-based observations may be used to measure quantitative changes in crop area and growth, and supervision of field operations should be strengthened.

**(8) WPI (Meghalaya)**

Wholesale Price Index is a measure of inflation and also, an important input for SDP estimation. Therefore, the compilation of WPI may be undertaken.

**(9) CPI (Nagaland)**

The compilation of Consumer Price Index may be undertaken as there is a high demand for CPI in indexation of prices and for wage revisions.

**(Madhya Pradesh)** The need for CPI is justified as it is a measure of disposable income and estimation of savings potential of households and also as a measure for determining poverty levels.

**(10) Health Statistics (Maharashtra)**

Data on Hospitals/Dispensaries, PHC, Subcentres, number of Doctors, is available with the Directorate of Health Services. But data on Birth Rates/Death Rates/IMR are not available due to inefficiencies in working of the Civil Registration Scheme because of staff inadequacies. The Registrar General is operating SRS in the state, which provides reasonably reliable estimates of BR/DR/IMR at the state level. The scheme requires a randomised selection of villages and urban blocks, where concerted efforts are made to ensure registration of the vital events. This should be subsequently checked through Half Yearly Surveys to ensure identification of all vital events in the selected village/Block. It is proposed that DES should select, on random basis, additional villages and urban blocks, in all the districts, and conduct half yearly survey only, on a same pattern, as is done under SRS. Through intensive probing and supervision, number of vital events in the selected village/urban block could be identified. The half yearly survey should be coterminous with the period for SRS. The number of vital events identified through the proposed state sample could be merged; district wise, with the central SRS, and thus district wise BR/DR and IMR could be worked out. This would be a new activity for the state.

**(11) Housing Statistics (Orissa)**

Given the rapid urbanization in the state and the programme of urban renewal to be undertaken under the Jawaharlal Nehru National Urban Renewal Mission, it is critical to generate data on housing including construction activities and other urban assets for use by policy makers both at the state and centre levels. It is equally important to have a single window for all housing statistics to improve access to housing data by users.

Two activities are proposed. First, DES may become a repository of all housing statistics. For this, DES should annually collect complete housing statistics from all agencies involved in housing like Community & Rural Development, Housing Board, Urban Development Department, and Local Bodies periodically, so as to have housing statistics at one place. This task could be assigned to the DES.

Second, DES may undertake periodic sample surveys of housing including construction activities to assess addition to housing stock including the socio-economic profile of owners of housing stock. This task could be assigned to the DES.

### **(12) Environment Statistics (Punjab)**

Increasing pace of industrialisation in Punjab is adversely impacting on environment. The adverse impacts are manifesting themselves in pollution of the State's water system - surface and ground water - air quality, and biodiversity conservation, among other ways. This has persuaded both the state and central governments to assign one of the highest priorities to pollution control. A number of institutional mechanisms have been put in place, but their functioning has been constrained by the inadequacy of the environmental data base. ESO may undertake this activity and develop a sound environmental statistical base by creating a data base based on the needs of the policy makers, the environment activists, and the international community. The data base should address the environmental statistical requirements arising from the need for environmental decisions on the following, among others:

1. Air quality - outdoor and indoor
2. Ozone Layer Protection
3. Noise
4. Waste
5. Water
6. EA & Planning
7. Strategic Environmental Assessment
8. Conservation
9. Energy Efficiency and Conservation

10. Renewable Energy
11. Environmental monitoring

### **(13) Forest Statistics (Meghalaya)**

As concerns the forestry sector, data is not available on a number of important income

generating parameters like head loads of fire wood consumed, wood used for power generation and cooking, status of biodiversity resources, activities related to eco development of villages within the protected zones and the outer periphery, and eco-tourism, among others. The quality of forestry statistics can be enhanced by initiating collection and compilation of data in respect of these parameters.

### **(14) Water and Sanitation Statistics (Tripura)**

The coverage of data generated on drinking water and sanitation is inadequate due to exclusion of urban areas and lack of scrutiny and supervision of village survey data. The recommended statistical cell in PHE may develop an action plan for extending the coverage to urban areas and implement this plan with adequate supervision.

**(Lakshadweep)** Water is a scarce resource in the UT. This warrants meticulous management of water supply and demand. For this, statistics on several social and technical parameters will be required to enable knowledge-based formulation of policies and strategies for management of water resources.

### **(15) Participation in NSSO Rounds/Pooling and Tabulating NSS Data (Manipur)**

The data collected for state and central samples for each NSS round should be pooled following the procedure as advocated by the NSSO/CSO to get reliable and precise estimates not only at state level but also for regional/ district levels. For example, estimates of poverty ratios, employment/un-employment rates at district level can be obtained by pooling the data collected on consumer expenditure and employment and unemployment. The CSO may provide technical guidance and training on pooling techniques/methodology to the staff of the DES. This will require appropriate

training to be provided to the Primary Investigators engaged in NSS field work, who are under graduates and have little understanding of the complicated concepts and procedures prescribed by NSSO. A better alternative would be to assign NSSO work to officials who are at least graduates.

In the above context, it needs highlighting that the State Sample of NSS is not being tabulated as the validation computer programme supplied by NSSO is not working properly. The work of tabulation of data of NSS schedules of the state samples for several NSS rounds has not yet started due to lack of hardware and trained IT personnel. It is recommended that necessary facilities in terms of manpower and PC's should be provided to DES to undertake this work urgently. Also, the staff of DES should be trained in I.T. to undertake this work at state level.

#### **(16) Statistics for Local Area Planning (Kerala)**

In view of the 73rd and 74th Constitutional Amendments, DES needs to develop a data base to facilitate local level governance both in urban and rural areas. As a first step, the staff at the District Planning Unit could be trained and then deployed for undertaking activities for data collection including development and finalisation of key data requirements, schedules, and a calendar of activities/outputs. This should be done in consultation with local administration including the Panchayats.

#### **(Tripura)**

In view of the 73<sup>rd</sup> and 74<sup>th</sup> constitutional amendments, the local bodies have been empowered to prepare and implement plans for economic development and social justice at local levels. It is imperative to have local level data base to enable micro level planning. Director of Planning has laid down guidelines for collection of comprehensive information at village level but such information at present is not being collected. Statistical staff posted at SDM's office may be entrusted with this task, under the guidance of concerned DSO.

#### **(17) Type Studies (Jharkhand)**

DES may undertake type studies to update the rates and ratios used for estimation of GSDP, DDP and other income statistics.

**(18) Building District, Block and Village level data (Uttar Pradesh)**

Some local level - district, block, and village levels - data is collected for administrative purposes. However, it is not adequate in coverage vis-à-vis the needs of local planning. ESD may, therefore, engage in collection and compilation of village, block and district level statistics in respect of all socio-economic parameters. As a first step, ESD may develop a framework and an actionable plan in consultation with the concerned departments associated with local level planning. Also, ESD may put in place a structured mechanism for data management of local level statistics.

Further, steps may be taken to collect BPL statistics on a comprehensive basis by minimizing the current exclusions, for example, urban districts, and to enhance the quality of field data, which can be achieved to some extent by increasing the sample size to produce reliable district level estimates. Also, state and district level estimates of people below poverty line based on the Planning Commission method can be prepared by pooling the results of the state and central samples.

**(19) Fisheries (Puducherry)**

Although fisheries is an important economic activity in the UT the development of this sector is constrained by inadequate data required for planning and strategizing. Although the Department of Fisheries maintains data on Fisheries related to freshwater, brackish water, near shore and offshore sectors, limited data is available with respect to species wise, area wise and gear wise landings, and export statistics of various species in different forms such as dried, frozen, fresh and live form involving crab, lobster, shrimp and fishes in the marine sector. Further, there is limited data on socio economic status of the fishers and fish farmers. Appropriate steps may be taken to bridge these data

gaps. As a first step, the Directorate of Fisheries may establish a statistical cell with adequate staff.

#### **(20) Gender (Tamil Nadu)**

DES may initiate steps to develop a comprehensive set of gender statistics, which is in high demand by policy makers vis-à-vis the goal of social equity. Gender statistics is a relatively new field and conceptually more than just data broken down by sex. Gender statistics are a valuable tool for gender advocates, policy makers, and others working on gender related issues.

The production of gender statistics will require DES, probably in consultation with the CSO, to adequately formulate the concepts and methods for data collection so as to reflect the existing gender concerns and differentials and take into consideration social and cultural factors that can produce gender-based biases in data collection, analysis, and presentation. The process of production of gender statistics implies that DES takes the following steps:

- Selection of topics that need to be investigated;
- Identification of the data needed to understand gender differentials and women and men's roles and contributions in the different spheres of life;
- Evaluation of existing concepts, definitions, and methods used in data collection against existing realities of women and men;
- Development of new concepts, definitions, and methods to produce unbiased gender statistics;
- Compilation, analysis, and presentation of statistics in formats easily accessible to a wide array of users;
- Development of dissemination plans for statistical products to reach a wide audience.

#### **(21) Tourism Statistics (Tamil Nadu)**

Tourism has been assigned high priority by the State Government, and the Government is planning to introduce a number of novel tourism products like eco tourism and water sports. The real challenge is to contain the adverse impacts of tourism. To address this challenge through appropriate policy framework and regulatory measures, the State needs detailed data base on tourist

arrivals, their spending patterns as well as tourism-environment interface and its impact. The efforts of the Government have been somewhat constrained due to inadequate data on tourism related parameters. Thus, a detailed database on tourism is required to facilitate formulation of tourism development strategy and plan in a manner that the State's biodiversity resources do not get into a state of disequilibrium. While data is available on tourist arrivals, there is inadequate data on tourists' expenses, employment generated in the tourism sector, and tourist profiles by origin and sex, and impact of tourism on environment, among other parameters. DES may initiate activities to close these data gaps.

#### **(22) Service Sector Statistics (Karnataka)**

The services sector is growing rapidly in Karnataka and is contributing significantly to the State's income. It is important to factor in the service sector's income in estimation of State Income Statistics. DES may take the initiative in structuring a structure; system and action plan for collection and compilation of service sector statistics.

#### **(23) Disaster Management Statistics (Puducherry)**

Disaster management statistics are required not only to address the impact of disaster when it occurs but also to help in designing relief and rehabilitation mechanisms and strategies ahead of disasters on the basis of well thought out scenarios. As a first step, DES may, in consultation with concerned authorities and agencies, determine the parameters/fields on which data is required. Next, DES may develop an appropriate system and structure for collection and compilation of disaster management statistics.

### **7 Activities to be undertaken with Less Frequency**

These recommendations are made for specific states as indicated below

#### **(1) (Maharashtra) Municipal Year Book**

In addition to collecting data from municipalities for estimation of local bodies contribution to GSDP, DES collects data for the Municipal Yearbook on an annual basis. For example, data on employment in municipal bodies is collected not only in this activity, but separately for estimation of contribution of local

bodies to SDP, and again through the Census of State Government and Local Bodies employees. There is thus a duplication of activities. If the data included in the Yearbook have some utility - an issue to be examined - then it may be considered if the data could be collected with less frequent periodicity, say once in five years.

**(2) (Maharashtra) Occupational Pattern of Employment in Organised Sector**

These data are collected by the Employment Exchanges (now called Employment and Self-employment Guidance Bureaus) as a part of the Employment Market Information Programme of the Directorate General of Employment and Training in the Union Ministry of Labour. The data collection is partly statutory and partly voluntary, and collected once in two years covering public and private sectors in alternate years. The data (basic returns) are sent in raw form to DGET who processes them centrally and send back the tabulations to the States. Apart from substantial non-response from establishments, there are substantial time lags in collecting the data and their processing at DGET (the last data released relate to 1999). Nor are there any specific instances where these data found significant use of late. The continued collection of these massive data year after year needs to be reviewed. May be a less frequent programme, say once in 5 years, covering a sample of establishments would do. Moreover, with the installation of computers in almost all employment exchanges, the continued use of outmoded form of data transmission needs to be reviewed.

**(3) (Puducherry) Water, sanitation and housing statistics**

The frequency of data collection with respect to the following activities could be reduced from annual to bi-annual: Water and Sanitation Statistics and Housing Statistics. These activities could be undertaken through periodic - bi-annual - sample survey.

**(4) (Rajasthan) Housing, water and sanitation** Data collection and compilation of housing, and water and sanitation statistics could be undertaken biennially

through surveys, rather than the annual frequency of data collection.

## **8 Activities to be Dropped or Outsourced**

These recommendations were made for specific states as follows.

### **(1) (Maharashtra) BPL Surveys**

The BPL related activities may be dropped as perhaps there is no need to take up BPL surveys by the DES thereby duplicating the efforts of Ministries of RDPR and Urban Development/Food and Civil Supplies Departments. RDPR has devised the methods to determine BPL families based on 12 criteria so as to eliminate unreliable and inaccurate data. Similarly, Urban Development Department and Food and Civil Supplies Department of Government of India have also devised the methods to enumerate urban poor (BPL families) based on certain criteria.

### **(2) (Maharashtra) Printing of Publications plus Man Ori Pun Raj**

Printing of publications to be outsourced to ensure timeliness and improved dissemination.

### **(3) (Manipur) Crop area and production statistics**

There is a duplication of work on estimation of crop area and production and collection of wholesale and retail price of all principal crops undertaken by DES and Directorate of Agriculture, Manipur. The methodology for LUS and CES followed by DES is of standard Sample Survey and the outcome of the activities seems to be realistic in nature. If the data quality of DES estimates of crop area and production are found to be better than the data produced by the Directorate of Agriculture, the Directorate of Agriculture may perhaps be relieved of these two activities.

Collection of data on housing statistics and water and sanitation statistics, should be through adhoc surveys. Adequate checks and balances can be built into the system and the possibility of outsourcing these surveys should be explored.

#### **(4) (Meghalaya) Socio-economic Surveys**

Though there is a functional division in the DES tasked with socio-economic surveys, as of now, no surveys have been undertaken. These surveys could be outsourced and conducted at three year intervals following sampling technique to fill up data gaps in the social sector at district/ state level. The surveys should be directed at closing the following data gaps, among others:

1. Percentage of children out of school and reasons thereof
2. Cost of education per child
3. Percentage of fully immunized children
4. Percentage of unmet needs of eligible couples, pregnant women/ nursing mothers getting ANC & PNCs
5. Percentage of deliveries attended by health staff
6. Health expenditure per household
7. Percentage of house holds without safe drinking water, sanitation, and electricity.

#### **(5) (Puducherry) Housing, water and sanitation statistics**

Collection and compilation of housing, and water and sanitation statistics through biennial surveys may be outsourced after constituting a mechanism to ensure proper conduct of the surveys.

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## **Chapter 4 Part III Prioritization of statistical activities**

### **1 Prioritization Criteria**

1 In the DES Report (2007) it is reported that the SSBs and line departments of the states perceive all the twenty core statistical activities as important and of equal priority as the outputs of each of the twenty statistical activities are critical for both macro and micro management of the state's economy through information and knowledge-based policy making and deciding on policy shifts as required by performance of socio-economic indicators measured through the twenty core statistical activities. In terms of guidance on future priorities two options were provided in the DES Report, namely prioritization based on (i) demand for statistical information; and (ii) current quality of statistical output.

### **2 Demand-based Prioritization**

2 The demand-based priorities were established in the DES Report on the basis of perceived demand (need) for statistics by policy makers, researchers and the business community. The demand (need) perceptions were derived from consultations with select government officials and on the basis of *a priori* understanding of the need for data for both macro and micro management of the state economies. The demand (need) for statistics was categorized into high, medium, and low depending upon the criticality of statistics related to a given parameter for policy formulation, development planning, and macro and micro management of the State's economy. Explanation of the assignment of high, medium, or low was given for each of the 20 core statistical series. The explanations are reasonable and rather standard from state to state, although special circumstances in some states are recognized.

### **3 Quality Driven Prioritization**

3 The quality-based prioritization was done in the DES Report on the basis of quality assessment of the 20 core statistical activities using a limited /modified methodology based on the IMF Data Quality Assessment Framework, concentrating on accuracy and reliability indicators. The quality of statistical output was

assessed on a scale of high, medium, and low. After this the statistical activities were prioritized by assigning high priority to low quality statistical activities, medium priority to medium quality statistical activities, and low priority to high quality statistical activities.

#### **4 The results of the Demand-driven prioritization**

4 Overall, virtually all of the 20 core statistical series are completely or predominately assigned high priority in all of the states. The high priority ranking is given in 94 % of instances. In Group I it was 97%, in Group II 87%, and Group III 93%.

5 The only stand-out exception is Electricity production and distribution statistics which was rated as medium priority in 88% of all instances and this was approximately the case in each of the three Groups of states. The other noticeable deviations were the Annual Survey of Industries and the Index of Industrial production which were given low priority by several states in both Groups II and III. Transport statistics was rated of medium and low priority by several states in Groups II and III.

6 Some series in some states were not rated on demand-driven priority, a total of 43 instances or 6% of instances; this is largely explained by some series not being relevant to the economies of some states but also by some presentational issues especially under Environment statistics, where there are variations in how the priorities are reported under the three headings of Environment statistics and its two subheadings, Forestry statistics and Water supply and sanitation statistics.

7 Priorities were assigned to a small number of series outside the 20 core series in some of the states. These priority assignments were uniformly high priority in the three Groups of states.

8 Details are shown in the table below.

**Table 1**

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<b>Demand-driven prioritization</b>														
	<b>Core statistical activities</b>	<b>Group I</b>			<b>Group II</b>			<b>Group III</b>			<b>All Groups</b>			<b>Total</b>
		<b>H</b>	<b>M</b>	<b>L</b>	<b>H</b>	<b>M</b>	<b>L</b>	<b>H</b>	<b>M</b>	<b>L</b>	<b>H</b>	<b>M</b>	<b>L</b>	
1	State Domestic Product Estimates	3	0	0	12	0	0	20	0	0	35	0	0	35
2	Estimate of Capital Formation and Savings	3	0	0	12	0	0	20	0	0	35	0	0	35
3	Estimates of District Domestic Product	3	0	0	12	0	0	20	0	0	35	0	0	35
4	Estimates of the contribution of local bodies	3	0	0	12	0	0	20	0	0	35	0	0	35
5	Data on major fiscal variables	3	0	0	12	0	0	20	0	0	35	0	0	35
6	Annual Survey of Industries	1	0	0	3	0	5	12	0	1	16	0	6	22
7	Index of Industrial Production	1	0	0	2	1	5	13	0	2	16	1	7	24
8	Crop area and production statistics	3	0	0	11	1	0	20	0	0	34	1	0	35
9	Wholesale Price Index	3	0	0	10	1	1	19	0	1	32	1	2	35
10	Consumer Price Index	3	0	0	10	0	2	19	0	1	32	0	3	35
11	Health, morbidity, mortality and family welfare statistics	3	0	0	12	0	0	20	0	0	35	0	0	35
12	Education and	3	0	0	12	0	0	20	0	0	35	0	0	35

12	literacy Statistics Statistic As on educational institutions													
12	School .B enrolment data													
13	Labor and employment statistics	3	0	0	12	0	0	20	0	0	35	0	0	<b>35</b>
13	Labor .A statistics													
13	Employment .B statistics													
14	Housing Statistics	3	0	0	11	1	0	20	0	0	34	1	0	<b>35</b>
15	Birth and death registration statistics and population	3	0	0	12	0	0	20	0	0	35	0	0	<b>35</b>
16	Electricity production and distribution statistics	1	2	0	0	11	0	1	17	2	2	30	2	<b>34</b>
17	Environment and forestry statistics	3	0	0	11	0	0	17	0	0	31	0	0	<b>31</b>
17	Forestry .A Statistics	2	0	0	9	0	0	18	0	0	29	0	0	<b>29</b>
17	Water .B Supply and Sanitation Statistics	3	0	0	12	0	0	20	0	0	35	0	0	<b>35</b>
18	Participation in surveys of the National Sample Survey Org.	2	0	0	6	1	2	20	0	0	28	1	2	<b>31</b>

19	Transport Statistics	3	0	0	10	2	0	16	3	1	29	5	1	<b>35</b>
19	Motor vehicle registration statistics													
19	Road statistics													
19	Traffic accident statistics													
19	Passenger traffic statistics													
20	Statistics for local area planning	3	0	0	12	0	0	16	0	0	31	0	0	<b>31</b>
	<b>Total</b>	<b>58</b>	<b>2</b>	<b>0</b>	<b>21</b>	<b>18</b>	<b>15</b>	<b>39</b>	<b>20</b>	<b>8</b>	<b>66</b>	<b>40</b>	<b>23</b>	<b>72</b>
	<b>Additional areas</b>				<b>5</b>			<b>1</b>			<b>4</b>			<b>7</b>
	Industrial statistics	1	0	0	3	0	0	2	0	0	6	0	0	<b>6</b>
	Gender statistics	0	0	0	0	0	0	3	0	0	3	0	0	<b>3</b>
	Tourism statistics	2	0	0	1	0	0	8	0	0	11	0	0	<b>11</b>
	Services statistics	0	0	0	1	0	0	8	0	0	9	0	0	<b>9</b>
	Fisheries statistics	2	0	0	1	0	0	6	0	0	9	0	0	<b>9</b>
	Disaster Mgt statistics	0	0	0	1	0	0	4	0	0	5	0	0	<b>5</b>

## 5 The results of the quality-driven prioritization

9 Unlike the demand-driven priorities, the quality-driven priorities were, overall, spread across high, medium and low with 57% high, 22% medium and 21 % low priority. The situation by Groups is similar except that in Group I there is a higher incidence of low priority. All Groups have about the same incidence of medium and low quality combined at around 40 %.

**Table 2**

<b>Priorities based on quality-driven prioritization, by Groups of states</b>				
Priority level	Group I	Group II	Group III	All Groups
High	57	61	56	57
Medium	11	19	24	22
Low	32	20	20	21

10 The following series were, over all Groups, most frequently identified as high priority for quality improvements:

Labour and Employment statistics (29 states)  
 Education and literacy statistics (28 states)  
 Forestry statistics (23 states) Health statistics (22 states)  
 Estimates of Capital Formation and Savings (22 states)  
 Estimates of the contribution of local bodies (21 states)  
 Crop Area and Production statistics (20 states)

11 The following series were, over all Groups, least frequently identified as high priority for quality improvements:

Data on major fiscal variables (0 states)  
 Electricity production and distribution (0 states)  
 Transport statistics (0 states)  
 Index of Industrial Production (3 states)  
 Participation in the NSSO surveys (4 states)  
 Annual Survey of Industries (5 states)

12 By Groups the following series were most frequently identified as high priority for quality improvements: Labour and Employment statistics and Education and literacy statistics figure in all three groups as high priority.

#### Group I

Crop Area and Production statistics (2 states)  
 Health statistics (2 states)  
 Labour and Employment statistics (2 states)  
 Education and literacy statistics (2 states)  
 Traffic accident statistics (2 states)

#### Group II

Health statistics (11 states)

Labour and Employment statistics (11 states)  
 Education and literacy statistics (11 states)  
 Forestry statistics (9 states)  
 Crop Area and Production statistics (8 states)

Group III

Motor vehicle registration statistics (20 states)  
 Labour and Employment statistics (16 states)  
 Estimates of the contribution of local bodies (16 states)  
 Education and literacy statistics (15 states)  
 Estimates of capital formation and saving (15 states)

13 Some series in some states were not rated on quality-driven priority, a total of 451 instances or 42% of instances; this is partly explained by some series not being compiled in some states ( on average 10 series are not compiled in Group I states, 5 in Group II states and 3 in Group III states) and consequently no quality rating was possible; also for some series that were compiled no rating was given for example for housing when the main source was the decennial census, and statistics for local area planning when the data is from secondary sources. Also there are some presentational issues under those core activities which have subheading series namely Education and Literacy statistics, Labour and Employment statistics, Environment and Forestry Statistics, and Transport statistics where there are variations in how the priorities are reported under the headings. Adjustment for these reporting issues results in 31% of instances where no rating was assigned.

14 Details are shown in the table below.

**Table 3**

Quality-driven prioritization														
	Core statistical activities	Group I		Group II			Group III			All Groups			Total	
		H	M	L	H	M	L	H	M	L	H	M		L
1	State Domestic Product	0	1	0	6	6	0	2	1	0	8	23	0	31

	Estimates													
2	Estimate of Capital Formation and Savings	0	0	0	7	0	0	15	0	0	22	0	0	<b>22</b>
3	Estimates of District Domestic Product	0	0	0	5	0	0	13	0	0	18	0	0	<b>18</b>
4	Estimates of the contribution of local bodies	1	0	0	4	2	0	16	1	0	21	3	0	<b>24</b>
5	Data on major fiscal variables	0	0	2	0	0	9	0	0	1	0	0	30	<b>30</b>
6	Annual Survey of Industries	1	0	0	0	1	0	4	5	0	5	6	0	<b>11</b>
7	Index of Industrial Production	0	0	0	0	2	0	3	7	1	3	9	1	<b>13</b>
8	Crop area and production statistics	2	0	0	8	4	0	10	8	1	20	12	1	<b>33</b>
9	Wholesale Price Index	0	0	0	2	0	0	3	2	0	5	2	0	<b>7</b>
10	Consumer Price Index	0	0	0	6	0	0	6	3	0	12	3	0	<b>15</b>
11	Health, morbidity, mortality and family welfare statistics	2	1	0	11	1	0	9	9	2	22	11	2	<b>35</b>
12	Education and literacy Statistics	2	0	0	11	0	0	15	0	0	28	0	0	<b>28</b>
12.A	Statistics on educational institutions	1	0	0	1	0	0	2	1	1	4	1	1	<b>6</b>
12.B	School enrolment	1	0	0	1	0	0	2	3	0	4	3	0	<b>7</b>

	data													
13	Labor and employment statistics	2	0	0	11	1	0	16	0	0	29	1	0	<b>30</b>
13.A	Labor statistics	0	0	0	0	0	0	3	0	0	3	0	0	<b>3</b>
13.B	Employment statistics	0	0	0	0	0	0	1	0	2	1	0	2	<b>3</b>
14	Housing Statistics	1	0	0	1	0	0	3	1	1	5	1	1	<b>7</b>
15	Birth and death registration statistics and population	1	1	0	7	5	0	11	8	1	19	14	1	<b>34</b>
16	Electricity production and distribution statistics	0	0	3	0	0	1	0	0	1	0	0	32	<b>32</b>
							0			9				
17	Environment and forestry statistics	0	0	0	1	0	0	0	0	0	1	0	0	<b>1</b>
17.A	Forestry Statistics	1	0	0	9	2	0	13	7	0	23	9	0	<b>32</b>
17.B	Water Supply and Sanitation Statistics	1	0	0	7	4	0	9	9	2	17	13	2	<b>32</b>
18	Participation in surveys of the National Sample Survey Org.	0	0	0	0	1	0	4	5	1	4	6	1	<b>11</b>

19	Transport Statistics	0	0	0	0	0	0	0	1	0	0	1	<b>1</b>	
19.A	Motor vehicle registration statistics	0	0	3	0	1	9	20	0	0	20	1	12	<b>33</b>
19.B	Road statistics	0	0	3	1	3	6	1	3	1	2	6	24	<b>32</b>
19.C	Traffic accident statistics	2	1	0	7	0	2	12	3	4	21	4	6	<b>31</b>
319.D	Passenger traffic statistics	1	0	1	4	2	1	9	1	5	14	3	7	<b>24</b>
20	Statistics for local area planning	2	0	0	3	0	0	8	0	0	13	0	0	<b>13</b>
	<b>Total</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>11</b>	<b>3</b>	<b>3</b>	<b>21</b>	<b>9</b>	<b>7</b>	<b>34</b>	<b>13</b>	<b>12</b>	<b>599</b>
		<b>1</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>4</b>		

### 6 Options for states

15 The demand-driven and quality-driven priorities are offered in the DES Report (2007) as "options" for prioritization of statistical activities; they are not firmly presented as recommendations but they do offer the states some direction when they address priorities within their SSSPs.

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## Chapter 5 Cost estimates for improving the statistical capacity of the States

### 1 Introduction

1 The DES Report (2007) contained cost estimates for additional needed information technology (IT) and physical infrastructure (PI) for improving the statistical capacity of each of the states. These are summarized in the following tables.

### 2 Estimated costs for Information Technology Infrastructure (IT) and Physical Infrastructure (PI)

2 The total estimated costs are 32979 lakhs, with 7522 lakhs for IT and 25475 for PI. The average costs per state vary dramatically with the average for total costs for Group I states at 94 lakhs and rising to 861 lakhs for Group II and 1118 lakhs for Group III. A similar pattern exists for both IT and PI as shown in the following table.

**Table 1**

<b>Total and average costs of IT and PI by Groups of states</b>				
<b>Rs Lakhs</b>				
	<b>Group I</b>	<b>Group II</b>	<b>Group III</b>	<b>All states</b>
Total Costs	282	10333	22364	32979
Average total cost per state	94	861	1118	942
Total IT costs	142	2309	5071	7522
Average IT cost per state	47	192	254	215
Total PI costs	140	8024	17293	25457
Average PI costs per state	47	669	864	727

### 3 Major components of cost

3 In terms of the components of IT and PI the largest single element of cost by far is office space at

21091lakhs which is 64 % of the total. The second largest element of cost is hardware and software for the DSOs and other organizational levels below SSB headquarters at 4747 lakhs or 14% of the total. The order of importance for all items of expenditure is shown below. Office space is consistently the largest item for all Groups. Groups II and III have similar profiles but both are quite different from Group I other than office space being the largest item for all three Groups. See the tables below

**Table 2**

<b>Principal items of cost; all Groups of states</b>	
<b>Rs</b>	
<b>in Lakhs</b>	
Office space	21091
DSO & other levels HW and SW	4747
Vehicles	2131
Office machines & equipment	1862
SSB HW	1297
Line Departments HW and SW	1097
Training Equipment	373
SSB SW	227
Training HW and SW	154

**Table 4**

**Table 5**

<b>Principal items of cost all Group II states</b>	
<b>Rs Lakhs</b>	
Office space	6712
DSO & other levels HW and SW	1169
Vehicles	775
Line Departments HW and SW	589

**Table 3**

<b>Principal items of cost all Group I states</b>	
<b>Rs Lakhs</b>	
Office space	123
SSB HW	62
Line Departments HW and SW	61
DSO & other levels HW and SW	13
Office machines & equipment	11
Vehicles	6
SSB SW	6
Training Equipment	0
Training HW and SW	0

Office machines & equipment	536
SSB HW	451
SSB SW	89
Training HW and SW	11
Training	1

**all Group III states**

**Rs Lakhs**

Office space	14256
DSO & other levels HW and SW	3565
Vehicles	1350
Office machines & equipment	1315
SSB HW	784
Line Departments HW and SW	447
Training	372
Training HW and SW	143
SSB SW	132

#### 4 Details of IT and PI costs for each state and Groups of states

4 Detailed tables of the cost elements follow.

**Table 6**

<b>Cost estimates for IT Infrastructure and Physical Infrastructure</b>			
<b>Rs Lakhs</b>			
<b>State</b>	<b>IT Infrastructure</b>	<b>Physical Infrastructure</b>	<b>Total</b>
<b>Group I</b>			
And Nicobar &	89	98	187
Dadra & Nagar H	40	-	40
Lakshadweep	13	42	55
<b>Total</b>	<b>142</b>	<b>140</b>	<b>282</b>
<b>Group II</b>			
Arunach Pradesh	202	1,598	1,800
Bihar	328	1,495	1,823
Chandigarh	19	28	47
Jharkhand	138	1,090	1,228
Madhya Pradesh	464	720	1,184
Manipur	171	-	171
Mizoram	217	279	496
Nagaland	140	932	1,072
Puducherry	78	439	517
Punjab	252	1,338	1,5890
Sikkim	88	-	88
Tripura	212	105	317

<b>Total</b>	<b>2309</b>	<b>8024</b>	<b>10333</b>
<b>Group III</b>			
Andhra Pradesh	293	1,156	1,449
Assam	330	1,081	1,411
Chhattisgarh	201	362	563
Daman & Diu	34	0	34
Delhi	75	218	293
Goa	44	178	222
Gujarat	199	47	246
Haryana	185	1,558	1,743
Himachal Pradesh	154	820	974
Jammu & Kash	211	1,138	1,349
Karnataka	351	1,653	2,004
Kerala	165	631	796
Maharashtra	495	584	1,079
Meghalaya	141	366	507
Orissa	476	1235	1711
Rajasthan	334	807	1,141
Tamil Nadu	225	2,087	2,312
Uttar Pradesh	827	759	1,586
Uttarakhand	100	1000	1,100
West Bengal	231	1,613	1,844
<b>Total</b>	<b>5071</b>	<b>17293</b>	<b>22364</b>
<b>Grand Total</b>	<b>7522</b>	<b>25457</b>	<b>32979</b>

**Table 7**

<b>Cost Estimates of Physical Infrastructure Rs Lakhs</b>						
<b>State</b>	<b>Office Space</b>	<b>Office Mach</b>	<b>Equipm ent</b>	<b>Vehicl es</b>	<b>Traini ng</b>	<b>Total</b>
<b>Group I</b>						
And & Nicoba	98					98
D&NH					Incl in IT	0

Lakshadweep	25		11	6		42
<b>Total</b>	<b>123</b>		<b>11</b>	<b>6</b>		<b>140</b>
<b>Group II</b>						
Arun Pradesh	1438		98	61	1	1598
Bihar	1221		62	212		1495
Chandigarh	15		8	5		28
Jharkhand	1020		38	32		1090
Madhya Prad	360	125	19	216		720
Manipur						Needed but not estimated
Mizoram	208	24	6	41		279
Nagaland	840	32	6	54		932
Puducherry	390	22	Incl in OM	27		439
Punjab	1158	76	Incl in OM	104		1338
Sikkim						Needed but not estimated
Tripura	62	14	6	23		105
<b>TOTAL</b>	<b>6712</b>	<b>293</b>	<b>243</b>	<b>775</b>	<b>1</b>	<b>8024</b>
<b>GROUP III</b>						
Andhra Prad	1000	131	Incl in OM	25		1156
Assam	840	77	6	158		1081
Chattisgarh	270	0	11	81		362
Daman & Diu						0
Delhi	218	0	0	0		218
Goa	178					178

Gujarat	24				23	47
Haryana	1365	76	Incl in OM	117		1558
Himachal Pradesh	705	52	Incl in OM	63		820
Jammu&Ka sh	1013	71	Incl in OM	54		1138
Karnarta ka	1477	144	Incl in OM	32		1653
Kerala	150	207	Incl in OM	274		631
Maharash tra	460	34	Incl in OM	90		584
Meghalay a	310	18	6	32		366
Orissa	1210				25	1235
Rajastha n	592	47	15	153		807
Tamil Nadu	1428	168	Incl in OM	167	324	2087
Uttar Pradesh	539	220				759
Uttarakh and	975		11	14		1000
West Bengal	1502	21		90		1613
<b>Total</b>	<b>1425 6</b>	<b>1266</b>	<b>49</b>	<b>1350</b>	<b>372</b>	<b>17293</b>
<b>Grand Total</b>	<b>2109 1</b>	<b>1559</b>	<b>303</b>	<b>2131</b>	<b>373</b>	<b>25457</b>

**Table 8**

<b>Cost Estimates of Information Technology Infrastructure Rs Lakhs</b>						
<b>State</b>	<b>SSB Hardwa re</b>	<b>SSB Softwa re</b>	<b>DSO &amp; other level s HW&amp;SW</b>	<b>Line Departmen ts HW&amp;SW</b>	<b>Traini ng HW&amp;SW</b>	<b>Tota l</b>
<b>GROUP I</b>						
And&Nicob ar	26	1	13	49		89
D&NH	25	3		12		40
Lakshadwe	11	2				13

ep						
<b>TOTAL</b>	<b>62</b>	<b>6</b>	<b>13</b>	<b>61</b>		<b>142</b>
<b>GROUP II</b>						
Arun Pradesh	31	3	112	56		202
Bihar	42	46	191	49		328
Chandigarh	9	3		7		19
Jharkhand	31	2	83	22		138
Madhya Prad	39	19	283	112	11	464
Manipur	67	2	58	44		171
Mizoram	18	3	75	121		217
Nagaland	59	2	67	12		140
Puducherry	41	2	23	12		78
Punjab	44	3	193	12		252
Sikkim	20	2	26	40		88
Tripura	50	2	58	102		212
<b>TOTAL</b>	<b>451</b>	<b>89</b>	<b>1169</b>	<b>589</b>	<b>11</b>	<b>2309</b>
<b>GROUP III</b>						
Andhra Prad	35	9	199	20	30	293
Assam	54	2	215	59		330
Chattisgarh	39	3	146	13		201
Daman & Diu	19	3		12		34
Delhi	39	18	0	7	11	75
Goa	27	3		14		44
Gujarat	108	26		65		199
Haryana	47	3	131	4		185
Himachal Pradesh	48	3	93	10		154
Jammu&Kash	39	6	105	28	33	211
Karnataka	22	3	326	0		351
Kerala	22	3	140	0		165
Maharashtra	61	32	337	65		495
Meghalaya	29	3	71	38		141

Orissa	62	3	305	69	37	476
Rajasthan	29	3	292	10		334
Tamil Nadu	26	3	164	0	32	225
Uttar Pradesh	0	0	807	20		827
Uttarakhand	15	3	69	13		100
West Bengal	63	3	165			231
<b>Total</b>	<b>784</b>	<b>132</b>	<b>3565</b>	<b>447</b>	<b>143</b>	<b>5071</b>
<b>Grand Total</b>	<b>1297</b>	<b>227</b>	<b>4747</b>	<b>1097</b>	<b>154</b>	<b>7522</b>

Karnataka: 0 for line departments due to the adequacy of resources in place

Kerala: 0 for line departments due to the adequacy of resources in place

Tamil Nadu: 0 for line departments due to the adequacy of resources in place

Uttar Pradesh: 0 no additional is recommended

#### **5 Additional costs to be taken into account (hardware maintenance and upgrades, solid cell batteries and site hosting charges**

5 Footnotes in DES Report (2007) indicated that the following costs have to be factored in: Annual maintenance costs @ 12-15% of hardware value every year, Hardware upgrades @ 20% of hardware value every year, Solid cell batteries @ 20% of UPS, and Site Hosting Charges @ Rs.10,000/- per year. These costs were not calculated for the DES Report but they are calculated here as they are legitimate additional operating costs which need to be taken into account in the planning process (even if they are not to be covered under the ISSP funding process). These are additional costs, on top of current operating costs. They are shown in Tables below.

6 For calculation purposes it is assumed that all of the estimated hardware requirements will be acquired in the first year. The estimated hardware requirements are

made up of SSB Hardware (from the table above) plus 85 % of the DSO and other levels, line departments, and training hardware and software totals (from the table above) ( the 85% is derived as the percentage that hardware comprises of the hardware and software totals at DES also shown in the table above). UPS costs were extracted from Chapter 6 of the 35 Reports. Site hosting charges have been rounded up to 1 lakh per plan (5 year ) period. The costs are presented as five year totals corresponding to a plan period of five years.

7 These costs are not insignificant. The total estimated costs are 10340 lakhs over a five year period, with 5080 lakhs for hardware upgrades and 4768 lakhs for hardware maintenance. The average costs per state vary dramatically with the average for these costs for the Group I states at 68 lakhs and rising to 262 lakhs for Group II and 350 lakhs for Group III. A similar pattern exists for each of hardware maintenance, hardware upgrades and solid cell batteries, as shown in the following table. Among these categories of costs, hardware maintenance and upgrades are by far the biggest and this is the case for all three Groups of states.

**Table 9**

<b>Total and average costs of hardware maintenance, hardware upgrades, and solid cell batteries by Groups of states</b>				
	<b>Rs Lakhs</b>			
	Group I	Group II	Group III	All states
Total Costs	204	3144	6992	10340
Average total cost per state	68	262	350	295
Total HW Maint costs	93	1462	3213	4768
Average HW Maint cost per state	31	122	161	136
Total HW upgrade cost	100	1556	3424	5080
Average HW upgrade costs per state	33	130	171	145
Total solid	8	114	335	457

cell costs	batt				
Average cell costs per state	solid battery per	3	10	17	13

8 A detailed table of these cost elements follows.

**Table 10**

**Cost Estimates for hardware maintenance and upgrades, solid cell batteries and site hosting: totals over five years:**

**Rs Lakhs**

State	Est of Hardware	Est of UPS	Maint (5 times 15% of HW)	Hardware Upgrade (4 times 20% of HW)	Solid Cell Batteries (5 times 20% of UPS)	Site Host Costs 1000 Rs pa	Total
<b>Group I</b>							
And Nicob	79	5	59	63	5	1	128
D&NH	35	2	26	28	2	1	57
Lakshadweep	11	1	8	9	1	1	19
<b>Total</b>	<b>125</b>	<b>8</b>	<b>93</b>	<b>100</b>	<b>8</b>	<b>3</b>	<b>204</b>

<b>Group II</b>							
Arun Pradesh	174	6	131	139	6	1	277
Bihar	246	4	185	197	4	1	387
Chandigarh	15	1	11	12	1	1	25
Jharkhand	120	3	90	96	3	1	190
Madhya Prad	375	27	281	300	27	1	609
Manipur	154	12	116	123	12	1	252
Mizoram	185	17	139	148	17	1	305
Nagaland	126	8	95	101	8	1	205
Puducherry	71	3	53	57	3	1	114
Punjab	218	22	164	174	22	1	361
Sikkim	76	4	57	60	4	1	122
Tripura	186	7	140	149	7	1	297
<b>TOTAL</b>	<b>1946</b>	<b>114</b>	<b>1462</b>	<b>1556</b>	<b>114</b>	<b>12</b>	<b>3144</b>
<b>GROUP III</b>							
Andhra Prad	237	36	178	190	36	1	405
Assam	287	8	215	230	8	1	454
Chattisgarh	174	17	131	139	17	1	288
Daman & Diu	29	1	22	23	1	1	47
Delhi	54	5	41	43	5	1	90
Goa	39	4	29	31	4	1	65
Gujarat	163	1	122	130	1	1	254
Haryana	162	22	122	130	22	1	275
Himachal Pradesh	136	19	102	109	19	1	231
Jam&Kash	180	16	135	144	16	1	296
Karnataka	299	3	224	239	3	1	467

Kerala	141	3	106	113	3	1	223
Maharashtra	408	39	306	326	39	1	672
Meghalaya	122	7	92	98	7	1	198
Orissa	380	40	285	304	40	1	630
Rajasthan	286	32	215	229	32	1	477
Tamil Nadu	193	4	145	154	4	1	304
Uttar Pradesh	703	45	527	562	45	1	1135
Uttarakhand	85	9	64	68	9	1	142
West Bengal	203	24	152	162	24	1	339
<b>Total</b>	<b>4276</b>	<b>335</b>	<b>3213</b>	<b>3424</b>	<b>335</b>	<b>20</b>	<b>6992</b>
<b>Grand Total</b>	<b>6347</b>	<b>457</b>	<b>4768</b>	<b>5080</b>	<b>457</b>	<b>35</b>	<b>10340</b>

## 6 Cautions on the cost estimates

9 The estimates need to be treated with caution, and as order of magnitude, rather than actual estimates of costs. Observation of the cost estimates in the 35 state reports in the course of preparing this report raises some concerns about the accuracy, consistency and completeness of some of the cost estimate data. For example for several states in Chapter 8 of the reports statements are made about the needs for office equipment, vehicles etc but no cost estimate figures are produced; for some states IT cost estimates are duplicated in the PI figures; estimates for training equipment and HW and SW for training are absent from most states; UPS requirements are missing from many of the estimates of requirements at DSO and other levels below the SSB headquarters. Some corrections were made to delete the duplication of IT figures in the PI figures. Blanks and zeros in the tables above may reflect "additional resources not needed " or "additional resources needed but estimates not included in the DES Report (2007)". The estimates are taken as given in the DES Report (2007) and were not subject to assessment. The formulas for calculating maintenance costs, upgrade costs etc were taken as given and not

subject to assessment. A footnote in the DES Report (2007) indicates that prices used in calculating the costs were street prices as at October 11, 2006 in New Delhi; estimates would have to be updated because of the passage of time and technology changes.

**7 Additional cost items not reflected in the DES Report (2007)**

10 Additional costs to be included in any state strategic statistical plan include costs for coordination, statistical infrastructure, technical advice on statistical operations such as implementing technical recommendations to fill gaps and improve statistical capacity, and technical advice on improving operations. These were not estimated in the DES Report (2007).

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## **Chapter 6 Conclusions**

### **1 Summary Conclusion**

1 The 35 state reports, referred to as the DES Report (2007), contain facts, assessments and recommendations largely related to 20 core statistical activities of the states, but frequently extending beyond those 20 activities. A comprehensive approach to improving statistical capacity for all statistical activities will need to address not only those statistical activities covered in the Reports, but also those additional activities of the SSBs and the line departments, which were listed in the reports, mainly in Chapter 3, and were judged to be considerable, but were not assessed.

2 The reports were prepared using a sound methodology.

3 The recommendations on IT, PI and human resources are supported by clear arguments.

4 The reports identify data gaps and provide specific recommendations for each state on bridging those gaps, and strengthening the state statistical system to improve the quality of the statistical activities or to initiate those activities which are not already undertaken. For some states there are recommendations on activities to be undertaken with less frequency, and activities to be dropped or outsourced. Although the specific recommendations were made for a particular state they may be relevant to the needs of other states and generate new thoughts on solutions in states. Also many of these recommendations are extensions or more detailed expressions of common recommendations and so should be of interest to all states especially in terms of implementing common recommendations. The states will need to review the assessments and stated gaps, and reassess the recommendations in the DES Report (2007) in the light of updated priorities and in the context of developing their SSSPs.

5 There is a preponderance of attention given to assessment and recommendations on IT, physical infrastructure and human resources and less on

operational issues. This balance will have to be addressed in the SSSPs.

6 The reports reflect many of the state-oriented recommendations of the NSC Report of 2001.

7 The recommendations provide directions on the general support needed by all the states such as additional staff, training, IT, PI, and other requirements (Common Recommendations set out in Chapter IV Part 1 above), and specific support for individual states as well (Unique Recommendations set out in Chapter IV Part 2 above). There is a lot of identical/similar content in the recommendations in the 35 reports. Based on the recommendations in these reports individual state plans will have a large number of similarities, supplemented by some unique elements and differences in timing and priorities.

8 The reports suggest that priorities at the state level have not been set sufficiently selectively; a more discriminating approach to setting priorities will need to be developed in the context of developing the SSSPs

9 A proposal is made in Chapter 3 on a national benchmark for norms and performance standards for the state statistical system.

10 Estimates of the costs of implementing the recommendations on IT and PI contained in the 35 reports are also in those reports. They are reflected in Chapter 5 above. They need to be treated with caution, and as order of magnitude, rather than actual estimates of costs.

11 More details on the above and some additional conclusions follow.

## **2 The coverage of activities.**

12 The reports cover the activities of the SSBs and the line departments, related to the 20 core statistical activities and to some other series that are important in some or many states and compiled for their own state policy purposes. eg fisheries are added for some

states, and tourism statistics where tourism is especially important for a state economy. Gender statistics are recommended in some/many reports; as this field of statistics is relevant to all states; the question arises as to why is it not uniformly recommended; similarly for services statistics.

13 The reports recognize and list the additional (significant) activities of the SSBs and line departments but subsequent assessment and recommendations in the reports are largely restricted to the core activities. This is not a problem provided that decision-makers and planners keep this in mind, and recognize that to cover all the statistical activities at state level requires additional analysis focusing on the additional statistical activities both of the SSBs and the line departments. Any support that is provided in relation to work on the 20 core activities eg training, IT, accommodation, etc. can have positive flow-over effects for the other activities. The state reports mainly indicate that the SSBs are not very effective in carrying out their assigned nodal responsibility for coordination; given the importance of effective coordination, the recommendations on enhancing the role of the SSB is appropriate. Ideally all the statistical activities of a state should be included in a SSSP. The importance of legislative support for statistical activities at state level can not be over emphasized.

### **3 The methodology adopted for preparing the reports.**

14 The methodology was sound. It involved a structured questionnaire that was reviewed by MOSPI and sent to the SSBs and line departments concerned with statistics pertaining to the core statistical activities, visits to the state offices and discussions with concerned officials to obtain their qualitative assessments, visits to and reviews of selected DSOs covering both ends of performance level, and reviews of drafts and comments by the states and a Task Force/Review Committee.

### **4 Observations on the assumptions underlining the estimates of IT requirements**

15 The assessment was made on the basis of the volume of data handled and the related data processing workload of the operational staff, and the need to access IT resources by the supervisory staff and top management. Explanations are provided separately for the estimates of servers, desktop computers, laser printers, desk-jet printers, line printers, scanners, UPS, backup devices, other equipment (projector and notebook, GIS workstations), LAN, internet connectivity and websites. The explanations are reasonable (but probably debatable) eg for desktops all officers in group A should have a PC and printer, all functional IT staff one PC each, statistical and administrative cells one PC for each two staff at grade B, and one computer for each four grade C staff. One colour laser printer and heavy duty network printer for each SSB state office, LAN for each office, broadband internet for each office, and a website for each SSB. The assessments also covered the needs of the line departments for their statistical work. The reports also addressed training in IT and recommended a comprehensive programme which is largely similar for each state.

16 The pricing is listed as street prices of a specified date, Oct 11 2006 at Delhi. Also the following costs have to be factored in (over time) : annual maintenance at 12-15 % of hardware value every year; hardware upgrade at 20% of hardware value every year, solid cell batteries at 20% of UPS, and site hosting charges of 10,000 rupees a year.

17 Overall, the approach used is methodical and sound, and useful for initial planning purposes. Some state governments are reported as being especially committed to improving the IT facilities for government including statistics. Training facilities and equipment for IT training were not consistently addressed for all states as seen in Chapter 5 Table 8.

18 The approach and estimates for IT should be reviewed and updated especially for IT training facilities as part of preparing a SSSP.

## **5 Observations on estimates for Physical Infrastructure**

19 Additions to and improvements in office facilities at all levels of the SSB are by far the largest single resource cost recommended in the 35 reports; justifications are presented for each estimated state requirement. Provision for general training facilities and equipment does not appear to have been consistently addressed across the states, as is apparent in Chapter 5 Table 7 of this report.

## **6 Observations on the assumptions underlining the estimates of HR requirements**

20 The estimates reflect:

(i) Strengthening the state statistical systems (SSS) through improving the quality of statistical outputs and timeliness of dissemination; this involves overcoming the defects in quality and time lags which had been set out for each of the 20 core statistical activities in Chapter 4 of the DES Report (2007) as described in Chapter 7 of that Report; it includes participation in the core statistical activities that are not presently undertaken by some states.

(ii) Increasing capacity /capability of the SSS to effectively respond to new demands arising from internal Indian economic and governance reform processes like privatization and devolution of power and authority to local bodies, and external factors like globalization.

(iii) the increased use of IT.

21 The approach assessed the HR needs on the basis of an assessment of staff days required for data collection, transmission of raw data, scrutiny and validation. supervision, compilation, tabulation, analysis and report writing and dissemination of data. The time inputs were converted into staff numbers on the assumption that 260 staff days of input are equivalent to one staff working full time for a year. Estimates are provided for the various levels of staff needed. A concrete explanation is provided for the estimates for each of the core activities. Experience of each of the SSBs is taken into account in making the estimates.

22 Overall the approach is methodical, and useful for initial planning purposes. In addition to the issue of

numbers of staff there are many calls in the state reports to upgrade the level of certain statistical staff particularly heads of DSOs; the arguments for this seem plausible. The realities concerning constraints on recruitment of additional staff need to be taken into account as this factor would be a major influence on the contents of any SSSP. The approach and estimates should be reviewed and updated as part of preparing a SSSP.

### **7 Key data gaps and approaches to filling the gaps**

23 Data gaps are listed for many of the statistical series; these are in terms of absence of a particular statistical activity in the state, incomplete coverage in relation to the technical specifications, poor quality of data collection, supervision, and scrutiny, insufficiently frequent data collection, subsets of data available from different sources but no integrated source, etc; they are rather standard from state to state.

24 The technical measures for bridging the data gaps and improving the statistical capacity of the states are also rather standard across states; sometimes there is no tight connection between the list of gaps and the list of recommended activities in any particular state report. In particular, in some cases a gap may be that the state does not undertake one or more of the 20 core statistical activities, but a recommendation on initiating that activity is missing; for example in Chapter 4 of the reports, quality defects, gaps, and time lags are listed in relation to participation in the NSSO Rounds and the statistical series of the line departments, but notable in their absence from the recommended actions are participation in the NSSO Rounds and processing the results (recommended in one state), education statistics, data on major fiscal variables, and labour and employment. Also a gap may be specified for a particular statistical activity but the recommended action may be on some other aspect of that statistical activity. While there could be reasons for these situations - the DES Report indicates that the recommendations are not exhaustive but are suggested for closing gaps in respect of some of those statistics that are of paramount importance - they need to be

investigated where they appear. The recommendations also are sometimes not compatible with the demand-driven and quality-driven prioritization analysis (see section 11 below). The above kinds of deficiencies noted, the reports do provide substantial recommendations and a basis for each state to develop a comprehensive approach to raising their capabilities in relation to the 20 statistical activities.

25 Recommended activities to raise quality are generally in Chapter 9.6, Chapter 10.3, and Position Paper Sections 4.1 and 4.2 but they are not the same in each and there does not seem to be a clear rationale for the differences. For the purposes of the current report the list from Position Paper Sections 4.1 and 4.2 was taken for the reporting on these activities in Chapter 4 of the present report. However these various sources would need to be reconciled for any further strategic planning work. For some states there are recommendations on activities to be undertaken with less frequency, and activities to be dropped or outsourced; these recommendations deserve consideration, especially considering the resource constraints on the state statistical systems..

26 Basically, in preparing the SSSP there needs to be a comprehensive run through of the quality assessment, deficiencies, absence of statistical activities, and updated priorities and a reassessment of the recommended actions, taking account of the work of all the statistics-producing entities in the state, principally the SSB and the line departments.

### **8 Balance among important issues**

27 There is a preponderance of attention given to assessment and recommendations on IT, physical infrastructure and human resources and less on operational issues such as improvement and further development of statistical infrastructure and strategies to change operations to deal with staff constraints by for example improved and expanded use of administrative records, reduction of sample size, use of sampling instead of censuses, review of precision needed in estimates for the purposes for which they will be used, review of schedules and so on.

Additional attention could have been given to improving the efficiency and effectiveness of statistical operations by, in part, reengineering the organization structure and operations. This imbalance would require attention in developing the SSMP and would be addressed in part by actions to improve the survey capability of the states and their IT and human resources capacity to tabulate and disseminate the survey data, and ensuring improvement in the widespread existing system of administrative statistics and full use of additional administrative data and ensuring their timely flow from the states to the CSO and central line ministries, as appropriate.

### **9 NSC Report**

28 Selected recommendations of the NSC Report of 2001 are listed verbatim in the DES Report (2007) in many areas (without citing the NSC Report). Some of the NSC recommendations that are incorporated include: develop capabilities to tabulate data on demand and to analyse data from different sources, fully exploit the potential of the their (SSBs) participation in the NSS Rounds, create a separate Department of Statistics in the states, empower SSBs to undertake a technical review of the statistical activities of all departments every year, create a common statistical cadre, and establish strong communication links among all the important statistical institutions. It would have been positive to see also references to other NSC recommendations such as those relating to improving administrative records for statistical purposes, and creating sample survey divisions to create or improve sample survey capabilities, both of which are important in situations of constraints on staff numbers.

### **10 The reports have a lot of identical/very similar content**

29 Based on the reports, all the states require enhancements in each of seven areas ie reform in business rules, legislation, policy and regulation, HR increases and development, IT, other physical infrastructure, statistical infrastructure, statistical operations in line with international standards and with improved efficiency and effectiveness, and coordination and management.

30 Given the similarities of the reports the state strategies for statistical development will have many common recommendations along with some unique variation in some cases where a unique situation may be known to exist or where priorities and timing may differ. All the following are similar or identical: Gaps, demand based priorities, recommended fields of action, lateness of data, recommended training programmes (which are extensively laid out in a common programme for all states for statistics, management and IT), management challenges, technical challenges, dissemination recommendations, recommendations on statistical cadre, observations on the SSB as nodal agency, representation of director of SSB, and improving coordination.

31 Distinctions can be drawn among the states on the number of the core activities not undertaken by each state, the number of statistical activities that the SSB is involved in, the number of statistical activities classified as of high, medium or low quality, the number of human resources and the size of the gap between available and optimum levels of human resources, and the number of recommendations for technical measures for bridging data gaps and strengthening the state statistical system and other measures. Other differences are identified eg existence or not of a web site, a training institute, SSB declared a data warehouse, existence of a Cartographic Unit, existence of a statistics cadre, experience in pooling of survey data, and others.

32 When the states are considered according to the three Groups, patterns in their characteristics do appear for several of the factors listed above such as core statistical series not compiled, percent of series judged to be of low quality, responsibilities of the SSB for core series, the size of the SSB in terms of human resources, and the size of the gap between available and estimated optimum levels of human resources, which may provide some direction for defining some Group-based statistical development strategies.

## 11 Observations on the prioritization of the statistical activities

33 As stated in the reports all states consider all the 20 core statistical activities to be of equal priority. This is not particularly useful for any kind of strategic decision making. The approach adopted in the reports to infer current actual priority rankings from actual resource allocations is interesting and does differentiate among the 20 core statistical activities.

34 Virtually all state reports have the same/similar profile under **Demand-based priorities**. Most are high. The basis for the assignment is standard from state to state and reflects general arguments on the need for certain sets of statistics for policy purposes. Mention is made of a range of international and national policy plans eg health, education, local area planning, housing for all, and water sector reform. In some cases the argument for the field of statistics is the same but the assignment of the priority level is different and no explanation is given as to what additional factors were taken into account. Demand-based priorities were also assigned to several activities beyond the 20 core statistical activities. Overall this prioritization is not sufficiently discriminatory to help the allocation of resources across various fields of statistics in a strategic planning context.

35 The **Quality-driven prioritization** is more varied from state to state reflecting the different assessment of the quality of the series in each state using a limited/modified IMF DQAF analysis concentrating on accuracy and reliability indicators. The results where all three Groups of states have about the same percentage of their statistical activities classified as medium or low quality (around 40%) is somewhat counter intuitive. There is some inconsistency in the results of the quality-driven prioritization and the recommendations for bridging the data gaps and improving the capacity of the state statistical systems; for example Labour and Employment Statistics and Education and Literacy Statistics are among the most frequently assigned high priority for needing their quality improved but recommendations to that effect are not in the final recommendations for action.

36 The Demand-driven approach would need to be refined further to differentiate among the 20 core activities. The Millenium Development Goals might be highlighted in any future work on demand-driven priorities (they are "mentioned" in the reports). The Quality-driven approach is potentially valuable for future decisions for the states if the reconciled with other recommendations in the DES Report (2007). The reports caution that low and medium quality activities should not be strengthened at the expense of high quality activities. No specific recommendations are made about changing priorities in the state operations, but the presentation of the Demand-driven and Quality-improvement-driven priorities perhaps offers the states some direction when they do address priorities within their SSSPs.

## **12 The proposed national benchmark for norms and performance standards for the SSS**

37 It is important that consistent standards be applied in all the states; the national benchmark recommended in Chapter 3 above reflects good statistical practice consistent with international standards. The benchmark will permit good statistics to be produced for state level purposes, it will provide for as uniform as possible statistical results across the states and useful interstate comparability, and upon aggregation provide good quality national statistics. The benchmark ,as proposed, allows for states to approach the long term objective at different rates and with different emphasis on the various elements of the national benchmark.

## **13 Estimates of cost**

38 Estimates of the costs of implementing the recommendations on IT and PI contained in the 35 reports are also in those reports. They are reflected in Chapter 5 above. They need to be treated with caution, and as order of magnitude, rather than actual estimates of costs. Observation of the cost estimates in the 35 state reports in the course of preparing this report raises some concerns about the accuracy, consistency and completeness of some of the cost estimate data, for example in some states there is a

statement that additional office equipment and vehicles are needed but these are not carried forward into the cost estimates.

39 A footnote in the DES Report (2007) indicates that prices used in calculating the costs were street prices as at October 11, 2006 in New Delhi; estimates would have to be updated because of the passage of time and technology changes. Additional costs to be included in any state strategic statistical plan include costs for coordination, statistical infrastructure, and statistical operations including any technical advice needed on statistical operations such as implementing technical recommendations to fill gaps and improve statistical capacity, and technical advice on improving operations. These were not estimated in the DES Report (2007) and the present report but indicative figures are included in draft Strategic Statistical Plan also before the Workshop.

### **Additional conclusions**

#### **14 Analysis at the district and lower level**

40 A good description is given of the responsibilities and activities of SSBs. District level analysis was supported by a visit to and review of two districts from each state. This approach was practical and gives an indication of the situation at district level. The reports recognize the importance of activities below the District level, and in fact at the lowest administrative level, and the need for improving the connectivity among the various administrative levels in the state statistical systems.

#### **15 Staff allocation to the 20 core statistical series**

41 In many states the recommendation is made that no staff be allocated to housing statistics, and water supply and sanitation and that the statistics should be obtained from ad hoc surveys. This recommendation seems at odds with the importance of water supply and sanitation in public policy and the recommendations on housing statistics (that surveys should be conducted and the SSB should become the central single source of all housing statistics).

#### **16 Need for advocacy for statistics**

42 This aspect was not mentioned in the Terms of Reference for the DES Report (2007) and consequently is absent from the reports. However as pointed out in Chapter 4 Part II para 71 of the present report the SSS should engage in advocacy aiming for a more statistically aware/ numerate population. This process creates demand for statistics and encourages government to be accountable and to give appropriate priority to statistics in the budget process. Statistical advocacy should be done at every level, but especially at the highest level of state government. Advocacy should be given explicit attention in the SSSP

### **17 Implementation issues**

43 How to implement the recommendations was not addressed in the 35 state reports. This will require a lot of attention in the planning process. It involves such things as obtaining commitment from all levels of staff to the plan and to make changes as needed, obtaining and using technical advice on quality improvement, programme management including realistic timeframes, determining how to carry out the necessary training programmes, re-engineering the organization structure and statistical operations, and other issues. Particular attention will need to be paid to how to enable the SSBs to play a more active role in technical cooperation with all state departments. The NSC Report considered this to be very important; many relevant recommendations are in the DES Report but how to effectively implement them will be a challenge.

**Benchmarks for norms and performance standards for states using the Data Quality Assessment Framework**

(elements that are underlined are those that are proposed for the national benchmark in the short term or as the less demanding long-term national benchmark)

**0. Prerequisites of quality**

**0.1 Legal and institutional environment**—*The environment is supportive of statistics*

0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified.

0.1.2 Data sharing and coordination among data-producing agencies are adequate.

0.1.3 Individual reporters' data are to be kept confidential and used for statistical purposes only.

0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.

**0.2 Resources**—*Resources are commensurate with needs of statistical programs*

0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs.

0.2.2 Measures to ensure efficient use of resources are implemented.

**0.3 Relevance**—*Statistics cover relevant information on the subject field.*

0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.

**0.4 Other quality management**—*Quality is a cornerstone of statistical work.*

0.4.1 Processes are in place to focus on quality.

0.4.2 Processes are in place to monitor the quality of the statistical program.

0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.

**1. Assurances of integrity** *The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.*

**1.1 Professionalism**—*Statistical policies and practices are guided by professional principles.*

1.1.1 Statistics are produced on an impartial basis.

1.1.2 Choices of sources and statistical techniques as well as decisions about dissemination are informed solely by statistical considerations.

1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.

**1.2 Transparency**—*Statistical policies and practices are transparent.*

1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.

1.2.2 Internal governmental access to statistics prior to their release is publicly identified.

1.2.3 Products of statistical agencies/units are clearly identified as such.

1.2.4 Advanced notice is given of major changes in methodology, source data, and statistical techniques.

**1.3 Ethical standards**—*Policies and practices are guided by ethical standards.*

1.3.1 Guidelines for staff behavior are in place and are well known to the staff.

**2. Methodological soundness** *As far as possible, the methodological basis for the statistics follows (CSO technical specifications which should in turn be in accordance with) internationally accepted standards, guidelines, or good practices.*

**2.1 Concepts and definitions**—*Concepts and definitions used are in accordance with (CSO technical specifications which should in turn be in accordance with) internationally accepted Statistical frameworks.*

2.1.1 The overall structure in terms of concepts and definitions follows (CSO technical specifications which should in turn be in accordance with) internationally accepted standards, guidelines, or good practices.

**2.2 Scope**—*The scope is in accordance with (CSO technical specifications which should in turn be in accord with) internationally accepted standards, guidelines, or good practices.*

2.2.1 The scope is broadly consistent with (CSO technical specifications which should in turn be in

accordance with) internationally accepted standards, guidelines, or good practices.

**2.3 Classification/sectorization**—*Classification and sectorization systems are in accordance with (CSO technical specifications which should in turn be in accordance with) internationally accepted standards, guidelines, or good practices.*

2.3.1 Classification/sectorization systems used are broadly consistent with (CSO technical specifications which should in turn be in accordance with) internationally accepted standards, guidelines, or good practices.

**2.4 Basis for recording**—Flows and stocks are valued and recorded according to (CSO technical specifications which should in turn be in accordance with) internationally accepted standards, guidelines, or good practices

2.4.1 Market prices are used to value flows and stocks.

2.4.2 Recording is done on an accrual basis.

2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.

**3. Accuracy and reliability** *Source data and statistical techniques are sound and statistical outputs sufficiently portray reality*

**3.1 Source data** - *Source data available provide an adequate basis to compile statistics.*

3.1.1 Source data are obtained from comprehensive data collection programs that take into account state/country-specific conditions.

3.1.2 Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required.

3.1.3 Source data are timely.

**3.2 Assessment of source data**—*Source data are regularly assessed.*

3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.

**3.3 Statistical techniques**—*Statistical techniques employed conform to sound statistical procedures*

3.3.1 Data compilation employs sound statistical techniques to deal with data sources.

3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.

**3.4 Assessment and validation of intermediate data and statistical outputs**—*Intermediate results and statistical outputs are regularly assessed and validated.*

3.4.1 Intermediate results are validated against other information where applicable.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

3.4.3 Statistical discrepancies and other potential indicators or problems in statistical outputs are investigated.

**3.5 Revision studies**—*Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.*

3.5.1 Studies and analyses of revisions are carried out routinely and used internally to inform statistical processes (see also 4.3.3).

**4. Serviceability Statistics**, *with adequate periodicity and timeliness, are consistent and follow a predictable revisions policy.*

**4.1 Periodicity and timeliness**—*Periodicity and timeliness follow internationally accepted dissemination standards.*

4.1.1 Periodicity follows dissemination standards.

4.1.2 Timeliness follows dissemination standards.

**4.2 Consistency**—*Statistics are consistent within the data set, over time, and with major datasets*

4.2.1 Statistics are consistent within the dataset.

4.2.2 Statistics are consistent or reconcilable over a reasonable period of time.

4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.

**4.3 Revision policy and practice**—*Data revisions follow a regular and publicized procedure*

4.3.1 Revisions follow a regular and transparent schedule.

4.3.2 Preliminary and/or revised data are clearly identified.

4.3.3 Studies and analyses of revisions are made public (see also 3.5.1).

**5. Accessibility** *Data and metadata are easily available and assistance to users is adequate.*

**5.1 Data accessibility**—*Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis*

5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts).

5.1.2 Dissemination media and format are adequate.

5.1.3 Statistics are released on a pre-announced schedule.

5.1.4 Statistics are made available to all users at the same time.

5.1.5 Statistics not routinely disseminated are made available upon request.

**5.2 Metadata accessibility**—*Up-to-date and pertinent metadata are made available*

5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated.

5.2.2 Levels of detail are adapted to the needs of the intended audience.

**5.3 Assistance to users**—*Prompt and knowledgeable support service is available*

5.3.1 Contact points for each subject field are publicized.

5.3.2 Catalogs of publications, documents, and other services, including information on any changes, are widely available.

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