

1. Evolving standards for data collection and reporting*

Official Statistics:

Official statistics are required by Government for informed debate, decision making and research both within government and by the wider community. Objective, reliable, timely and accessible official statistics with complete coverage are critical in democratic societies to ensure public confidence in the integrity of the governance and public decision making.

Indian Official Statistical System:

The Indian Official Statistical System is decentralized and consists of the National Statistical System involving mostly national level estimates/aggregates and the State Statistical System (SSS) involving mostly State/UT level estimates/aggregates. State Statistical System (SSS) is an integral part of the Indian Official Statistical System and there exists two-way dependence between the two systems so that improvements in State Statistical Systems are critical to the improvements in National Statistical System and vice-versa. The CSO at the Centre and the DESs in the states are expected to perform the statistical coordination functions

Directorate of Economics and Statistics (DES):

The type and purpose of data produced in DES are as follows:

Economic statistics:

1. Gross state domestic product
2. Gross District domestic product
3. Whole sale price index
4. Consumer price index
5. Rural/Urban retail price index
6. National Sample Surveys
7. Employment and unemployment,
8. Consumption expenditure
9. Economic cum purpose classification of state budget
10. Number of enterprises and other economic census data
11. Data for preparation of the Economic Survey

Social and demographic indicators:

1. Birth and death registration
2. Medical certification of cause of death
3. Vital rates like birth rate, infant and maternal mortality rate
4. Key socio economic indicators

Key sector statistics:

1. Crop area and production of major crops
2. Rainfall
3. Area under fruits and vegetables and other horticultural crops
4. Annual survey of industries.
5. Index of industrial production

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6. Number of agricultural holdings by size and all related agricultural census data, data regarding agricultural equipment etc.

General statistics:

1. Karnataka at a glance
2. District at a glance
3. Planning Atlas
4. Statistical Abstract
5. Men and women in Karnataka

Statistical Divisions of other departments:

The Statistical Divisions of other departments cater mainly to the specific needs of the departments concerned and are headed by officers in the rank of Joint Director/ Deputy/ Assistant Director depending upon the needs of the concerned departments.

1. Animal Husbandry and Veterinary Services
2. Health and Family Welfare
3. Public Works
4. Urban Development
5. Minor Irrigation
6. Watershed Development
7. Sericulture
8. Rural Development and Panchayat Raj
9. Karnataka Slum Clearance Board
10. Bruhat Bangalore Mahanagara Palike and other Corporations
11. Karnataka Lokayukta
12. Zilla Panchayats (30 districts)
13. Agriculture
14. Horticulture
15. Cooperation
16. Education
17. Excise
18. Finance
19. Forest
20. Transport
21. Social Welfare
22. Industries and Commerce
23. Textiles
24. Commercial Taxes
25. Minority Commission
26. Area Development Boards
27. Medical Education
28. Abdul Nazeer Saab State Institute of Rural Development
29. Backward Classes Commission

30. Taluka Panchayats (107 Taluka Panchayats)

31. Functional Divisions of Planning Department

Status of Statistical System:

- Host of data are being collected regularly by various Government Departments and Agencies
- To adopt statistical treatment most of their data lacks correctness and completeness
- DES is dependent of line departments in the collection and compilation of data from grassroots level
- There is need for better understanding at all levels of the role, power and importance of statistics as a strategic resource for planning, decision making, good governance, accountability and management.
- Low priority is attached to statistical production.
- In many cases, the available data is not made proper use of during the planning process by the Panchayat Raj Institutions (PRIs), Urban Local Bodies (ULBs) and State Government departments.
- Timely and accurate data is not demanded, made available or used for monitoring the implementation of schemes or assessing their outcome.
- The data is not analysed using statistical methods
- The State government is implementing KSSSP to strengthen the State Statistical System and focussing on 20 key Statistical activities

Issues in data collection, compilation and dissemination:

- There is no proper mechanism for systematic approach in collection, compilation, analysis and dissemination of data required for planning, monitoring, compilation of socio-economic indicator and evaluation at village level, block level.
- The data is suffering from quality aspects. We need reliable, credible and timely data to assist decision making within and outside the Government, stimulate research and promote informed debate relating to conditions affecting people's life.
- Allocation of funds is not made on the basis backwardness or lack of progress in a particular sector. This is because non availability of socio- economic indicators at lowest level and also support system at that level with strict guidelines.
- Extensive use of ICT for collection, compilation, analysis and dissemination of data and bringing out lowest level indicator

Intervention Required:

- Conceptualisation Central and State Policy on Statistics
- Planning, Monitoring and Information Cell needs to be established at block level. The Taluk Planning Unit may be converted by strengthening the same. This shall deal with

above activities with ICT capabilities and infrastructure. The cell should be a centre for getting all the unit level data and consolidated information of the taluk and sub taluk level.

- Independent District Planning Unit (DPU) needs to be established which should support the DPC and cater to the needs of the PRIs, ULBs and State Government departments. This unit should monitor the functioning of block level Planning, Monitoring and Information Cells. System of Data Collection in all local bodies.
- DPU may be divided into three divisions with the officers and staff after merger of CPO and his staff in ZP, PD, DUDC and AD (Statistics) and some experts in various fields in DC's office namely PRI, ULB, State Sector and information divisions.
- Extensive use of ICT tools and capacity building

Quality of the data under 20 key statistical activities:

The KSSDA is focusing on 20 key statistical activities to improve reliability and timeliness of data in these activities under Karnataka State Strategic Statistical Plan. These activities are also being strengthened under 13th Finance Commission grants. The study was entrusted to M/s. Deloitte to evaluate the implementation of these programmes and to assess the gaps if any. The draft report submitted by them provides information on quality of the data and issues, the activities taken up to improve the data and also recommendations to further improvement. This information is given at Annexure-1.

DES as a Nodal Agency:

To bring in coordination in statistical activities, the State Government had issued a Government Order during 1982 declaring the Directorate Economics and Statistics as the "Nodal Agency" in relation to all statistical matters in the state and empower the DES to undertake systematic studies of the working of departmental statistical divisions in the state as and when necessary. DES had carried out very few functions. As there is a continual change in the expansion of areas covered by statistics and constant change and improvement in the methodology of data collection, analysis, interpretation and dissemination, there was a need to actively promote the DES as a "Nodal Agency" to improve the State Statistical System. Hence Government of Karnataka has issued a G.O. No. PD 183 SMC 2010, Dated: 25.01.2011 to empower the Directorate of Economics and Statistics to act as a "Nodal Agency" in respect of all the statistical activities of the State and to provide advice to all the Government department in all the statistical matters.

In discharging the assigned role and responsibilities, the DES should carry out the following functions:

- 1) Orient data collection programmes to the needs of the departments
- 2) Chalk out an annual data collection programme of each department
- 3) Lay down formats, periodicity, time schedule, stages and types of tabulation, the content of the final output/publication, etc., in relation to the above

- 4) Advise the departments to collect gender, SC/ST and community wise data wherever relevant
- 5) Suggest suitable staffing pattern for the Departmental Statistical Divisions taking into consideration item nos. 1, 2, 3& 4 above
- 6) Evolve/prescribe job charts/duties of the personnel at item no. 5 above
- 7) Make it compulsory for the departments to undertake analysis of data collected by them Assist the departments to conduct user-producer meetings/workshops to improve the design of the questionnaires, data collection and more detailed analysis ;
- 8) Suggest suitable statistical appendices for the Annual Administration Report brought out by the Departments/Organizations in relation to administrative activities and developments in the socio-economic sectors/subject fields dealt with by them;-
- 9) Ensure these Annual Administration Reports contain analysis of data;
- 10) Advise departments to collect data on a minimum set of static and dynamic indicators including poverty reduction indicators and with regard to millennium development goals and disseminate the same through their website
- 11) Ensure adoption of uniform concepts and definitions of terms etc., employed in the collection of statistical data
- 12) Advise the departments to maintain one set of data at all levels free from incorrect, inconsistent, mechanical and arithmetical errors
- 13) Ensure the elimination/minimization of duplication of statistical work among departments.
- 14) Suggest ways and means for optimum utilization of resources applied for collection of statistics
- 15) Implement The Collection of Statistics Act 2008 and rules effectively.
- 16) Adopt established methods of Small Area Estimates supplied by Central Statistical Office/Indian Agricultural Statistics Research Institute to arrive at estimates at district and sub-districts level from survey data.
- 17) Ensure all the Departments/Organizations post important data and also advance calendar of posting these data on their website. Post “State Summary Data page on DES website” and link it with line Departments/Organizations.

In relation to the statistical activities, the Government Departments/Panchayat Raj Institutions/Urban Local Bodies/Boards/Corporations should adhere to the following;

1. Data Collection programmes should not be initiated on any subject without first ascertaining whether the needed data is already available with the DES or other departments. This will not, however, apply to collection of data of administrative

nature and on other minor items or generated from different sections/sub-offices of an offices/department ;

2. Whenever fresh data collection programmes are initiated, the procedure, sampling design, schedules/formats, concept and meaning of each item the tabulation programme, etc., should be evolved in consultation with the DES. This should be undertaken only after obtaining “No objection Certificate” from the DES. The DES should finalize these proposals in consultation with the concerned officers immediately and not later than 30 days. If the certificate is not received by this deadline, the same may be presumed as issued.
3. Annual Administration Reports should be brought out with the statistical appendices and analysis of data suggested by the DES ;
4. All the data available with them and with the DES should be utilized to the fullest extent ;
5. The duplication of efforts in collection of data should be minimized if not avoided ;
6. The data collected should be reliable, credible and timely as the decisions are taken on the basis of these data ;
7. Ensure all the statistical reports should have complete coverage and should not contain arithmetic and mechanical errors and also free from inconsistency ;
8. There should not be any discrepancy or difference in the data furnished by district and state level officers for the same period ;
9. Ensure effective validation, storage, retrieval, transmission and processing of the administrative data using modern tools of Information and Communication Technology to provide reliable, credible and timely data ;
10. All the important data/reports should be uploaded on the respective websites apart from issue of publications Advance calendar of posting these data should be drawn and posted on their websites ;
11. All the head of Departments/Organizations should invariably forward to the Director, DES Copies of all statistical statements/returns/reports submitted by them to the State and/or Central Government or any other authority. Similarly all the District/Divisional Level Officers should forward to the concerned District Statistical Officers copies of all such returns.

In order to monitor the above activities and to produce reliable, credible and timely statistics by all the departments, the Government of Karnataka has constituted the State and District Level Coordination Committee under Chairmanship of the Director DES and the Chief Planning Officer, Zilla Panchayat of the concerned district respectively.

The State Level Co-ordination Committee is as follows:

Director, Directorate of Economics and Statistics	Chairman
Representative from Institute for Social and Economic Change (ISEC)	Member
Representative from Federation of Karnataka Chamber of Commerce & Industry (FKCCI)	Member
Head of the Department of Statistics, Bangalore University	Member
Head of the Department of Economics, Bangalore University	Member
Head of the Department of Agriculture Economics/Statistics, University of Agriculture Sciences, Bangalore	Member
Special Officer, Evaluation Division, Planning Programme Monitoring and Statistics Department	Member
Joint Director, (Publication, Co-ordination and Training) Directorate of Economics and Statistics and Statistics (Head Office)	Member Secretary

The District Level Co-ordination Committee is as follows:

Chief Planning Officer, Zilla Panchayat of the concerned district	Chairman
District Statistical Officer of the concerned district	Member
Professor of Economics of PG centre OR Degree college in the District	Member
Professor of Statistics of PG centre OR Degree college in the District	Member
Representative from a reputed research Institution/non-governmental organizations engaged in research/studies/surveys /analysis working in the district	Invitee
Project Appraisal and Evaluation Officer, Zilla Panchayat of the concerned district	Member Secretary

These Committees have to meet frequently and review the statistical activities of the departments and also advise them on the above points. These Committees have met only one or two times after the issue of Government Order in the month of January 2011. Continuous interaction with the departments will ensure improvement in the State Statistical System at State level and at Sub-State level. This will lead to providing quality data to the users. The experts' opinion will be available in improving the system of collection, compilation, analysis and dissemination of data of various departments. This data will be used for local level development and to take policy decisions at various levels.

Hence the Publication, Training and Co-ordination division of the DES and the Chief Planning Officers in the Zilla Panchayats play important role in improving quality of the data and usage of the data. The above Committees should effectively perform their duties and see that all the departments produce accurate statistical data within the time schedule and provide the same to the users.

Business intelligence, Data analytics and data warehousing:

At present there is no centralized system in place to collect, analyze and process the data in departments. The data is being gathered manually by the majority of the departments and maintained in different formats even though it is collected in soft copy.

The Data collection department is responsible for collecting two types of data, namely primary and secondary data. Primary data is collected voluntarily on the prescribed schedules/formats through district level offices, while the secondary data is collected from various government departments, local bodies and other government/semi-government agencies at both State head-quarters as well as District level field offices. Almost all data is collected and scrutinized manually at the collection levels before being taken up for further processing.

The analysis of data is also not being undertaken by every department and very few departments have the statistical methodologies in place to analyse the data. In case the methodologies exist, they differ from department to department.

The data processing is also not uniform throughout the department, and data analysis is done either as per the Calendar Year or Financial Year. Moreover, for the analysis of data, most of the departments at present are using suitable Office software, while few are using their individual Data Preparation Modules, Summary Statistics and Graphical Analysis and Statistical analysis tools.

Presently, the departments do not have any consensus on the designation or level at which this tool should be made available for the end users. Joint Director, Deputy Director, Assistant Statistical Officer, Assistant Director, Data Entry operators and section employees are the few designations proposed by the departments for the purpose.

Furthermore, currently there is no unified way to store, retrieve or process data across the departments. All types of legacy data is either available in hard copy or discrete electronic files. The reports are available in either printed format or soft copy, and the soft copy is stored in PC, Network or server by the departments.

The amount of data collected by the departments also varies to a large extent. For some departments it is in MBs and for some it reaches to GBs. Additionally, not all the departments are storing the collected data on their departmental servers. The data is also being stored in NIC/Central Govt. server/State data center.

Following are the key findings based on the Present System Analysis.

- i. Need for a Business Intelligence Solution that can automate the collection, retrieval, analysis and storage of statistical data gathered from various departments.
- ii. Need of a Centralized Data Center to store, monitor and analyse data.
- iii. Requirement of a common format to gather, process, and store data.
- iv. Need of customized hardware and Software for all departments.
- v. Presence of system integrators and data experts who can understand the statistics and

technical aspects of data.

Therefore there is a requirement for implementing an appropriate IT solution (BI solution) that shall be capable of providing on demand statistical, analytical and predictive information by way of standard reports serviced through a web portal. Various departments of the State shall be able to make use of the proposed BI solution, in effective policy and decision making. Hence, the DES is taking up Business Intelligence, Analytics and Data Warehouse Solution.

This solution will help the departments to clean and analyse their data. The analysed data can be used for decision making. This will also enable the department to understand the existing data and what needs to be further augmented.

Heads of departmental Statistical Divisions:

The National Statistical Commission in its Annual report for the year 2010-11 has suggested that 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. This shows that how important are the posts of the heads of departmental statistical divisions. Hence statisticians' roles and responsibilities have been increased.

Code of Statistical Practice:

The statistical organizations of various countries have come up with their code of practice for official statistics. The United Kingdom Statistics Authority had issued Code of Practice for Official Statistics in the year 2009. The same is reproduced at Annexure-2. The standard set by the United Kingdom Statistics Authority may be adopted for the state also.

The National Statistical Commission has issued Code of Statistical Practice and guidelines on outsourcing statistical activities. The same is reproduced at Annexure-3. Principles of collection of data and release of statistical reports and unit level data under various statistical activities have been laid down by the National Statistical Commission. These codes needs to be adopted in day-to-day work of each department.

Recommendations:

1. The DES should function as a Nodal agency for all statistical activities of the state by performing roles and responsibilities detailed in GO No. PD 183 SMC 2010, dated 25.01.2011. The district and state level co-ordination committees under the chairpersonship of Chief Planning Officers of Zilla Panchayats and Director Directorate of Economics and Statistics shall intensively conduct review of statistical activities of all the departments and guide them.
2. The above committees should see that all the departments produce trust worthy data and make available to the users within two years' time frame. Core committees of senior officers may be constituted to assist these committees and to achieve the same.

3. These committees shall focus initially on the 20 key statistical activities as the gaps in these activities have been identified already.
4. Code of Practice for Official Statistics of UK Statistics Authority and Code of Statistical Practice Guidelines on Outsourcing statistical activities of National Statistical commission shall be adopted to improve the the state and sub-state statistical system.
5. Business Intelligence, Data analytics and data warehousing solution shall be put in place immediately. All the departments should computerise their official statistics so that this solution will enable all departments integrate the functions of retrieval, analysis and processing, dissemination of data in a simple, fast and effective manner.
6. Planning, Monitoring and Information Cell needs to be established at block level. The Taluk Planning Unit may be converted by strengthening the same. This shall deal with above activities with ICT capabilities and infrastructure. The cell should be a centre for getting all the unit level data and consolidated information of the taluk and sub taluk level.
7. Independent District Planning Unit (DPU) needs to be established which should support the DPC and cater to the needs of the PRIs, ULBs and State Government departments. This unit should monitor the functioning of block level Planning, Monitoring and Information Cells. System of Data Collection in all local bodies.
8. DPU may be divided into three divisions with the officers and staff after merger of CPO and his staff in ZP, PD, DUDC and AD (Statistics) and some experts in various fields in DC's office namely PRI, ULB, State Sector and information divisions.
9. All the departments should make extensive use of ICT tools and build the capacity of their personnel.
10. Dr. V.S. Acharya, Institute of Planning and Development should be established to train the personnel of DES and line departments and take up research work.

Quality of the data under 20 key statistical activities

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
1. State Domestic Product Estimates	System of National Accounts and Sources and Methods 2008 by CSO	<ul style="list-style-type: none"> • 17 sectors data suffers from quality • Currently, DES accepts data from various line departments which are directly used to compute SDP estimates without much verification/validation to check that the data is accurate, (the data which is sent at eleventh hour), which could result in errors in SDP estimation 	<ul style="list-style-type: none"> • To improve the quality of the data, number measures are taken under KSSSP and 13th Finance Commission grants. • Preparation of Common Business Register and taking up studies is one of the initiatives to improve the quality of the data of service sector 	<ul style="list-style-type: none"> • Taluk level indicators should be compiled for all the 20 Key activities and also for 17 sectors of GSDP/ GDDP • DES can prepare industry-wise schedule/calendar with data requirements and deadlines. • The current year data for each field can be compared with previous period data (upto 5 years) to check for major deviations
2. Estimates of capital formation and savings.	System of National Accounts and Sources and Methods 2008 by CSO	<ul style="list-style-type: none"> • DES yet to take up this compilation 	<ul style="list-style-type: none"> • Training programmes will be conducted and the compilation would be commenced. 	<ul style="list-style-type: none"> • CSO should give importance to compute GFCF with basic data available at the State/ District level. • CSO should also hold regional workshops to impart training based on the methodology developed
3. Estimates of district domestic product	System of National Accounts and Sources and Methods 2008 by CSO	<ul style="list-style-type: none"> • Data gap at sub district level • Annual Employment Data is not available at district level • The data that is reported for district-wise estimates in the Karnataka at a Glance 	<ul style="list-style-type: none"> • Taluk Income estimates were computed for primary sectors where data availability is fairly good, for the other sectors the district values are allocated to taluks with a suitable / relevant indicators 	<ul style="list-style-type: none"> • Taluk level data on primary sectors is not comparable. • Based on the comprehensive list of enterprises collated by the CBR, sample surveys can be conducted by DES to

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		<p>Document and District At a Glance Document, often do not match for sectors including Fisheries, Forestry, Mining and Quarrying etc.</p>	<ul style="list-style-type: none"> • A manual on DDP estimates has been prepared and disseminated to all the district level officers through Zilla Panchayats • The Common Business Register Cell of DES aims to establish a Common Business Register for the State which will collate data on enterprises including employment data 	<p>compute value-added per worker estimates at the district, and even taluk level</p> <ul style="list-style-type: none"> • KSSSP could recommend that district and state level officers interact with each other frequently to ensure that data estimates are reconciled in concurrence and simultaneously
4. Estimates of contribution of local bodies.	System of National Accounts and Sources and Methods 2008 by CSO	<ul style="list-style-type: none"> • Local bodies not taking responsibility for data collection • At the local level, bifurcation of expenditure items and categorisation under various purpose codes is not validated currently 	The analysis of this kind for all local bodies is the first time to compile in this large scale. A web based application is created and the data entry is under progress	<ul style="list-style-type: none"> • This will lead to know the expenditure areas at the local body level. Priority areas can be identified for further investment. • Every year, for a selected sample of local level bodies, ZP consultants could sit with data entry operators to verify how data was entered and ensure that they are classified appropriately
5. Data on major fiscal variables.	NSC, MOF, RBI	<ul style="list-style-type: none"> • Data quality is good due to high level of computerization • Data is in confirmation with the Data Quality Assessment Framework (DQAF) prescribed by the IMF • Data is dispersed across 	<ul style="list-style-type: none"> • FD is publishing data along with the state budget and also in the MTFP document and annual CAG report. • Data on major fiscal indicators in published on monthly basis as is the 	<ul style="list-style-type: none"> • Implementation of Khajane II will enable faster and accurate dissemination of data and improvement of data quality

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
		<p>publications and not at one place</p> <ul style="list-style-type: none"> • There is poor level of budget data pertaining to Panchayat Raj Institutions and Urban Local Bodies 	<p>practice followed by the central government on department website</p>	
6. Annual survey of industries.	CSO	<ul style="list-style-type: none"> • Problems of incorrect information of factories such as address, status (whether running or shut down), impact the survey process • Use of Manual Data Validation process affects data quality 	<ul style="list-style-type: none"> • State is participating in ASI from 2010-11 and data frame, sampling and data collection is expected to improve 	<ul style="list-style-type: none"> • The updation of Dept. of Factories & Boilers database and software and the creation of the common business register by DES will be an important step to improve sample frame quality • Process may be strengthened by use of technology for data collection and dissemination.
7. Index of industrial production	CSO	<ul style="list-style-type: none"> • Coverage is less than 40-45% from manufacturing units and the target is 80% • The requested details do not come in from factories, resulting in lack of information to accurately compute the IIP index 	<ul style="list-style-type: none"> • Item basket was updated in 2004-05 to improve data quality • Web application proposed to develop will increase the response rate. • A survey will be conducted to know the existence of manufacturing units and also to make aware them the importance of IIP for which they have to furnish the information 	<ul style="list-style-type: none"> • The updation of Dept. of Factories & Boilers database and software and the creation of the common business register by DES will be an important step to improve coverage • GoK/ DES will undertake awareness building measures to sensitize factories of the need to provide information regarding provision of IIP data
8. Crop area and production statistics.	Ministry of Agriculture NSSO	<ul style="list-style-type: none"> • Primary workers are overburdened with other departmental works. No 	<ul style="list-style-type: none"> • Supervisory work entrusted to the officers of Revenue, Agriculture, horticulture and 	<ul style="list-style-type: none"> • RTC and Hissa map formats need to be provided to VA once every five years

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
		<p>proper supervision by the concerned departments</p> <ul style="list-style-type: none"> • Inconsistencies between data reported by department and DES for Horticulture and Irrigation data • Lack of validation of data reported by Horticulture department • RTC books have been discontinued after roll-out of Bhoomi resulting in no proper formats for data collection for the Village Accountants 	<p>DES at the rate of 25% each</p> <ul style="list-style-type: none"> • Special drive for crop enumeration in TRS districts was initiated in 2009-10 and was also done for 2011-12 • GPRS enabled handset for crop inventory and land use mapping being piloted in one GP 	<ul style="list-style-type: none"> • Outsourcing of data collection activity (1 outsourced staff per 10 villages) may be explored • DES may be designated as the State Horticulture Statistics Authority and State Irrigation Statistics Authority in lines of SASA • Sample surveys to be undertaken by Horticulture dept. with DES support for validation of data • Scaling up of GPRS enabled handset based data collection to entire State
9. Whole sale price index	Ministry of Commerce and Industries	<ul style="list-style-type: none"> • Very old base year data • The current process relies heavily on manual data collection from shops, APMC and other sources affecting data quality 	<ul style="list-style-type: none"> • The exercise for shifting of base year has been initiated. The collection of turnover data for 2006-07, 2007-08 and 2008-09 is complete. The item basket and weighing diagram for shifting of base year to 2007-08 should be finalized after validation of data received from Agricultural Marketing Department • Current manual data collection process especially from the APMCs and the Boards is under up-gradation (under KSSSP) to automated price dissemination from APMC website 	<ul style="list-style-type: none"> • The base year must be shifted by 1.1.2013 • Automation of price dissemination from APMC website should be accelerated to improve data quality

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
10. Consumer Price index	CSO, Labour Bureau	<ul style="list-style-type: none"> • Compilation of CPI at district level for rural and urban areas has been hampered as pooling of state and central samples of NSS 66th round results have yet not been done • CPI data quality: collection and checks 	<ul style="list-style-type: none"> • Correspondence has been made with MoSPI, NSSO and CSO regarding the issue. They have recommended to follow the methodology laid down by NSC • For CPI, collection of retail prices from shops across the states is one of the key activities. Collection and validation are currently done manually 	<ul style="list-style-type: none"> • Pooling of central and state samples needs extensive technical support as well as capacity development. External Assistance may be taken to carry out this Pooling exercise • CPI data quality may be strengthened by use of technology for data collection and dissemination • The collection of data for CPI Rural and Urban the CSO has outsourced to postal department, the same type of arrangement can be made in the state also.
11 Health, Morbidity, Mortality and Family Welfare statistics	Ministry of Health and Family Welfare	<ul style="list-style-type: none"> • HMIS needs some more time to stabilise • Data collection on Non-Communicable Diseases, Cost of healthcare and on operations of private sector in the state is still poor • Exhaustive information collected at the primary level, without focus on analysis and usage 	<ul style="list-style-type: none"> • Web based Health Management Information System (HMIS) has been implemented • Annual Programme Implementation Plan (APIP) published every year under NRHM • Sample surveys in health by NSSO, NFHS, DLHS and CES are credible sources of information having high data quality 	<ul style="list-style-type: none"> • The state has proposed “The Karnataka Private Medical Establishments bill, 2007” which is yet to be enacted • Specific initiatives such as survey on cost of healthcare, Karnataka Health Statistical report and District health report cards will improve quality of data available to public. • The data on employment and finances of private corporate hospitals and nursing homes should be made available at one place for the use of

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<p>12 Education and literacy statistics 12A. Statistics on educational institutions 12B. School enrolment data</p>	<p>Ministry of Human Resource Development</p>	<ul style="list-style-type: none"> • Absence of data on number of schools, teachers, students from schools like Fine Arts Schools, Music Schools etc. • Absence of independent data collection agency for reporting school level data which is currently self-reported by Head Masters. • There is huge variation in data available on drop-outs & out-of-school children. • No use of ISCED (developed by UNESCO) has been made for reporting Educational Statistics in state. • Data on PU education in the state is not part of the EMIS & is collected through OMR sheets. 	<ul style="list-style-type: none"> • Collection of education statistics computerized at block level for providing consistent & reliable data. • A computerized management information system, namely DISE with school as the unit of data collection & district as the unit of data dissemination is being used. • All the filled-in-forms are scrutinized & inspected at the cluster & block level for any error or inconsistency. 	<p>researchers ad planners.</p> <ul style="list-style-type: none"> • A schedule should be designed & rolled out in line with U-DISE format to collect details on Fine Arts Schools, Music Schools etc. • Specific initiatives such as third-party sample validation surveys of data collection activity done at school level, periodic independent third party sample survey on drop-out & out of school children, Use of ISCED & use of U-DISE for data collection on PU Education would improve data quality & address lack of consistency in available data. • The employment and finance data on private organised (deemed universities, autonomous institutions and big coaching centers) and private unorganised (small coaching centers, evening tuitions) should be made available at one place for the use of researchers ad planners.
<p>13. Labour and employment statistics</p>	<p>Labour Bureau</p>	<ul style="list-style-type: none"> • Data suffers from quality • Lack of data checks when information from the field 	<ul style="list-style-type: none"> • E-Karmika software has been implemented for registration under Karnataka shops and 	<ul style="list-style-type: none"> • Data review could be achieved by establishing parallel channels of reporting

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
13A. Labour statistics 13B. Employment statistics 13C. Child labour statistics (new)		<p>comes to the regional office, affecting data quality</p> <ul style="list-style-type: none"> Poor compliance with respect to submission of returns by factories leading to incomplete information Lack of published statistical reports on Employment and Training and Factories and Boilers 	<p>establishment act.</p> <ul style="list-style-type: none"> E-Surakshate software has been developed to replace manual data collation by Factories and Boilers Department and allow for online registrations, renewals, submission of returns etc. 	<p>for certain critical indicators</p> <ul style="list-style-type: none"> Apart from workshops by the line department, The Chamber of Commerce and Industry could be involved in educating enterprises on why returns are collected, and in disseminating information Workshops could be held with DES and external experts to identify content and level of analysis in reports and prepare a template after which data collation, analysis and report preparation could be attempted.
14. Housing	NBO, State housing department	<ul style="list-style-type: none"> Census data on housing available once in ten years and there is no appropriate system to provide data of good quality in intermittent years There is Lack of updation of housing addition each year and no key indicators pertinent to Housing statistics are being generated currently 	<ul style="list-style-type: none"> NSSO and Census provide housing data with high quality; RGRHCL also carries out a census of houseless people Utilization of Gram Panchayats and ULBs in providing housing data has begun and their participation is enabling to companies like RGRHCL be up to date with their housing data 	<ul style="list-style-type: none"> Housing department should coordinate design of housing KPIs, compilation of Data and Publication of Housing Statistics on annual basis A common software can be introduced in order to capture crucial data elements captured at individual company level, annual housing stock addition and consolidated The GPs and ULBs should be encouraged to construct an elaborate property list of

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
				houses and updating the same at the end of each financial year.
15A. Birth and death registration statistics and population	Registrar General of India	<ul style="list-style-type: none"> • There exists possibility of duplication of birth registration due to absence of validation during the process • Key data in the statistical portions of births and deaths forms are not filled in entirety, undermining the quality of data being captured in these forms. 	<ul style="list-style-type: none"> • 2010-11, Medical Officers of PHCs/CHCs have been nominated as the Sub-Registrars. Totally, 2254 new sub-registration units have been started • To eliminate of duplication of data arising out of involvement of multiple agencies, reconciliation committees have been formed at village, taluk and district levels • The Recording efficiency of births and deaths has reached 99.02% and 92.81% respectively 	<ul style="list-style-type: none"> • Uniform software being prepared by UNICEF must be expedited and implemented in all the registration units • Creation of new online software for MCCD and increase in coverage of all hospitals is necessary • Training and Development of notifiers, retraining of field level personnel are essential to address data quality issues
15B. Registration of Marriages statistics (new)	Registrar General of India	<ul style="list-style-type: none"> • The registration efficiency of marriages is very low and marriage certificates are not in demand • There are no clear indicators defined for tracking, or publications and reporting of marriage related data in the state • Vital information such as nationality, religion, educational level, caste is not 	<ul style="list-style-type: none"> • Marriage registration, is compulsory as per Supreme Court judgment in 2006 • Updation of Karnataka Registration of Marriages Rules is in progress 	<ul style="list-style-type: none"> • DES to take up ownership of compulsory registration of marriages and formation of marriage statistics cell to compile and publish data is proposed • Introduction of additional data fields during marriage registration is necessary

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
		recorded in the current registration process and Proof of age and address is optional		
16. Electricity production and distribution statistics	Central Electricity Authority	<ul style="list-style-type: none"> • Data & statistics are not being regularly released into the public domain. Currently, only being done annually • Data largely focused on the electricity sector. However, very less public data available on non-commercial fuels and major commercial fuels like petrol, diesel, kerosene and LPG across the state 	<ul style="list-style-type: none"> • Extensive use of ICT in processes leads to good availability of high quality real time data in electricity sector • ESCOMs monitoring cell operational. Generation & aggregate consumption data provided by SLDC daily for internal use 	<ul style="list-style-type: none"> • Monthly data, post MMR verification with Generation , Transmission and Distribution utilities, must be released on the Energy Department website • Statistical publication having details of usage of all forms commercial energy and studies on use of non-commercial energy will need to be commissioned • The income estimates are prepared by using income originating concept, hence the taluk wise generation and consumption of electricity.
17. Environment and Forestry statistics 17A. Forestry statistics	Ministry of Environment and Forest	<ul style="list-style-type: none"> • Data suffers from quality issues, as there is no validation / cross checking of data reported from field offices on major and minor forest produce • Input cost estimates for major forest produce is unreliable as it is assumed as a percentage of output • Duplication of data collection by various units, resulting in 	<ul style="list-style-type: none"> • ICT system development is currently underway, which will facilitate timely data provision and verification of data for wide variations over the years • Sample surveys proposed for validation of major & minor forest produce, growing stock etc. • It is proposed to bring the statistical personnel in 	<ul style="list-style-type: none"> • Analysis of data from across years to be taken up once ICT system is rolled out, to identify variations • Statistics division to assess data requirements of all units and draw up time table for data collection, taking the needs of all units into consideration • Quarterly data collection to be explored for key data • Studies to be taken up by

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
		inconsistent data	various units in Forest Department under the main unit to act as a single window for data collection	Forest Department with DES support for input costs of major forest produce
17B. Water supply and sanitation statistics	Ministry of Rural Development	<ul style="list-style-type: none"> • Most of the source data at the GP and district level is manually collated • No documentation / review process for monitoring and authenticating the data by the state level personnel 	<ul style="list-style-type: none"> • GIS enabled systems being used by KRWSSA and PRED for tracking project installations 	<ul style="list-style-type: none"> • Defined process be outlined for state personnel to verify and confirm data provided by the district and village data operators
18. Participation in the surveys of National Sample Survey Organisation	NSSO	<ul style="list-style-type: none"> • Pooling of Data of central and state samples is not being done • Practice of using temporary outsourced resources to collect data from sampling units leads to compromise in the quality of data and non-sampling errors 	<ul style="list-style-type: none"> • Karnataka is the second state in the country in implementation for which district level keying is done for state samples by using indigenously developed quality software by NSS 	<ul style="list-style-type: none"> • Joint planning between state and central NSS and identification of indicators of pooling will need to be done • Pooling software to be provided by Central NSS • Stronger supervision and monitoring, training, use of digital forms for data entry and Improved validation checks in software will help reduce non-sampling errors
19. Transport statistics 19A. Motor Vehicle registration statistics	Ministry of Road Transport and Highways	<ul style="list-style-type: none"> • Certain physical and financial productivity indicators for the freight and passenger transport such as age profile of vehicles, motor vehicles on road etc. are lacking • Time lag in data dissemination: Statistics on website is not updated on a 	<ul style="list-style-type: none"> • Certain key parameters as mentioned in the previous column are not captured by the Vahan and Sarathi applications 	<ul style="list-style-type: none"> • The department should coordinate with NIC and consider customization of Vahan and Sarathi software for including various critical parameters • Strengthening of ICT infrastructure would ensure timely dissemination of data by

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
		<p>regular basis</p> <ul style="list-style-type: none"> Manual Data entry at RTO/ARTO level 		<p>providing data on a real-time basis which can be published in the department's website and updated on a regular basis.</p> <ul style="list-style-type: none"> The department should be made efforts to collect the off road vehicles (vehicles which are no longer in use). This will firm up over estimates of income to a certain extent.
19B. Road statistics	Ministry of Road Transport and Highways & Indian Road Congress (IRC)	<ul style="list-style-type: none"> Absence of certain key parameters such as Statistics with respect to periodicity of repair/renovation/upgradation of roads, accessibility of villages by roads etc. Otherwise the quality of statistics is reported to be good as per the state-wise study report by MoSPI in 2007 as the data on roads is generated and collected at the Sub-Division (Taluk) level whenever a road work is taken up by PWP&IWTD/PRED/KRRDA 	No steps have been taken yet for inclusion of additional parameters	<ul style="list-style-type: none"> PWP&IWTD, PRED and KRRDA should consider including various critical parameters, which are currently not being captured. The good quality road length (roads improved be KSHIP, NHAI, KRDCCL, NH) should be maintained.
19C. Traffic Accident statistics	State Home Department	<ul style="list-style-type: none"> Absence of regular assessment of source of data for coverage, sample error, response error and non-sampling error. Data is collated and analysis 	<ul style="list-style-type: none"> No capacity building training for statistical analysis of data is being imparted currently. The statistics on accidents is being collated by the use of 'Police IT' and the involvement of people in 	<ul style="list-style-type: none"> Increase capacity building for statistical analysis of data; Introduction of statistician post and induction of Statistical staff may be considered

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
		is done by police personnel in the absence of statistical cell	analysis is currently minimal. <ul style="list-style-type: none"> The data on accidents is not being published by SCRB at a district or state level. 	
19D. Passenger traffic statistics	Ministry of Road Transport and Highways	<ul style="list-style-type: none"> Lack of information on passenger transportation by the private sector Due to lack of statistical manpower, data collection, compilation is done by staff with no statistical knowledge or background 	No steps have been taken yet in this direction.	<ul style="list-style-type: none"> Furnishing of information by private operators at the RTOs/ARTOs during renewal of operating license/ permits every year should be mandated. With better use of ICT, an interface may be made for reporting of passenger statistics by the private operators.
20A. Statistics for local area planning	DES & RDPR, UDD	<ul style="list-style-type: none"> Though statistics on GPs as well as ULBs is available within the departments, and some of it is published in their annual reports, it is not being consolidated & published as an annual publication. RD&PR department has discontinued collection and dissemination of Samanya Mahithi data 	<ul style="list-style-type: none"> Samanya Mahithi has been revised. RD&PR has issued a circular to collect, compile and disseminate the data on 542 parameters under 20 sectors. Roles and responsibilities of stake holders has been clearly mentioned in the circular. Development of software application and collection of data is yet to take place The RD&PR department had implemented Panchatantra software in the year 2009 to generate Gram Panchayat level data & capture the list of 	<ul style="list-style-type: none"> RD&PR as well as Urban Development Department must commence an annual statistical report called "Status of Rural Infrastructure" & "Status of Urban Infrastructure" respectively by consolidating data from their reporting directorates & agencies. It should be made available on their respective websites. The report should consist of sector wise employment and income and expenditure of all local bodies at one place.

Key statistical activities	Minimum Standards set by	Quality of data and issues	Activities undertaken to Improve data	Remarks
			<p>indicators at GP level.</p> <ul style="list-style-type: none"> • Computerization of data has been completed in all the GPs. • Monthly & annual reports on progress of various schemes are uploaded on website. • Service Level Benchmarking software to capture key performance indicators of ULBs has been designed & rolled out across all ULBs in state. 	
20B. Monitoring and Evaluation (new)	Planning & RDPR	Discrepancies in MPIC reports, no systematic evaluation	Decision support system is introduced. Karnataka Evaluation Authority has been established to guide the departments to take up evaluation studies. Asset and beneficiary mapping and monitoring system is being implemented in Bellary, Dakshin Kannada, Dharwad, Shimoga and Tumkur districts on pilot basis through GPS - GIS based technology	These systems need to be implemented in letter and spirit

Code of Practice for Official Statistics

Preamble:

- i. Official statistics are fundamental to good government, to the delivery of public services and to decision-making in all sectors of society. They provide Parliament and the public with a window on society and the economy, and on the work and performance of government.
- ii. Observance of a common Code of Practice, by all the public bodies that produce official statistics, is central to maintaining a unified statistical service that meets the needs of government and society and is both trustworthy and trusted.
- iii. The *Statistics and Registration Service Act 2007* requires the UK Statistics Authority (the ‘Statistics Board’ in the Act) to prepare and publish a Code of Practice and to assess compliance against it. Official statistics assessed as compliant are to be designated as National Statistics. Bodies that produce National Statistics are required to ensure that the Code continues to be observed. For other official statistics, compliance with the Code is not a formal requirement.
- iv. ‘Official statistics’ are defined in Section 6 of the *Statistics and Registration Service Act 2007*.
- v. This Code is consistent with the United Nations *Fundamental Principles of Official Statistics* and the *European Statistics Code of Practice* (with which all producers of European Statistics are expected to comply).
- vi. It is also consistent with the Civil Service core values of integrity, honesty, objectivity and impartiality. In relation to statistical work, these are interpreted as follows.
 - Integrity – putting the public interest above organisational, political or personal interests.
 - Honesty – being truthful and open about the statistics and their interpretation.
 - Objectivity – using scientific methods to collect statistics and basing statistical advice on rigorous analysis of the evidence.
 - Impartiality – acting solely according to the merits of the statistical evidence, serving equally well all aspects of the public interest. The National Statistician will publish a related code of conduct for officials working within the Government Statistical Service.
- vii. The Code contains eight principles and, in relation to each, a statement of associated practices. It also contains three more detailed protocols – on user engagement; on the release of statistics; and on the use of administrative data for statistical purposes. The

Code has been framed to support the assessment of compliance by the UK Statistics Authority.

- viii. Taken together, the principles and protocols of the Code are intended to ensure: that the range of official statistics meets the needs of users; that the statistics are produced, managed and disseminated to high standards; and that the statistics are well explained.
- ix. As required under Section 11(1) of the Act, the Code does not cover requirements in relation to ‘pre-release’ access to statistics in their final form. Pre-Release Access Orders provide the rules and principles relating to the granting of such access. The Code will apply as if it included these Orders.
- x. The Code is specific but, in many cases, its requirements will need interpretation and professional Judgment. The National Statistician and the Head of Assessment will provide supplementary guidance to assist bodies that produce official statistics.
- xi. Some practices set out in the Code are relevant to more than one principle. In the interests of conciseness, the practices are not normally repeated under different principles.
- xii. Under some circumstances it may be appropriate for the UK Statistics Authority to agree exemptions or exceptions to the practices, though not to the principles. Where a body that produces National Statistics is aware of a need for an exemption, it should make a case to the Head of Assessment. Details of all exemptions and exceptions will be made public.
- xiii. It is implicit in the Code that there will be sufficient managerial separation between staff responsible for official statistics and other staff of the organisation, to ensure clear lines of accountability for observance of the Code.
- xiv. The Code uses the following terminology.
 - Production, management and dissemination of official statistics – refers to the entire statistical process from the identification of needs, to the decision to collect or compile data, through to providing advice to the user.
 - Statistical report – means any statistical output, including any associated commentary and metadata.
 - Relevant statistical Head of Profession – includes the Chief Statisticians of the Devolved Administrations. (‘Heads of Profession’ are the senior statistical advisers in government departments).

Principle 1: Meeting user needs

The production, management and dissemination of official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public.

Practices

1. Engage effectively with users of statistics to promote trust and maximise public value, in accordance with Protocol 1.
2. Investigate and document the needs of users of official statistics, the use made of existing statistics and the types of decision they inform.
3. Adopt systematic statistical planning arrangements, including transparent priority setting, that reflect the obligation to serve the public good.
4. Publish statistical reports according to a published timetable that takes account of user needs.
5. Publish information about users' experiences of statistical services, data quality, and the format and timing of reports.

Principle 2: Impartiality and objectivity

Official statistics, and information about statistical processes, should be managed impartially and objectively.

Practices

1. Publish statistical reports in an orderly manner, in accordance with Protocol 2.
2. Present statistics impartially and objectively.
3. Make official statistics equally available to all, subject to statutory provisions for pre-release access.
4. Announce changes to methods or classifications well in advance of the release of the changed statistics.
5. Publish details of any exemption from the practices of the Code, as agreed by the UK Statistics Authority.
6. Publish a Revisions Policy for those outputs that are subject to scheduled revisions. Provide a statement explaining the nature and extent of revisions at the same time that they are released.
7. Correct errors discovered in statistical reports, and alert stakeholders, promptly.
8. Release all regular statistical reports on the internet without charge to the user.
9. For any supplementary statistical services for which a charge is made, adopt clear pricing policies that comply with legislation and relevant policy.

Principle 3: Integrity

At all stages in the production, management and dissemination of official statistics, the public interest should prevail over organisational, political or personal interests.

Practices

1. Issue statistical reports separately from any other statement or comment about the figures and ensure that no statement or comment – based on prior knowledge – is issued to the press or published ahead of the publication of the statistics.
2. Ensure that those producing statistical reports are protected from any political pressures that might influence the production or presentation of the statistics.
3. Ensure that the relevant statistical Head of Profession has the sole responsibility for deciding on statistical methods, standards and procedures, and on the content and timing of statistical releases.
4. Follow all statutory obligations and internationally endorsed guidelines governing the collection of data, confidentiality, and release.
5. Inform the National Statistician about complaints that relate to professional integrity, quality or standards, whether or not they can be resolved directly.
6. Implement controls to ensure that individuals do not abuse the trust placed in them for personal gain.
7. Promote a culture within which statistical experts in government can comment publicly on statistical issues, including the misuse of official statistics

Principle 4: Sound methods and assured quality

Statistical methods should be consistent with scientific principles and internationally recognised best practices, and be fully documented. Quality should be monitored and assured taking account of internationally agreed practices.

Practices

1. Ensure that official statistics are produced according to scientific principles. Publish details of the methods adopted, including explanations of why particular choices were made.
2. Ensure that official statistics are produced to a level of quality that meets users' needs, and that users are informed about the quality of statistical outputs, including estimates of the main sources of bias and other errors, and other aspects of the European Statistical System definition of quality.

3. Adopt quality assurance procedures, including the consideration of each statistical product against users' requirements, and of their coherence with other statistical products.
4. Publish quality guidelines, and ensure that staff are suitably trained in quality management.
5. Seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews or releasing statistical work in progress such as experimental statistics.
6. Promote comparability within the UK and internationally by, for example, adopting common standards, concepts, sampling frames, questions, definitions, statistical units and classifications (including common geographic referencing and coding standards). Make the reasons for any deviations from standard models publicly available.
7. Where time series are revised, or changes are made to methods or coverage, produce consistent historical data where possible.

Principle 5: Confidentiality

Private information about individual persons (including bodies corporate) compiled in the production of official statistics is confidential, and should be used for statistical purposes only.

Practices

1. Ensure that official statistics do not reveal the identity of an individual or organisation, or any private information relating to them, taking into account other relevant sources of information.
2. Keep confidential information secure. Only permit its use by trained staff who have signed a declaration covering their obligations under this Code.
3. Inform respondents to statistical surveys and censuses how confidentiality will be protected.
4. Ensure that arrangements for confidentiality protection are sufficient to protect the privacy of individual information, but not so restrictive as to limit unduly the practical utility of official statistics. Publish details of such arrangements.
5. Seek prior authorisation from the National Statistician or Chief Statistician in a Devolved Administration for any exceptions, required by law or thought to be in the public interest, to the principle of confidentiality protection. Publish details of such authorisations.
6. In every case where confidential statistical records are exchanged for statistical purposes with a third party, prepare written confidentiality protection agreements

covering the requirements under this Code. Keep an operational record to detail the manner and purpose of the processing.

Principle 6: Proportionate burden

The cost burden on data suppliers should not be excessive and should be assessed relative to the benefits arising from the use of the statistics.

Practices

1. Report annually the estimated costs (for example, on businesses, service providers, or the public) of responding to statistical surveys and strive to develop methods that will reduce the costs to individual organisations or people.
2. Seek participation in statistical surveys through informed consent, rather than using statutory powers, wherever possible.
3. Promote statistical purposes actively in the design of administrative systems in order to enhance the statistical potential of administrative records.
4. Analyse the costs of proposed new data requirements (to data suppliers) against the potential benefits.
5. Evaluate existing data sources and estimation techniques before undertaking new surveys.

Principle 7: Resources

The resources made available for statistical activities should be sufficient to meet the requirements of this Code and should be used efficiently and effectively.

Practices

1. Ensure that statistical services have the staff, financial and computing resources to produce, manage and disseminate official statistics to the standards of this Code.
2. Consult users before changing the allocation of resources to statistical activities. Include specific resources for user consultation in budgets.
3. Ensure that records are maintained showing the relationship between the statistical planning process, the work programme, the allocation of resources, and the outcomes.
4. Monitor expenditure against work programmes and demonstrate effective stewardship of resources allocated to statistical work.
5. Seek to balance quality (for example, accuracy and timeliness) against costs (including both costs to government and data suppliers), taking into account the expected uses of the statistics.
6. Ensure that appropriately skilled people are employed in the statistical production process. Use an appropriate competence framework to set the requirements of

statistical posts and the development needs of staff, and support staff in developing their statistical, management and subject area knowledge.

7. Where administrative sources are used for statistical purposes, follow the practices set out in Protocol 3.

Principle 8: Frankness and accessibility

Official statistics, accompanied by full and frank commentary, should be readily accessible to all users.

Practices

1. Provide information on the quality and reliability of statistics in relation to the range of potential uses, and on methods, procedures, and classifications.
2. Prepare and disseminate commentary and analysis that aid interpretation, and provide factual information about the policy or operational context of official statistics. Adopt formats for the presentation of statistics in graphs, tables and maps that enhance clarity, interpretability and consistency.
3. Make statistics available in as much detail as is reliable and practicable, subject to legal and confidentiality constraints, offering choice and flexibility in the format according to the level of detail required by the user.
4. Publicise official statistics in ways that enable users to identify and access information relevant to their needs. Make access to official statistics as straightforward as possible by providing easy-to-use entry points.
5. Ensure that official statistics are disseminated in forms that, as far as possible, are accessible to a range of different audiences, including those with disabilities.
6. Ensure that official statistics are disseminated in forms that enable and encourage analysis and re-use. Release datasets and reference databases, supported by documentation, in formats that are convenient to users.
7. Manage official statistics in accordance with relevant public records legislation and codes of practice on records management. Deposit official statistics (accompanied by information about their purposes, design and methods) with the relevant national archive as required in legislation.

Protocol 1: User engagement

Effective user engagement is fundamental both to trust in statistics and securing maximum public value. This Protocol draws together the relevant practices set out elsewhere in the Code and expands on the requirements in relation to consultation.

Practices

1. Identify users. Document their statistical needs, and their wishes in terms of engagement.
2. Make users aware of how they can find the information they need.
3. Take account of users' views on the presentation of statistics, and associated commentary, datasets and metadata.
4. Provide users with information about the quality of statistics, including any statistical biases.
5. Involve users in the evaluation of experimental statistics.
6. Seek feedback from users on their experiences of the statistical service they receive, data quality, and the format and timing of outputs. Review the feedback systematically.
7. Consult users before making changes that affect statistics (for example, to coverage, definitions, or methods) or publications. Consultations should be:
 - Informed – by relevant central guidance on how consultations should be conducted; and by the views of user groups on the best means of obtaining views;
 - Efficient – by balancing the importance of the issue and the likely impact of users' views against the time and resources available, so as to obtain good value for money from the consultation process; by liaising and co-ordinating with other producers to avoid duplication of effort and to minimise burdens; and by exploiting different methods of consultation;
 - Clear – by describing the consultation, and expressing the issues, as simply and concisely as possible; and by publishing the timetable for each consultation; and
 - Responsive – by publishing the records of decisions and actions following a consultation, together with explanations for them; and by publishing individual responses, unless anonymity is requested.

Protocol 2: Release practices

Statistical reports should be released into the public domain in an orderly manner that promotes public confidence and gives equal access to all, subject to relevant legislation.

Practices

1. Release statistical reports as soon as they are judged ready, so that there is no opportunity, or perception of opportunity, for the release to be withheld or delayed.
2. Publish a timetable of statistical releases for twelve months ahead.
3. Ensure that all National Statistics can be accessed from the National Statistics Publication Hub.
4. Issue statistical releases at the standard time of 9.30am on a weekday, to maintain consistency and to permit time for users to understand and respond to the information during normal working hours.
5. Draw public attention to any change to a pre-announced release date and explain fully the reasons for the change at the same time. The relevant statistical Head of Profession has the final decision and should not be influenced by non-statistical matters.
6. Include the name and contact details of the responsible statistician in statistical reports.
7. Subject to compliance with the rules and principles on pre-release access set out in legislation, limit access before public release to those people essential for production and publication, and for quality assurance and operational purposes. Publish records of those who have access prior to release.
8. Ensure that no indication of the substance of a statistical report is made public, or given to the media or any other party not recorded as eligible for access before publication. Report to the National Statistician immediately any accidental or wrongful release, and investigate the circumstances.
9. Ensure that government statements issued alongside official statistics, and referring to, or based upon, them:
 - a. contain a prominent link to the statistical release and clearly refer to the source of the statistics;
 - b. are labeled clearly as policy statements (or ministerial statements) and are readily distinguished from a statistical release; and
 - c. meet basic professional standards (for example, statistics should be cited accurately, and charts should be drawn in an accurate and impartial way).

Protocol 3: The use of administrative sources for statistical purposes

Administrative sources should be fully exploited for statistical purposes, subject to adherence to appropriate safeguards.

Practices

1. Observe all statutory obligations and relevant codes of practice in relation to the protection of confidentiality and the handling of personal data.
2. Only base statistics on administrative data where the definitions and concepts are good approximations to those appropriate for statistical purposes.
3. Maximize opportunities for the use of administrative data, cross-analysis of sources and for the exchange and re-use of data, to avoid duplicating requests for information. Where possible, use common information technology and information management systems that facilitate the flow of information between producers of statistics.
4. Ensure that no action is taken within the producer body, or public statement made, that might undermine confidence in the independence of the statistics when released.
5. Prepare, in consultation with the National Statistician, a Statement of Administrative Sources which identifies the following.
 - a. The administrative systems currently used in the production of official statistics.
 - b. Procedures to be followed within the organisation to ensure that full account is taken of the implications for official statistics when changes to administrative systems are contemplated.
 - c. Information on other administrative sources that are not currently used in the production of official statistics but have potential to be so used.
 - d. Arrangements for providing statistical staff, whether inside the producer body or elsewhere, with access to administrative data for statistical purposes.
 - e. Arrangements for auditing the quality of administrative data used for statistical purposes.
 - f. Arrangements for ensuring the security of statistical processes that draw on administrative data.

Code of Statistical Practice

Need for a Code of Statistical Practice

1. The Indian Statistical System is a decentralized system. The official statistics are generated as a by-product of administration and through censuses and surveys, including evaluation studies and case studies. There are also occasions when statistics produced in the private sector are used by government agencies. Besides, the private sector also produces some statistics which are disseminated by them from time to time. There are also cases where the private sectors enterprises procure statistical data/ reports from the Government Departments and disseminate them with or without value addition, at times even without disclosing the source from which the data/ reports were obtained. These situations are likely to cause confusion among the public, particularly the users. Multiplicity of producers of data, particularly on same or similar characteristics have been giving rise to conflicting statistics, being placed in the public domain.
2. It may not be possible to restrict production of statistics by multiple agencies, particularly when private agencies intend to produce statistics that are same or similar to those being produced by government agencies. But, it may be possible and also necessary to lay down a set of principles in the form of good practices, which if the agencies choose to, could follow.
3. The statistical reports and/ or the unit level data are either not disseminated regularly or disseminated without specifying the sources and methodology used. As a result, the users and the public at large are inconvenienced, mainly in the following ways, -
 - (1) They have no way by which release of a statistical product could be expected by a certain time, as the number of government agencies is very large and distributed geographically across the country.
 - (2) If the sources and methodology are not known, the users may not understand the manner in which they can use the products and the limitations in the use of data.
 - (3) If a statistical report is disseminated and the corresponding unit level data is not disseminated, the users may not believe in the product.
 - (4) The unit level data could be used for statistical purposes in a manner other than what the producer of a report from that data could have envisaged. In the absence of availability of unit level data, the users will have to be satisfied with the manner in which the data has been summarised or aggregated in the reports by the concerned agencies.
4. In addition to the above, there are a few other situations, such as not advising the informants about the purpose of collecting data and the manner in which their identities

would be kept confidential, and no precautions being taken while storing data, which need to be addressed while laying down good practices.

Scope

5. In view of the aforesaid reasons, it is necessary to lay down some principles in the form of good practices, which may be followed by government as well as private agencies. The principles, if followed by the concerned agencies, would facilitate users, the media and the public to understand and assess the veracity and credibility of the products.

Whom it would apply

6. The principles laid down hereunder are intended to be followed voluntarily by the government as well as private agencies. The agencies may, while collecting data or disseminating statistical reports and/ or unit level data, on their own declare whether they have followed all or any of the principles and on the contrary also may declare the reasons as to why all or a few of the principles could not be followed by them. If feasible, they may pre-announce deviations from the principles and the reasons thereof, in respect of each statistical product.

Terminology used

7. In this Code of Statistical Practice, unless the context otherwise requires,
- (1) "official statistics" means statistics derived by the Government agencies from statistical surveys, administrative and registration records and other forms and papers, the statistical analyses of which are published regularly, or planned to be published regularly, or could reasonably be published regularly;
 - (2) "government agency" means any Ministry or Department or its instrumentality, in the Union Government or in a State Government or in a Union territory Administration, or any local government that is to say, Panchayats or Municipalities, as the case may be; and
 - (3) "informant" means any person, who supplies or is required to supply statistical information and includes an employee of any Government agency and a owner or occupier or person in-charge or his authorised representative in respect of persons or a firm registered under the Indian Partnership Act, 1932 or a co-operative society registered under any Co-operative Societies Act or a company registered under the Companies Act, 1956 or a society registered under the Societies Registration Act, 1860 or any association recognised or registered under any law for the time being in force.

Principles

8. The following principles in respect of different types of statistical activities are laid down under the Code of Statistical Practice.

Collection of data

(1) At the time of data collection, the informants shall be told of the purpose for which data is being collected from them and the manner in which the data collected would be disseminated.

(2) The informants shall be told of the manner, the sources to be tapped and the persons to be contacted for the purpose of accessing data collected from each of them or about them.

(3) At the time of data collection, each informant shall be told whether furnishing data by him is voluntary or a statutory requirement and in case of statutory requirement, the consequences of not furnishing data and of furnishing false data.

Release of statistical reports and unit level data

(4) An agency producing statistics shall publish a calendar of release in respect of all its regular statistical products.

(5) In case of pre-release of calendar for regular statistical products, each agency shall publish the reasons for deviation, if any, for delay in release of any product as per the calendar.

(6) Unit level data needs to be placed in the public domain in respect of all the statistical reports and publications released.

(7) The unit level data must be disseminated only after suppressing or deleting identification details of informants and in a manner that even after such suppression/ deletion, no data could be identified as pertaining to a particular informant by the process of elimination.

(8) All statistical releases and publications including unit level data shall provide references to metadata, methodologies used, sources of detailed concepts and definitions followed for its production.

Explanation: Metadata or 'data about data' is a specific form of documentation and refers to the information that is made available to users in order to improve their understanding of the data. Comprehensive and complete metadata helps users to make informed and full use of data and minimises the likelihood of misuse.

(9) Metadata in respect of all the statistical releases and publications including unit level data shall also be made available to the widest possible audience through appropriate electronic portals and other dissemination channels.

(10) ‘Discovery metadata’, i.e., information enabling users to identify and access data relevant to their needs shall be compiled for every resource and shall be made available in a comprehensive catalogue in both paper and electronic format.

Explanation:

(a) The details shall be kept up to date, be easily accessible and shall contain information about the title, content, geographic context, timeliness, availability and accessibility of each resource together with appropriate contact details. Access shall be enhanced through the provision of indexes, and availability through web-based search engines.

(b) Additional metadata shall be made available to users concerning the more technical details of each resource. This will comprise, among other things, a description of the data collection arrangements including sample design, questionnaires, coding instructions and classifications, editing, validation procedures including auto-corrections if any made in the data, methodologies, and method of data collection, quality of data, confidentiality and anonymisation procedures and any other relevant materials.

(c) Metadata attached to electronically held data which is to be preserved permanently, or for a significant length of time, shall include information about the software used to arrange and process the resource. This is to ensure that the data can continue to be understood, manipulated and accessed over time.

(11) In respect of reports or data disseminated on the basis of data or reports of any other statistical agency, reference to such sources and the value addition made before dissemination needs to be explained. In case, there is no value addition, the product shall not be sold even at negligible cost to customers without the consent of the original producer. Even while disseminating such products free of cost, the source of production and the manner in which it was acquired needs to be quoted.

(12) All statistical publications and unit level data, including those putout in websites, shall indicate contact details of persons whom the users can approach for any clarifications.

(13) In case of periodical statistical reports/ publications and data releases, a separate section should indicate changes made in methodologies, practices, concepts as applicable to the publication/ data from the previous publication.

(14) In all cases of periodical release of key statistical indicators, the following aspects should be clearly brought out in each release.

- Extent of new data actually used, either as percentage of responses or as a percentage of estimates based on direct data
- Revisions made in the figures already released and reasons for the revisions

- Impact of revisions in terms of percentage change
- Date of next release

(15) All releases in respect of reports of sample surveys should provide for the estimates of sampling errors of key estimates.

(16) Identities of informants shall not, without their consent, be revealed to anyone not directly involved in the statistical work in the concerned agency and, shall not be used for any non-statistical purposes.

(17) The measures taken to store statistical reports and unit level data and the manner in which confidentiality of data to prevent its misuse particularly where it contains details of informants would be maintained, shall be spelt out.

(18) The prices to be collected from customers purchasing statistical reports/ publications and unit level data, the manner in which prices are arrived at and the conditions, if any, prescribed in their use shall be spelt out.

(19) The mechanism of receiving complaints and queries from users, customers and informants needs to be evolved and made public. The action taken on the complaints also needs to be made public through periodic reports.

Guidelines on Outsourcing statistical activities

Background

1. Statistical activities include activities such as designing methodology for surveys and censuses, data collection, including administrative statistics, data entry in electronic media, data validation, data processing and compilation, tabulation and report writing, data storage, providing access to data and dissemination of data and reports. These activities have to be performed in a professional way to earn public confidence in statistics, particularly when the statistics are produced within the Government.

Identification of statistical activity for outsourcing

2. For the purpose of identifying a statistical activity for outsourcing, the following points are normally kept in view.

- (1) A statistical project needs to be framed in such a way that its objectives are clear and it is intended to fulfill the objectives sought to be achieved.
- (2) All possible methodological alternatives suitable for a statistical project and the corresponding advantages and disadvantages need to be studied and the best possible alternative in accordance with the judgment of the concerned Government agency needs to be arrived at.
- (3) In case of a Census or a sample survey or a case study or an evaluation study, the list of indicators which are required to be measured and the level (say, geographical unit) at which estimates or measurement values are required is to be identified.
- (4) In cases where technology appropriate for the job is not known to the Government agency, it is advisable to initially go for a pre-qualification bid to obtain suggestions from the bidders on the available technological options.
- (5) Wherever feasible, tabulation plan and list of parameters to be estimated need to be specified first and the methodology including data collection formats should be prepared to meet the requirements so specified.

Need for guidelines

3. In the Government setup, need arises to take up statistical activities as a onetime exercise or for the purpose of augmenting resources to meet some time bound goals in respect of regular statistical activities. Outsourcing is a solution in such situations. The guidelines are guidelines and these are intended to bring notice to the concerned authorities about the requirements that they may keep in view while entering into contracts on outsourcing. The main goal of outsourcing a statistical activity should be to satisfactorily complete the activity within a time frame.

Terminology used

4. In these guidelines, unless the context otherwise requires,
- (1) "official statistics" means statistics derived by the Government agencies from statistical surveys, administrative and registration records and other forms and papers, the statistical analyses of which are published regularly, or planned to be published regularly, or could reasonably be published regularly;
 - (2) "Government agency" means any Ministry or Department or its instrumentality, in the Union Government or in a State Government or in a Union territory Administration, or any local government that is to say, Panchayats or Municipalities, as the case may be;
 - (3) "statistical project" includes any item of work on official statistics decided to be taken up by any Government agency through outsourcing relating to designing methodology for a Census or a sample survey or a case study or a evaluation study, collection of data either primary or secondary by any method including observation method and from administrative records, data preparation electronically on the basis of data collected/ records maintained, field supervision of data collection, quality scrutiny and validation of data, tabulation of data, preparation of general and analytical reports, storage and security of data and includes planning and project management activities, documentation and other activities incidental to all these activities;
 - (4) "outsourcing" means execution of a statistical project through an arrangement which involves a Government agency making use of a service from a private service provider;
 - (5) "informant" means any person, who supplies or is required to supply statistical information and includes an employee of any Government agency and a owner or occupier or person in-charge or his authorised representative in respect of persons or a firm registered under the Indian Partnership Act, 1932 or a co-operative society registered under any Co-operative Societies Act or a company registered under the Companies Act, 1956 or a society registered under the Societies Registration Act, 1860 or any association recognised or registered under any law for the time being in force;
 - (6) "sensitive information" means information or an opinion about an identified individual's racial or ethnic origin, political opinion, membership of a political association, religious beliefs or affiliations, philosophical beliefs, membership of a professional or trade association, membership of a trade union, sexual preferences or practices, criminal record; health information about an individual; or genetic information about an individual that is not otherwise health information; and

- (7) “contractor” means a service provider, private or otherwise, to whom a statistical project may be outsourced.

General Guidelines

5. No core statistical activity of a Government agency should be outsourced on a regular basis to the extent possible.

6. A Government agency may outsource a statistical project to any contractor, who in turn may engage agencies or persons to perform different jobs relating to the project or in the alternative, the Government agency may directly engage persons on contract basis for performing the jobs. Both these situations are outsourcing arrangements.

7. A Government agency must clearly identify the components of a statistical project to be outsourced with all appropriate technical details and action plan. Main goal shall be to ensure statistical product quality and timeliness of completion of outsourced statistical project.

8. The following aspects may be considered while drawing-up an outsourcing contract.

- (1) It is advisable that every outsourcing arrangement in respect of a statistical project by any Government agency shall be in the form of a written executable contract.
- (2) Any statistical project to be outsourced must always be awarded according to the principles of fair competition, as generally understood and accepted.
- (3) On completion of an outsourced statistical project by a contractor, the contractor shall have no priority claim in future for similar statistical projects.
- (4) The job description for each person engaged in a statistical project needs to be specified. This is necessary for projects given to individuals or directly handled by Govt. agencies. In case of projects handled by contractors, the project proposals should include details of various types of persons who could be engaged along with their job descriptions and minimum qualifications.
- (5) The Contractor may be required to inform the concerned Government agency if the work to be carried out for that Government agency is to be combined or syndicated in the same project with the work for other Government agencies or private agencies.
- (6) The Contractor shall be required to inform the concerned Government agency, when any part of the work for that Government agency is to be subcontracted outside the Contractors’ own organisation (including the use of any outside consultants), the identity of any such sub-contractor.
- (7) Contractor shall be obliged to avoid possible clashes of interest between the services provided to a number of Government agencies.

- (8) Contractors and persons involved in any outsourced statistical project must not, whether knowingly or negligently, act in any way that could bring discredit on the statistical profession or lead to loss of public confidence.
- (9) The contract shall stand automatically terminated at the expiry of contractual period. The notice period required from either side for termination of contract needs to be specified.
- (10) Contractors and persons engaged in a statistical project may be required to ensure the security and confidentiality of all statistical records in their possession, during the execution and after the cessation of the contract. They may be required not to disclose or use any information or record that has been in their knowledge in the performance of contract.
- (11) During the course of the contract or thereafter the Contractors may be required not to undertake any non-statistical activities like database marketing involving data about individuals which could be used for direct marketing and promotional activities.
- (12) The conditions, such as being guilty of any insubordination, intemperance or other misconduct or any breach or non-performance of any of the provisions of the contract or of any rules pertaining to breach of public service, by which the Government agency may terminate the contract without notice may also be specified.
- (13) When a Government agency decides to directly augment manpower on contract basis for performing different jobs, it is advisable to pick up persons for the contract from the place or its surroundings where the contractual work needs to be performed. The manner of identifying persons suitable for the contract may be advertised in that area in the local media as also to the Employment Exchanges located thereof. The results of the identification process shall be declared immediately on its conclusion.
- (14) All items such as machinery, equipment's and consumables acquired with the cost of a Government agency for the purpose of execution of a statistical project as a part of the contract may be treated as Government assets.
- (15) The Contractors may be required to maintain proper accounts of the expenditure incurred for any statistical project. Most importantly, they may be required to furnish supporting documents of payments made to persons engaged by them.
- (16) Each Contract may specify schedule of payments between parties and to persons engaged in a statistical project. It may also specify penalties, if any, for delays as well as indemnifications against any and all responsibilities, claims, demands, suits, judgments, damages and losses, including the costs, fees and expenses in connection therewith or incidental thereto for: (i) any injury, illness or death to the persons engaged in the project, attributable to the performance of services under the terms of the contract; (ii) any losses, thereof, damage to, or destruction of any of properties; arising out of, or in any way connected with performance of the contract.

- (17) The Contract may contain the usual provisions relating to performance security, earnest money deposit and production of Bank guarantee against advances payable.
- (18) The Government agency or its representative shall have the right to inspect and/ or to test the material and services to confirm their conformity to the Contract. The specifications in a Contract may include what inspections and tests the Government agency requires and where they are to be conducted. The Government agency may notify the Contractor in writing of the identity of any representatives deployed for these purposes.
- (19) The Government agency's right, to inspect, test and, where necessary, reject the material and services may in no way be limited or waived by reason of the same having previously been inspected, tested and passed by the Government agency or its representative. The Contractor may make available for inspection and examination such records, plans and other documents, as may be necessary.
- (20) Every Contractor may be required to report periodically the progress of work carried out, to the concerned Government agency.
- (21) A Government agency may reserve the right to omit any item(s) from the scope of a Contract or to increase or decrease the quantities of items by a certain degree (say 25 %) from the quantities indicated in the Contract specifications, without any change in unit price or other terms and conditions.
- (22) Where a contractor has to use his own equipment, software etc., in the execution of a statistical project, he may be required, at his cost, to take all necessary steps including replacement if necessary to maintain the equipment, software etc., used during the currency of the contract for the smooth flow of work as per the prescribed time schedule. During the period of maintenance/ repair of the equipment, software etc., the contractor may be required to hire such equipment, software etc., in order to ensure non-stoppage of the work.
- (23) The Government agency on receipt of any complaint shall immediately communicate the Contractor of only those details of the complaint, as may be necessary to minimize any breach or prevent further breaches of the contract.
- (24) If any Contractor engaged in a statistical project receives any complaint from any source, he shall immediately communicate the complaint to the concerned Government agency.
- (25) Every contractor and every person engaged in a statistical project may, on completion of his work, be required to handover all the records and documents and furnish a certificate to that effect to the concerned Government agency or to an officer authorised for the purpose by that agency.

- (26) Persons engaged in a statistical project, shall be made aware of their obligations, not to access, use, disclose or retain personal information except in performing their duties of employment or contractual obligations; and are informed that failure to comply would render themselves liable to legal (civil and criminal) consequences.

Outsourcing collection of statistics

9. In respect of contracts for collection of data, the following aspects may be considered for suitable incorporation into the contracts.

- (1) The identity of the Government agency and the Contractor may be made available to informants at the time of collection of data. Informants may also be told or be able to find without difficulty or expense, their contact details. Address, telephone numbers or websites of the Government agency and the Contractor may be provided so that informants can check the bonafides of the person collecting data without difficulty and significant cost to themselves. It is advisable that persons engaged for collection of data carry proper photo identity cards containing the aforesaid details.
- (2) Informants' identities must not, without their written consent, be revealed to anyone not directly involved in the statistical project or used for any non-statistical purpose.
- (3) Nobody shall be adversely affected or harmed as a direct result of furnishing information in a statistical project.
- (4) If informants' co-operation in a statistical project is entirely voluntary at all stages, they must be so informed when asking for their co-operation.
- (5) In cases of statutory data collection, the informants need to be told about the relevant provisions for data collection including legal consequences for failure to furnish information or furnishing false information.
- (6) Each informant may be informed of the manner in which the informant could access the data collected from the informant in a statistical project, as also of the measures taken to deny access on that information to others.
- (7) Persons engaged for data collection shall avoid interviewing informants at inappropriate or inconvenient times. They should also avoid the use of unnecessarily long interviews.
- (8) Contractors and those working on their behalf (e.g. persons engaged for data collection) must not, in order to secure informants' co-operation, make statements or promises that are knowingly misleading or incorrect – for example, about the likely length of the interview or about the possibilities of being re-interviewed on a later occasion. Any such statements and assurances given to informants must be fully honoured.
- (9) Children are defined as being 'less than 14 years' and young people are defined as being '14 – 17 years'. No child under 14 years shall be interviewed without

parents'/guardians'/responsible adults' consent. In the case of young people, where the information to be collected is "sensitive information", the consent of a responsible adult must be sought. Where the data collection involves any subjects or circumstances that might reasonably be judged to be of concern to parents or guardians of the young person (e.g. violence, drug taking), but does not include "sensitive information", it is advisable to seek the consent of a responsible adult. Social norms, that varies community-wise, should not be crossed

- (10) It is advisable to avoid data collection in places where persons other than the informant or his family members have free access and where an informant could reasonably expect to be observed and/or overheard by other people present. In case of collecting sensitive information and any other information which an informant could reasonably feel inconvenience to furnish even in the presence of his family members, the data shall not be collected in a manner that the informant could not be observed and/or overheard by his family members.
- (11) The number of enumerators and supervisors needed for each geographical unit needs to be specified.
- (12) The minimum qualifications, including knowledge of local language and social norms, for the position of enumerator/ supervisor and the manner of identifying them for the contract job needs to be specified. They should not be taken on the regular rolls of the Government agency even on ad hoc basis. They should not be required to attend office of the agency on days where they are not required to perform any job relating to the contract. In other words, when there is no job under the contract to be performed on any day, the enumerator/ supervisor may be free to take up any other assignment.
- (13) It is advisable to identify enumerators, supervisors and other staff required in the contract or project on the condition that they shall not be entitled to get any claims, rights, interests or further benefits in terms of regularisation or consideration of further appointment to any equivalent post(s) or any other post(s) whatsoever, including any claims for further casual, ad-hoc, temporary or regular service in any Government agency.
- (14) Where female informants participate in data collection in a significant number, adequate number of female enumerators/ supervisors need to be recruited to eliminate gender bias in the data.
- (15) The data enumerators shall be provided with all the technical material for carrying out the work assigned to them, such as instruction manuals, data collection formats, and any equipment required for the purpose.

- (16) Before being put on the job, the enumerators and other supervisory staff need to be imparted detailed training on the methodology that they have to follow in data collection.
- (17) Where significant costs are to be incurred for imparting training to the enumerators and other supervisory staff and remuneration is to be paid to them for attending training programme, it is advisable to incorporate a condition in the contract that the remuneration for attending training would become payable only after certain amount of work is done after receiving training.
- (18) Specific time bound norms of work need to be prescribed for the enumerators and supervisors.
- (19) Norms for field work in a day/ week/ month needs to be specified keeping in view the requirement, if any, of covering seasonal activities of the informants.
- (20) Norms for field supervision (on-the spot as well as surprise) and levels of supervision need to be specified in such a way that it covers the work of as many enumerators as possible and spread evenly throughout the period of data collection.
- (21) At times when remuneration is fixed in terms of number of formats of data collection filled up, the enumerators may try to fill up more number of formats than what is normally possible, which affects the quality of data. Similar situations could be there even in case of supervisors. This aspect needs to be kept in view while fixing the norms for data collection.
- (22) Place of work for each person engaged in the contract also requires to be specified.
- (23) Quality scrutiny of data collected and where required making back-checks to the field to meet the concerned informants to ascertain the correctness of data from informants need to be provided for.
- (24) Paying piece rated remuneration to the enumerators and supervisors in terms of the quantum of work done by them subject to quality satisfaction is advisable. The deductions in payment as also termination of contract for not being able to fulfill the prescribed norms and standards of work need to be specified in very clear terms.
- (25) Where data collection work in a geographical unit, say a village or urban block takes more than 2-3 days for one enumerator, it is advisable to send a team of enumerators along with one supervisor to set-up a camp to get the work completed expeditiously. In case of prolonged work by one enumerator, it should be ensured that the quality of work does not suffer because of possible human lethargy/ home sickness.
- (26) The enumerators shall be encouraged to provide clarifications in respect of points raised during field inspections, and quality scrutiny by the concerned Supervisors.
- (27) The findings of supervisory staff and other officers who conduct field supervision (on-the spot as well as surprise) and quality scrutiny shall be documented.

Outsourcing storage, security and dissemination of data

10. The storage, security and dissemination of official statistics, reports and the individual data collected from the informants are very important activities. All care and caution has to be taken by every Government agency on these aspects. Where need arises to outsource these activities, the following safeguards may be kept in view.

- (1) De-identification means the removal from identified information of any details that identify the informant, or from which the identity of the informant can reasonably be ascertained, without retaining a means by which the information could be re-identified. De-identification is thus a permanent and irreversible process. Statistical projects should be designed in a manner that makes de-identification practicable.
- (2) All indications of the identity of informants must be permanently removed from the records of information that they have provided as soon as they are no longer necessary for statistical purposes. If information exists in a physical form that makes the removal of the identity of informants impracticable (e.g. on paper), the information should be recorded in another medium and the original records destroyed.
- (3) The requirement to destroy or delete records does not apply if the destruction, deletion or de-identification would involve the destruction or deletion of information relating to other individuals.
- (4) Where it is necessary to retain identifying details, they must be stored securely and separately from other information that the informants have provided (e.g. with the linkage maintained by the use of an intervening variable). Access to such material must be restricted to authorised personnel within the Contractor's own organisation for specific statistical purposes (e.g. field administration, data processing, panel or repetitive survey programmes like price data collection, or other forms of data collection involving recall interviews). There should be no attempt to make a separate duplicate copy of identity details.
- (5) Where data collected on paper formats is treated as confidential because of its containing identification details of informants, steps should be taken, wherever feasible, to remove that part of the paper formats where identification details are recorded and the rest may be given to the Contractor for preparing data electronically. If linkage of electronic data with the part of paper formats is required to be maintained, a system of linking numbers or codes need to be developed. In the alternative, the Contractor may be asked to perform the job in the premises of the Government agency where tight security measures could be imposed to avoid leakage of data in any manner outside the premises.
- (6) To preserve informants' anonymity not only their names and addresses but also any other information provided by or about them that could in practice identify them (e.g. their Company and job title) must be safeguarded. These anonymity requirements

relate to any records from which the identity of the informant is apparent, or can reasonably be ascertained, including an informant's photograph, verbatim quotes and audio or video taped interviews.

- (7) The aforesaid anonymity requirements may be relaxed only under the safeguards, namely, (a) where the informant has given explicit written permission for this; and (b) where disclosure of names to a third party (e.g. a sub-contractor) is essential for any statistical purpose such as data processing or for further interview with the informant for an independent fieldwork quality check) or for further follow-up. The original Contractor shall be responsible for ensuring that any such third party agrees to observe the safeguards.
- (8) The Contractor must explicitly agree with the Government agency, specific arrangements regarding the responsibilities for security of data and for dealing with any complaints or damages arising due to faulty data/ services or data misuse. Such responsibilities will normally rest with the Government agency, but the Contractor must ensure that data are correctly stored and handled while in the Contractor's charge.
- (9) All documentation, data, reports and material/ data stored electronically that emerges out of the execution of a statistical project shall be the property of the concerned Government agency. The following records must remain the property of the Government agency and must not be disclosed by the Contractors to any third party without the Government agency's permission:
 - a) statistical project briefs, specifications, technical and training inputs, and other information provided by the Government agency.
 - b) the statistical data and findings from a statistical project (except in the case of syndicated or multi-Government agency projects or services where the same data are available to more than one Government agency).
- (10) If there is a requirement of post tabulation scrutiny and report writing, they are to be specified.
- (11) The manner and responsibility for releasing data or reports, if any, on completion of tabulation need to be specified.

While disseminating data, contractors shall ensure to inform users that the users are obliged
a) to acknowledge the source of data in their publications and b) to accept responsibility of views expressed in reports based on the data.

2. Evolving Standard for data collection and reporting*

Background:

During the 16th and 17th centuries, statistics were a method for counting and listing populations and State resources. The term *statistics* comes from the Latin *status* (state) indicating that the origin of the profession related to the needs of governments. **Official statistics** are statistics published by government agencies or other public bodies such as international organizations. They provide quantitative or qualitative information on all major areas of citizens' lives, such as economic and social development, living conditions, health, education and the environment etc.,. Official statistics are statistics disseminated by governmental agencies at all levels, including municipal, county, and state administrations.

Example: "Almost every country in the world has one or more government agencies that supply decision-makers and other users including the general public and the research community with a continuing flow of information. This bulk of data is usually called official statistics. Official statistics should be objective and easily accessible and produced on a continuing basis so that measurement of change is possible."

Statistics result from the *collection and processing of data* into statistical information by a government institution. They are then disseminated to help users develop their knowledge about a particular topic or geographical area, make comparisons between countries or understand changes over time. It make information on economic and social development accessible to the public, allowing the impact of government policies to be assessed, thus improving accountability.

Objective:

Statistics provide a picture of a country/state or different phenomena through data, and images such as graph and maps. Statistical information covers different subject areas (economic, demographic, social etc.). It provides basic information for decision making, evaluations and assessments at different levels.

The goal of statistical organizations is to produce relevant, objective and accurate statistics to keep users well informed and assist good policy and decision-making.

Common indicators used in statistics

Statistical indicators provide an overview of the social, demographic and economic structure of society. Moreover, these indicators facilitate comparisons between countries and regions.

For **population**, the main indicators are:

- Total population

* Sri.K.Gururaja Rao, Joint Director, PTC Division, Directorate of Economic & Statistics

- Population density
- Population by age
- Life Expectancy at birth and at age 65
- Total Fertility Rate
- Infant Mortality Rate

In the **employment** category:

- Employment Rate
- Unemployment Rate
- Economic activity Rate (women and men)
- Employment in major sectors: agriculture, industry, services

There are many indicators for the **economy**:

- Gross Domestic Product
- Gross Domestic Product per capita
- Real GDP growth rate
- GDP by major economic sectors: agriculture, industry, services
- Consumer Price Index
- Purchasing Power Parity
- Exchange Rate
- Gross external debt

For trade indicators we find:

- Exports of goods and services
- Imports of goods and services
- Balance of payments
- Trade Balance
- Major import partners
- Major export partners

Different Users of Statistics: statistics are intended for a wide range of users including governments (central and local), research institutions, professional statisticians, journalists and the media, businesses, educational institutions and the general public. There are three types of users: those with a general interest, business interest or research interest. Each of these user groups has different needs for statistical information

- a. Users with a General interest: include the media, schools and the general public. They use official statistics in order to be informed on a particular topic, to observe trends within the society of a local area, country, region of the world.

- b. Users with a Business interest: include decision makers and users with a particular interest for which they want more detailed information. For them, official statistics are an important reference, providing information on the phenomena or circumstances their own work is focusing on. For instance, those users will take some official statistics into consideration before launching a product, or deciding on a specific policy or on a marketing strategy. As with the general interest users, this group does not usually have a good understanding of statistical methodologies, but they need more detailed information than the general users.
- c. Users with a research interest are universities, consultants and government agencies. They generally understand something about statistical methodology and want to dig deeper into the facts and the statistical observations; they have an analytical purpose in inventing or explaining interrelations of causes and effects of different phenomena. In this field, official statistics are also used to assess a government's policies.

One common point for all these users is their need to be able to trust the official information. They need to be confident that the results published are authoritative and unbiased. Producers of official statistics must maintain a reputation of professionalism and independence.

The statistical system must be free from interference that could influence decisions on the choice of sources, methods used for data collection, the selection of results to be released as official, and the timing and form of dissemination. Statistical business processes should be transparent and follow international standards of good practice.

Producers at the State level

Official statistics are collected and produced by State Statistical Organizations (Directorate of Economics and Statistics), or other organizations that form part of the State statistical system in state where statistical production is de-centralized. These organizations are responsible for producing and disseminating official statistical information, providing the highest quality data. Quality in the context of official statistics is a multi-faceted concept, consisting of components such as relevance, completeness, timeliness, accuracy, accessibility, clarity, cost-efficiency, transparency, comparability and coherence.

The core tasks of State Statistical Organizations, for both centralized and decentralized systems, are determining user needs and filtering these for relevance. Then they transform the relevant user needs into measurable concepts to facilitate data collection and dissemination. The DES is in charge of the coordination between statistical producers and of ensuring the coherence and compliance of the statistical system to agreed standards. The DES has a coordination responsibility as its Director represents the entire state system of official statistics.

Data revision

Even after they have been published, some official statistics may be revised. Policy-makers may need preliminary statistics quickly for decision-making purposes, but eventually it is important to publish the best available information.

Data Sources

There are two sources of data for statistics. Primary, or "statistical" sources are data that are collected primarily for creating official statistics, and include statistical surveys and censuses. Secondary, or "non-statistical" sources, are data that have been primarily collected for some other purpose (administrative data, private sector data etc.).

Statistical survey or sample survey

A statistical survey or a sample survey is an investigation about the characteristics of a phenomenon by means of collecting data from a sample of the population and estimating their characteristics through the systematic use of statistical methodology.

- The main advantages are the direct control over data collection and the possibility to ask for data according to statistical definitions.
- Disadvantages include the high cost of data collection and the quality issues relating to non-response and survey errors.

There are various survey methods that can be used such as direct interviewing, telephone, mail, online surveys.

Census

A census is a complete enumeration of a population or groups at a point in time with respect to well-defined characteristics (population, production). Data are collected for a specific reference period. A census should be taken at regular interval in order to have comparable information available, therefore, most statistical censuses are conducted every 5 or 10 years. Data are usually collected through questionnaires mailed to respondents, via the Internet, or completed by an enumerators visiting respondents, or contacting them by telephone.

- An advantage is that censuses provide better data than surveys for small geographic areas or sub-groups of the population. Census data can also provide a basis for sampling frames used in subsequent surveys.
- The major disadvantage of censuses is usually the high cost associated with planning and conducting them, and processing the resulting data.

Official Statistics presentation

Official statistics can be presented in different ways. Analytical texts and tables are the most traditional ways. **Graphs** and charts summarize data highlighting information content

visually. They can be extremely effective in expressing key results, or illustrating a presentation. Sometimes a picture is worth a thousand words. Graphs and charts usually have a heading describing the topic. There are different types of graphic but usually the data determine the type that is going to be used.

- To illustrate changes over time, a line graph would be recommended. This is usually used to display variables whose values represent a regular progression.
- For categorical data, it is better to use a bar graph either vertical or horizontal. They are often used to represent percentages and rates and also to compare countries, groups or illustrate changes over time. The same variable can be plotted against itself for two groups. An example of this is the age pyramid.
- Pie chart can be used to represent share of 100 per cent. Pie charts highlight the topic well only when there are few segments.
- **Stacked bar charts**, whether vertical or horizontal, are used to compare compositions across categories. They can be used to compare percentage composition and are most effective for categories that add up to 100 per cent, which make a full stacked bar chart. Their use is usually restricted to a small number of categories.
- **Tables** are a complement to related texts and support the analysis. They help to minimize numbers in the description and also eliminate the need to discuss small variables that are not essential. Tables rank data by order or other hierarchies to make the numbers easily understandable. They usually show the figures from the highest to the lowest.
- Another type of visual presentation of statistical information is thematic map. They can be used to illustrate differences or similarities between geographical areas, regions or countries

Quality criteria

The quality criteria of a State Statistical Organization are the following: relevance, impartiality, dissemination, independence, transparency, confidentiality, national standards. These principles apply not only to the DES but to all producers of official statistics. Therefore, not every figure reported by a public body should be considered as official statistics, but those produced and disseminated according to the principles. Adherence to these principles will enhance the credibility of the DES and other official statistical producers and build public trust in the reliability of the information and results that are produced.

Relevance

Relevance is the first and most important principles for State statistical organization. When releasing information, data and official statistics should be relevant in order to fulfil the needs of users as well as both public and private sector decision makers. Production of

official statistics is relevant if it corresponds to different user needs like public, governments, businesses, research community, educational institutions.

Impartiality:

Once the survey has been made, the State Statistical Organizations checks the quality of the results and then they have to be disseminated no matter what impact they can have on some users, whether good or bad. All should accept the results released by the State Statistical office as authoritative. Users need to perceive the results as unbiased representation of relevant aspects of the society. Moreover, the impartiality principle implies the fact that State Statistical Organizations have to use understandable terminology for statistics' dissemination, questionnaires and material published so that everyone can have access to their information.

Dissemination

In order to maximize dissemination, statistics should be presented in a way that facilitates proper interpretation and meaningful comparisons. To reach the general public and non-expert users when disseminating, State Statistical Organizations have to add explanatory comments to explain the significance of the results released and make analytical comments when necessary. There is a need to identify clearly what the preliminary, final and revised results are, in order to avoid confusion for users. All results of official statistics have to be publicly accessible. There are no results that should be characterized as official and for the exclusive use of the government. Moreover they should be disseminated simultaneously.

Transparency

The need for transparency is essential for State Statistical Organizations to gain the trust of the public. They have to expose to the public the methods they use to produce official statistics, and be accountable for all the decisions they take and the results they publish. Also, statistical producers should warn users of certain interpretations and false conclusions even if they try to be as precise as possible. Furthermore, the quality of the accurate and timely results must be assessed prior to release. But if errors in the results occur before or after the data revision they should be directly corrected and information should be disseminated to the users at the earliest possible time. Producers of official statistics have to set analytical systems in order to change or improve their activities and methods.

Confidentiality

All data collected by the State Statistical Organizations must protect the privacy of individual respondents, whether persons or businesses. But on the contrary, government units such as institutions cannot invoke statistical confidentiality. All respondents have to be informed about the purpose and legal basis of the survey and especially about the confidentiality measures. The statistical office should not release any information that could identify an individual or group without prior consent. After data collection, replies should go back directly to the statistical producer, without involving any intermediary.

National standards

The use of national standards at the state level aims to improve national comparability for state users and facilitate decision-making. Moreover, the overall structure, including concepts and definitions, should follow nationally accepted standards, guidelines or good practices.

The gaps/weakness that exists in the current statistical system are:

I. Lack of statistical awareness:

- a. Policy-designers and decision-makers do not systematically utilize statistics and do not depend on statistics in running their institutions, hence compromising the quality of the policies and decisions made.
- b. Statistical data is rarely used by local authorities, or by legislators.
- c. Little collaboration and cooperation between data-producers Exist

II. Data production issues:

- a. Lack of a statistical strategy hinders the proper development of statistical operations, including those of the Department of Statistics.
- b. Many data-producing institutions do not abide by scientific principles, modern methodologies, and national statistical standards and good practices
- c. The scarce technical resources of the producers, particularly in the areas of data collection methodologies.
- d. documentation schemes, and the use of appropriate technologies and software.
- e. The producers' lack of expertise in the field of statistics, especially on sampling, form design, and data analysis
- f. The existence of human errors, particularly in form-filling, coding, and data entry.
- g. Lack of statistical awareness on the part of the data providers (respondents), whether on the household level or on the establishment level, causes their unwillingness to cooperate and tempts them to provide inaccurate information.

Suggestion for improving the data reliability and credibility:

- a. The adoption of standards and specifications to apply to data from all concerned departments to ensure the data's precision, reliability, and conformance to adopted standards. Such activities include non-politicizing of the statistical product, and non-allowing of interference in the production of statistical figures.
- b. Relieving the burden on the data providers, through limiting the number of questions they have to reply to in a single survey, and/or limiting the number of surveys they are subjected to

- c. Enforcing the Collection of Statistics Act, 2008 and Rules 2011 that are related to data quality and reliability. Such Act must be enforced on non-responding households and/or establishments, those who provide inaccurate information or the field staff that alter or forge the collected field data.
- d. Developing an information technology policy that provides for the use of modern technologies in data production, which lead to improving the production quality, starting with the collection process, through data processing the cost of data collection and the burden on the data entry, data storage, and ending with data publishing and dissemination. This will reduce the cost of data production and burden on respondents, providing –in turn- for more accuracy and reliability of the produced data.
- e. Developing an information management system and using information technologies to facilitate data management and retrieval, for data entry, transformation, storage, retrieval, control, and presentation. This includes management of data collected by administrative activities.
- f. Data consistency requires coordination between the data producers, such that:
 - o Data are collected for standard time periods.
 - o Modern methodologies and procedures are standardized and used for data collection.
 - o A single, approved, reference source is adopted for the publishing of data for each sector.
- g. Promoting statistical awareness by creating public awareness of statistics, through awareness programmes in the media.
- h. Developing the dissemination schemes of official data, through
 - Improving the statistical reporting system by using professional reporting techniques.
 - Maintaining an email list that is updated regularly, and that includes all stakeholders, whether they be producers users, or researchers.
 - Using websites as the main data dissemination channel.
- i. A detailed training programme to upgrade the staff skills in areas like methods of data collection, processing and summarization has to be given for the exiting staff and also induction training for Statistical Inspector and Enumerators with Basic Statistics has to be made mandatory in order to get quality data. A higher level training on important subjects like Poverty Estimation, Estimation of GSDP, DDP, Statistical analysis and also analysis of data and writing of report and usage of latest statistical packages must be given to higher level officers.

- j. Rotation of job at least once in 5-6 years for statistical personnel will give an opportunity for them to be exposed to different statistical environment and also to a long standing at a single place may some time lead to biased production of data.

Major initiatives taken by Karnataka Government :

Karnataka State Statistical Strengthening Project (KSSSP):

In order to produce timely, reliable and credible data, the National Statistical Commission recommended to strengthen National and State Statistical Systems. The Ministry of Statistics and Programme Implementation (MOSPI) launched the India Statistical Strengthening Project (ISSP) with the assistance of the World Bank. Karnataka is the first state to Prepare KSSSP and sign MOU with GOI during Dec. 2010.

The major initiatives taken up through this project are :

- Capacity building of personnel of DES and line departments
- Use of Information and Communication Technology
- Bringing out analytical reports and dissemination
- Filling up of vacant posts
- DES to perform as NODAL agency
- Closer interaction with data producers and users identify new areas where data is required.
- Meeting effectively, adequately and systematically the national minimum standards in regard to 20 key statistical activities

20 key statistical activities are :

1. State Domestic Product Estimates
2. Estimates of capital formation and savings.
3. Estimates of district domestic product
4. Estimates of contribution of local bodies.
5. Data on major fiscal variables.
6. Annual survey of industries.
7. Index of industrial production
8. Crop area and production statistics.
9. Whole sale price index
10. Consumer price index
11. Health, Morbidity, Mortality and Family Welfare statistics
12. Education and literacy statistics
 - A. Statistics on educational institutions

- B. School enrolment data
- 13. Labour and employment statistics
 - A. Labour statistics
 - B. Employment statistics
 - C. Child labour statistics
- 14. Housing
- 15. A. Birth and death registration statistics and population
 - B. Registration of Marriages
- 16. Electricity production and distribution statistics
- 17. Environment and Forestry statistics
 - A. Forestry statistics
 - B. Water supply and sanitation statistics
- 18. Participation in the surveys of National Sample Survey Organization
- 19. Transport statistics
 - A. Motor Vehicle registration statistics
 - B. Road statistics
 - C. Traffic Accident statistics
 - D. Passenger traffic statistics
- 20. A. Statistics for local area planning
 - B. Monitoring and Evaluation

13th Finance Commission:

In addition to KSSSP, in order to strengthen the District and State Statistical system, Directorate of Economics and Statistics along with some of the other departments involved in statistical activities is implementing programmes envisaged in 13th Finance Commission's grants. The main activities taken up under this grants are ;

- Preparation and maintenance of Business Register at District Level
- Preparation of Local Bodies Accounts by collecting data on receipts and payments of these bodies.
- Improvement of data in respect of Farm Activities
- Pooling of Central and state sample data for generating district level parameters
- Providing network connectivity among districts and with State Headquarters

Nodal Agency:

The Directorate of Economics and Statistics has been empowered to act as a nodal agency by the Government in respect of all the statistical activities of the state to provide and

advice to all the government departments in all the statistical matters vide GO No. PD 183 SMC 2010, dated 25.01.2011.

- Some of the important role and responsibilities of “Nodal Agency” are as follows.
 - Orient data collection programmes to the needs of the departments
 - Lay down procedures, formats, periodicity, time schedule, stages and types of tabulation, the content of the final output/publication etc.,
 - Ensure Annual Administration Reports contain analysis of data.
 - Advise the departments to maintain one set of data at all levels free from incorrect or inconsistent, mechanical and arithmetical errors.
 - Ensure adoption of uniform concepts and definitions of terms etc., employed in the collection of statistical data.
 - Advise the departments to collect gender, SC/ST and community wise data wherever relevant.
 - Minimize duplication of statistical works among departments.
 - Implement The Collection of Statistics Act 2008 and Rules effectively.

In order to monitor the above activities and to produce reliable, credible and timely statistics by all the departments, the Government of Karnataka has constituted the state level co-ordination committee under the chairmanship of Director, DES and district level co-ordination committee under the chairmanship of Chief planning Officer, Zilla Panchayat of the concerned district.

The first State level meeting was held on 25th & 27th July 2011 where in all the departments made presentation of their activities. Committee advised for improving the quality of data and other matters.

Further 9 core committees headed by Joint Directors/Deputy Directors of DES and Project Director KSSDA, have been formed in order to review the statistical activities of 21 major departments. Review meetings with the officers of the concerned departments is being held.

DES, Karnataka is bringing out publications viz., Statistical Abstract of Karnataka (SAK), Karnataka At a Glance (KAG), which are state level publications, and District At a Glance (DAG) a district level publication brought out by respective District Statistical Office. DAG is consolidated by collecting taluka wise information by district heads while for SAK and KAG information is being collected from state headquarters. There is a variation in the information provided to district and state offices. This problem has to be addressed on a war footing. In this direction and also DES as a nodal agency, Directorate has taken all necessary steps to instruct the concerned department on various platform to maintain a single set of data

both at district and state level. This has also been addressed in the review meetings held by heads of 9 core committees.

In addition to this DES is bring out a publication namely “Men and Women in Karnataka” where in gender wise information on various indicators like population, vital statistics, literacy rates, class wise enrolment in different levels education etc., will be incorporated. This has taken care of one of the function mentioned in the nodal agency viz., bring out gender wise statistical data wherever relevant.

In the light of recommendations made by Centre in the 19th COCSSO meeting to hold a state level COCSSO meeting in the same manner as that of centre, DES, Karnataka has acted quickly and taken all required initiations to organize “***First Karnataka’s Arthika mattu Sankyika Sammelana***” during Dec.2012 for 2 days with the assistance of KSSDA, which is a major breakthrough of DES, Karnataka.

3. MICRO, SMALL AND MEDIUM ENTERPRISES*

Micro, Small & Medium Enterprises

Micro, Small & Medium Enterprises (MSMEs) form an important and growing segment of Karnataka's industrial sector. The Government of India has enacted the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 in terms of which the definition of micro, small and medium enterprises is as under:

(a) Enterprises engaged in the manufacture or production, processing or preservation of goods as specified below:

- (i) A **micro enterprise** is an enterprise where investment in plant and machinery **does not exceed Rs. 25 lakh;**
- (ii) A **small enterprise** is an enterprise where the investment in plant and machinery is **more than Rs. 25 lakh but does not exceed Rs. 5 crore;** and
- (iii) A **medium enterprise** is an enterprise where the investment in plant and machinery is **more than Rs.5 crore but does not exceed Rs.10 crore.**

(b) Enterprises engaged in providing or rendering of services and whose investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006 are specified below.

- i. A **micro enterprise** is an enterprise where the investment in equipment **does not exceed Rs. 10 lakh;**
- ii. A **small enterprise** is an enterprise where the investment in equipment is **more than Rs.10 lakh but does not exceed Rs. 2 crore;** and
- iii. A **medium enterprise** is an enterprise where the investment in equipment is **more than Rs. 2 crore but does not exceed Rs. 5 crore.**

The Scheme on ‘**Upgradation of database on Collection of Statistics on Micro, Small and Medium Enterprises and quinquennial Census, Surveys and studies**’ is a centrally sponsored plan Scheme with 100% assistance by GOI, implemented by Govt. of Karnataka with the Head of Account 2851-00-102-0-10 under the guidance and direction by Ministry of Micro, Small and Medium enterprises, Office of the Development Commissioner (MSME), Government of India. The scheme is dealing with updation of database on collection of statistics on Micro, Small and Medium enterprises and conduct of Census of MSMEs and Sample surveys. GOI releases funds for the salary/TA of officers and staff working under the scheme every year and for conduct of census of registered and unregistered MSMEs and Sample Surveys.

**Smt. Y.M.Swarna gowri, Deputy Director, Department of Industries and Commerce, Bangalore.*

Objectives:

The objective of the scheme is:

1. To update the frame with adequate ancillary information on various classificatory characteristics in respect of number of enterprises, employment, investment, production which will help in conducting regular surveys and to understand structural changes in the MSME sector, which will lead to policy correctiveness.
2. To identify sick and incipiently sick enterprises with the reasons and to collect information useful for policy formulation.

Organizational structure of the scheme

One Deputy Director, one Assistant Director and one Assistant Statistical Officer deputed from the Directorate of Economics and Statistics are working at Head Office under the scheme. 16 enumerators from Industries and Commerce are working under the scheme. 5 posts of enumerators are vacant. 21 enumerators are outsourced at District Industries Centers to work under the scheme.

REGISTRATION OF IEM PART-I AND PART-II.

The person intended to start industry approach District Industries Center with a request to issue Industrial Entrepreneurial Memorandum Part I (IEM Part I). The Joint Director, DIC issue IEM Part I. After commencement of production, the entrepreneur can apply online and offline for issue of (IEM Part II), at respective District Industries Centers. The Joint Director, DICS issues acknowledgement for registering the unit at DICs. Such new MSME units registered (IEM Part I and IEM Part II) during the month are compiled at district level and send to the Head office through online. The report on no. of units registered during the month, investment in lakh Rs. on plant and machinery in case of manufacturing units and on equipments in case of service units and the employment generated are compiled district-wise and the consolidated report is sent to GOK and GOI regularly once in a month. The progress is being reviewed in the KDP meeting. The information on Micro, Small and Medium enterprises registered (category-wise) and according to Manufacturing and Services are also being compiled and consolidated and is made available to the public, GOK and GOI. Product-wise according to 36 categories of Industries as per NIC 2004 are also being collected, compiled and consolidated. The IEM Part I data is also being collected and compiled. The Industrial Extension Officers working at DICs promote Entrepreneurs who have taken IEM Part I to take IEM part II. The Annual targets are fixed to the Joint Director, DICs by the MSME division, Head office to register new MSME units in the district.

During 2011-12, 21021 MSME Units have been registered in the State with an investment of Rs. 159640 lakh by providing employment to 128387 persons. When compared to the same period of the previous year (2010-11), there is a 14.02% increase in No. of units registered, 32.35% increase in investment and 15.43% increase in number of persons

employed. During the first seven months of the current year (April to Oct.2012), 12463 units have been registered with an investment of Rs.100048 lakh by providing employment to 74816 persons. Under this, 11532 micro units, 883 small and 21 medium industries have been registered with an investment of Rs.30942 lakh, Rs 55659lakh, and Rs13447 lakh respectively by providing employment to51072, 22432and 1312 persons respectively.

Details of yearwise registration of MSMEs, investment in lakh Rs. and no. of persons employed in the State during 2000-01 to 2012-13 are given in Table below. The table also represents number of persons employed per unit in the newly registered MSMEs from 2000-01 onwards.

Number of Small-Scale Industrial Units Registered, investment and Persons Employed during the Years 2000-01 to 2012-13

Year	No.of Units Registered	Investment Rs. In lakhs	Persons Employed	Employment per unit
upto 1999-2000	252671	462497	1505832	
2000-2001	16554	65158	85792	5.18
2001-2002	16964	47883.6	73195	4.31
2002-2003	12029	40836	57371	4.77
2003-2004	12220	37054	56790	4.65
2004-2005	11238	38541	49998	4.45
2005-2006	12780	43647	58133	4.55
2006-2007	12580	46542	57517	4.57
2007-2008	14984	112656	123399	8.24
2008-2009	15705	101617	105034	6.69
2009-2010	17195	122816	111164	6.46
2010-2011	18434	120623	111226	6.03
2011-2012	21021	159641	128387	6.10
2012-2013	12436	100048.02	74816	
Cumulative Total	446811	1499561.47	2598654	

REGISTRATION OF SSI UNITS FOR THE YEAR 2012-13

SL NO	DISTRICT	Cumulative upto 2011-2012			2012-2013*			Cumulative upto 2012-2013		
		UNIT in Nos.	INVEST Rs. Lakhs	EMP in Nos.	UNIT in Nos.	INVEST Rs. Lakhs	EMP in Nos.	UNIT in Nos.	INVEST Rs. Lakhs	EMP in Nos.
1	Bagalkot	8575	20663.83	40927	252	1320.89	1251	8827	21984.72	42178
2	Bangalore (U)	75727	434339.31	708970	3067	46689.87	31387	78794	481029.1751	740357
3	Bangalore (R)	17420	67859.96	96942	185	3223.57	1919	17605	71083.53	98861
4	Belguam	37138	79305.35	157550	825	3472.58	3807	37963	82777.93	161357
5	Bellary	17793	67051.40	85648	560	5120.40	3707	18353	72171.8	89355
6	Bidar	7893	18131.56	43939	253	3525.95	1491	8146	21657.51	45430
7	Bijapur	9670	17175.92	46703	180	718.14	956	9850	17894.06	47659
8	CH Nagar	8637	10381.09	37039	124	177.26	402	8761	10558.351	37441
9	Chikkaballapur	1206	3930.48	6377	150	1252.65	676	1356	5183.13	7053
10	Chikmagalur	9496	15654.36	37810	186	633.69	613	9682	16288.05	38423
11	Chitradurga	10623	19763.02	43488	279	260.93	1106	10902	20023.95	44594
12	D.Kannada	22446	56537.36	112279	780	1850.71	2146	23226	58388.068	114425
13	Davangere	9725	24231.01	43472	294	271.03	1012	10019	24502.04	44484
14	Dharwad	18564	62479.03	150000	552	5116.60	3431	19116	67595.63	153431
15	Gadag	8117	11271.56	31409	161	969.95	800	8278	12241.512	32209
16	Gulbarga	17317	37586.28	72980	288	1097.06	937	17605	38683.34	73917
17	Hassan	12734	23093.51	52831	396	1290.90	1198	13130	24384.41	54029
18	Haveri	10115	16342.58	37793	316	505.95	1008	10431	16848.525	38801
19	Kodagu	3698	8358.06	25002	62	293.55	464	3760	8651.61	25466
20	Kolar	14719	57860.78	94241	428	2687.41	1152	15147	60548.193	95393
21	Koppal	6200	33942.72	38917	287	836.51	1074	6487	34779.225	39991
22	Mandya	10233	23430.93	47630	263	2190.95	963	10496	25621.88	48593
23	Mysore	24551	68933.47	130047	430	2113.29	2492	24981	71046.764	132539
24	Raichur	9810	29994.07	46383	115	2785.78	679	9925	32779.85	47062
25	Ramanagara	1776	19037.34	15268	277	3029.95	1700	2053	22067.29	16968
26	Shimoga	16716	29783.65	73814	486	1379.43	2291	17202	31163.08	76105
27	Tumukur	23676	68694.89	124773	506	4250.30	2590	24182	72945.19	127363
28	Udupi	9153	48620.09	65626	290	1988.69	1751	9443	50608.78	67377
29	U.Kannada	10296	24057.61	54636	268	554.37	1194	10564	24611.98	55830
30	Yadgir	351	1002.25	1344	176	439.65	619	527	1441.9	1963
	TOTAL	434375	1399513.46	2523838	12436	100048.02	74816	446811	1499561.47	2598654

as on Oct.2012

**REGISTRATION OF MICRO SMALL AND MEDIUM ENTERPRISES
ACCORDING TO MANUFACTURING AND SERVICE SECTOR**

Year	MANUFACTURE			SERVICES			Grand Total		
	Unit	Investment	Employment	Unit	Investment	Employment	Unit	Investment	Employment
2007-08	11168(75%)	103945.22	107195	3816(25%)	8712.76	16204	14984	112657.98	123399
2008-09	10303(66%)	90055.73	82772	5402(34%)	11561.6	22262	15705	101617.33	105034
2009-10	11772(68%)	112717.9	90783	5423(32%)	10098.09	20381	17195	122815.99	111164
2010-11	12613(68%)	108796.495	88883	5821(32%)	11826.716	22343	18434	120623.211	111226
2011-12	13997(66%)	143893.0201	101122	7024(34%)	15747.727	27265	21021	159640.7471	128387
Total	59853(68%)	559408.3651	470755	27486(32%)	57946.893	108455	87339	617355.2581	579210

MSME data according to Manufacturing and Service sector is being collected from the year 2007-08 after the enactment of MSME Act 2006. It can be seen from the table, out of 14984 registered during the year 2007-08, 75% of the units were from Manufacturing sector and it has fallen down to 66 % during the year 2011-12. but the units registered under Service Sector has increased from 25% to 34 % during the same period.

**REGISTRATION OF MICRO, SMALL & MEDIUM ENTERPRISES WHO HAVE FILED
ENTERPRENEURAL
MEMORANDUM DURING THE FOLLOWING PERIODS**

YEAR	MICRO			SMALL			MEDIUM			TOTAL		
	Unit in Nos.	Invt. Rs. Lakhs	Emp in Nos.	Unit in Nos.	Invt. Rs. Lakhs	Emp in Nos.	Unit in Nos.	Invt Rs. Lakhs	Emp in Nos.	Unit in Nos.	Invt	Emp in Nos.
2007-08	13945	31352	77526	902	59801	38870	31	21174	6373	14984	112657	123402
2008-09	14812	28905	74726	869	56918	26815	24	15795	3493	15705	101618	105034
2009-10	16177	35110	76085	992	70404	31910	26	17302	3169	17195	122816	111164
2010-11	17408	36420.18	77567	998	65941	29701	28	18261.07	3958	18434	12062	111226
2011-12	19610	43650.46	86216	1370	91266	34400	41	24724	7771	21021	159641	128387

It can be seen from the table, there is increase in No. of units registered every year, but there is decrease in invt. and employment during 2008-09 due to global recession ,but there is gradual increase after 2009-10. Out of total MSMes' registered during every year, around 94% is from Micro enterprises.

MAJOR UNITS IN 10 PRODUCTS DURING 2011-12

Sl. No	Products	NIC-98	No.of Units	Investment	Employment
1	Manufacturing of Wearing Apparel;dressing and Dyeing of Fur	18	5252	12457.5	24518
2	Manufacturing of Textiles	17	2259	11513.45	11356
3	Others		2008	26524.11	17007
4	Manufacturing of wood,products of Wood,Cork,Articles of Straw &Plating Materials,except furniture	20	1885	2166.45	5549
5	Manufacturing of Food Products and Beverages	15	1551	23405.31	15118
6	Manufacturing of Furnitiure;Manufacturing N.E.C	36	924	2296.26	3897
7	Manufacturing of Machinery and Equipment N.E.C	29	838	13079.1	6751
8	Manufacutring of Other Non-Metallic Mineral Productcs	26	652	10664.11	6901
9	Tanning and Dressing of Leather;Manufacture of Luggage,Handbags,Saddlers,Harness and Footwear	19	552	319.82	1601
10	Other Service Activities	93	452	311.88	959
	Grand Total during 2011-12 (36 Classification)		21021	159640.75	128387

36 classification of industries as per NIC 1998 are covered under MSMEs.Out of which, Manufacturing of Wearing Apparel;dressing and Dyeing of Fur has got maximum 5252 no. of units registered during 2011-12, followed by , Manufacturing of Textiles, Others, Manufacturing of wood,products, of Wood,Cork,Articles of Straw &Plating Materials,except furniture respectively.

MAJOR INVESTMENT IN 10 PRODUCTS DURING 2011-12					
Sl.No	Products	NIC-98	No.of Units	Investment (Rs. In lakhs)	Employment
1	Others		2008	26524.11	17007
2	Manufacturing of fabricated Metals Products, Except Machinery and Equipment	28	1841	24008.24	13193
3	Manufacturing of Food Products and Beverages	15	1551	23405.31	15118
4	Manufacturing of Machinery and Equipment N.E.C	29	838	13079.1	6751
5	Manufacturing of Wearing Apparel; dressing and Dyeing of Fur	18	5252	12457.5	24518
6	Manufacturing of Textiles	17	2259	11513.45	11356
7	Manufacturing of Other Non-Metallic Mineral Products	26	652	10664.11	6901
8	Manufacturing of Chemical & Chemicals Products	24	310	6810.26	2991
9	Publishing/Printing and Reproduction of recorded media	22	466	5720.41	2929
10	Computer and Related Activities	72	386	4428.01	4740
	Grand Total during 2011-12 (36 Classification)		21021	159640.75	128387

As regards major investment in the products under 36 classification of Industries, Others (not specified under 36 classification,), have major investment of Rs. 26524.11 lakh, followed by Manufacturing of fabricated Metals Products, Except Machinery and Equipment, Manufacturing of Food Products and Beverages, Manufacturing of Machinery and Equipment N.E.C, Manufacturing of Wearing Apparel; dressing and Dyeing of Fur respectively.

MAJOR EMPLOYMENT IN 10 PRODUCTS DURING 2011-12					
Sl.No	Products	NIC-98	No.of Units	Investment	Employment
1	Manufacturing of Wearing Apparel;dressing and Dyeing of Fur	18	5252	12457.5	24518
2	Others		2008	26524.11	17007
3	Manufacturing of Food Products and Beverages	15	1551	23405.31	15118
4	Manufacturing of fabricated Metals Products,Except Machinery and Equipment	28	1841	24008.24	13193
5	Manufacturing of Textiles	17	2259	11513.45	11356
6	Manufacturing of Other Non-Metallic Mineral Products	26	652	10664.11	6901
7	Manufacturing of Machinery and Equipment N.E.C	29	838	13079.1	6751
8	Manufacturing of wood,products of Wood,Cork,Articles of Straw &Plating Materials,except furniture	20	1885	2166.45	5549
9	Computer and Related Activities	72	386	4428	4740
10	Manufacturing of Furniture, Manufacturing N.E.C	36	924	2296.27	3897
	Grand Total during 2011-12 (36 Classification)		21021	159640.75	128387

Maximum employment **24518** can be seen from Manufacturing of Wearing Apparel;dressing and Dyeing of Fur, followed by Others, Manufacturing of Food Products and Beverages, Manufacturing of fabricated Metals Products,Except Machinery and Equipment, Manufacturing of Textiles respectively.

Constraints/ Limitations:

1. The data collected constitute only registered MSMEs by the DICs in the economy. The unregistered MSMEs existing in the economy are being left out. Hence this does not reflect the entire MSMEs in the economy. Only the sample survey on unregistered MSMEs are being undertaken and the estimated unregistered MSMEs are not realistic.

2. The units registered by the DICs are target oriented, many are flour mills/ tailoring units / cobblers/ blacksmiths/ carpenters which do not maintain accounts/ which does not contribute in a major way for calculation of IIP for MSMEs.

3. Many petty units are registered only for availing loan/ benefit and may be closed in due course. . Nearly 25 % of the registered units are closed as per results of 4th Census of MSMEs. Closed units are not being de registered , hence there is large difference in no. of Number of units registered as per DICs and as per Census of MSMEs.

RECOMMENDATIONS:

1. Efforts may be made to register all the industrial enterprises existing in the State. For this purpose, list of unregistered units may be obtained from the National Sample Survey Organization who undertakes sample survey of unregistered units and get registered those units to have the complete data of MSMES in the State.
2. Registration of new industrial units may not be made target oriented. Registration of such Industrial units with 5 or more workers which maintains account and which product/ activity contribute to State GSDP may be covered.
3. Micro units registered may be closed for one or the other reasons in due course which is not reported to the Dept. Such closed registered IEM numbers have to be deleted from the main frame of MSMEs by evolving some methodology. Action may be taken to deregister closed units regularly once in a year to have realistic number of MSMEs in the State. To deregister the closed units, the work may be entrusted to outsourced private agency under the guidance by DICs.

4. Evolving Standards for Data Collection and Reporting*

“Statistics is the study of collection, organization, analysis, interpretation and presentation of data. It deals with all aspects of this, including the planning of data collection in terms of the design of surveys and experiments”.

History/background

The history of statistics can be said to start around first introduced by Gottfried Achenwall originally designated the analysis of data about the state. It acquired the meaning of the collection and classification of data generally in the 19th century. Even though the use of statistical methods dates back to 5th century BC, the Athenians calculated the height of the wall of platea by counting the number of bricks in un-plastered section of the wall. Even in the epic-Mahabaratha, King Rtupara estimated the number of fruits and leaves on two great branches of Vibhitaka tree by counting them on single twig and estimated the fruits and leave of the tree, which was found to be very close to the actual number.

By the 18th century the term “statistics” designated the systematic collection of demographic and economic data by states. In the early 19th century, the meaning of “statistics” broadened to include the discipline concerned with the collection, summary, and analysis of data.

Today statistics is widely employed in Government and business. Electronic computers have expedited statistical computation, and have allowed statisticians to develop “computer-intensive” methods.

During 20th century the creation of precise instruments of agricultural research, public health concerns, industrial quality control, and economic and social purposes necessitated substantial advances in statistical practices.

Today the use of statistics has broadened far beyond its origins. Individuals and organizations use statistics to understand data and make informed decisions throughout the natural and social sciences, medicine, and other areas.

The Directorate of Economics and Statistics, Bangalore, Government of Karnataka is engaged in the process of data collection and reporting to the Government.

Present status

The data collected at District level by the Directorate of Economics and Statistics is classified into two categories viz 1) Primary data and 2) secondary data

- 1) **Primary data:** All the statistical information’s collected by way of census, experiments, surveys etc., directly through the source is classified as primary data. The details of the primary data collected by the department through district offices are:

* Sri. Anandasagar Reddy, Deputy Director, Directorate of Economics & Statistics presently working as District Statistical Officer, Bidar.

- a) **census:** agriculture census, economic census, minor irrigation census, etc.
- b) **Surveys:** input survey, sample check (TRS, ICS AS1.0 and AS1.1), national sample survey, industrial survey, and employment and un-employment survey, etc.
- c) **Experiments:** crop cutting experiments of agriculture crops and fruits and vegetables, central sample- CES2.0, etc.
- d) **Crop area Statistics:** season wise, crop wise, source wise details of the land utilization.
- e) **Rainfall:** the details of the daily records of the rainfall in all rain gauge stations.
- f) **Prices:** collection of the details of weekly, fortnightly, monthly prices of the agricultural products, consumer products, rural wage rate, etc.
- g) **Birth and Deaths:** collection of details of Registrar wise information on birth, death, still birth.

2) Secondary data: sir.M.M.Blair has defined the secondary data as “Secondary data are those already in existence for some purpose than the answering of the question in hand”.

The merits of using the secondary data for the users are. a) It is convenient. b) It saves time and finances. c) In some cases primary data cannot be collected.

The Details of the Secondary data collected and publishing by the department are:

- 1) State/District at a Glance.
- 2) Socio-Economic Review.
- 3) District Income, etc.

Publishing of District at a Glance

Since the formation of Directorate (Bureau) of Economics and Statistics, District Statistical Officers, are compiling and publishing “District a Glance”. The hand book of District at a Glance is transformed from less than 100 columns to nearly 2000 columns at present. This handy hand book is being used by Government departments and general public.

Objectives

Publishing of DAG in the first quarter, i.e. by the end of June, of the succeeding year.

Gaps

The gaps identified in publishing of District at a Glance are

- a) Delay in printing and publishing of DAG’s.
- b) Variations in the data furnished at the district level to that of state level.
- c) Hurdles in collection of data i.e. poor response by the other District level Officers.

Recommendations to fill the Gaps

To achieve the aforesaid objectives the following are recommended

- 1) The forms designed to collect the information from State level are to be standardized.
- 2) The information flow from the District level should include the taluka wise details of the standard items required for inclusion in DAG.
- 3) At the end of the financial year, i.e. upto 31st March, the details are to be furnished by the District level officer to their State level officer by 15th April; in the required forms and marking copy to the District Statistical Officers (This avoids the variations in the data). This should be enforced by the concerned State level officers.
- 4) All the DAG's, after enforcing the aforesaid recommendations, should be published at the District level latest by 31st July.

Conclusion

It is evident from the above that, by using a little different method for collection of information, intime reporting of the details to the Directorate. This enables the DSO's to publish the DAG's within three months after the completion of financial year. The details so collected, reported and published are variations free, dependable, timely and qualitative.

5. Evaluating Standards for data collection and reporting (as relevant for working at DSO office) *

a) ಹಿನ್ನೆಲೆ : Background / History

Statistics as such occupy a prime and predominant place in every body's life and more so at macro level.

Standard data gives so much of strength and success to the plan and schemes evolved both in individuals life or at National level.

b) ಈಗಿನ ವಸ್ತು ಸ್ಥಿತಿ : Present Status

Confining to Macro/State level data collection and reporting, the present system requires a little more fine tuning. As a wide range of statistics need to be collected and reported, a well equipped statistical personnel at grass root level i.e. at District, Taluk and at lower level is very much required.

c) ನ್ಯೂನತೆಗಳು / ಕುಂದು ಕೊರತೆಗಳು:/ Gaps

The prime gaps in collection of statistical data is observed at the base level itself i.e., where the data generates and collected. Statistical personnel attached for collection of data at that level is linked or attached with other departments. For Ex: An SI / PA attached to a Taluk office or Panchayath office where the identity of statistics as such occupies a less importance, as they have a lot of development work and taluk administration activities. As our statistical staff happens to be directly under their supervision, other than statistical work is entrusted to them. Hence pure statistical work or departmental work gets hampered.

d) ಆರ್ಥಿಕ ಮತ್ತು ಸಾಂಖ್ಯಿಕ ಅಧಿಕಾರಿಗಳ ಗಮನವನ್ನು ಸೆಳೆಯಬೇಕಾದ ಮಹತ್ವದ ಸಂಗತಿಗಳು

Any other important material the writer wants to bring to the notice of the Economics and Statistics Fraternity

Each DSO's work should be reviewed individually in the first instance and then with all JDs as a combined interaction. The discussion should be as free and as expressive as possible. Total work load of the DSO office should be reviewed by all JDs' combinedly and to that effect the problem if any to be addressed immediately.

In between JDs there should be as far as possible practical assessment of the DSO's work. For Eg: What work to be assigned at what time is to be determined well in advance.

DSO office is a multi-faced work place. Coordinating the work between various departments consume a lot of time.

* Sri. P. Rathnakar, District Statistical Officer, Bangalore Rural District

Good lot of general holidays during the month of October and November hampers office work at large. For Ex: In the month of October this year there are eleven general holidays. Which makes office work tough. Added to this a lot of meetings and trainings eat away the left out time, in this process the work load will be more and quality work suppresses to certain extent. During these months work should be redesigned.

e) ನ್ಯೂನತೆಗಳನ್ನು ತುಂಬಲು ಶಿಫಾರಸ್ಸುಗಳು **Recommendation to fill the Gaps**

Most importantly as a solution to all these, at Taluk level a full pledged Statistical Office with a post of Assistant Director has to be created and it should be an independent unit and at Hobli level an Enumerator post has to be created. With this change an effective standard data can be generated and thereby reporting can be improved.

A Committee may be constituted to completely assess the work load of DSO office, various pros and cons should be indentified and resolved immediately and also much concern to be given for strengthening of the statistical staff.

Research, redesign and restructure of the departmental activities in background of DSO work should be carried out on regular basis, feasible changes to be incorporated, mere adding of schemes and project does serve less purpose, the grass root level feasibility should be assessed.

Conclusion

Directorate of Economics and Statistical mostly depend on the Statistical personnel at grass root level where Statistical information generated. Strengthening of this alone will help the cause of evaluating standards for data collection and reporting.

Final word

Since my appointment as ASO in 1977 to this day a lot more positive changes has been taken place in Statistical activity. With change in time there is good lot of changes in the work culture, methodology etc. Openness too few more new things, like the one now, that is “Economic and Statistical conference” is a feather in the cap. More such interaction of this nature is needed.

6. Role of Statistics in Planning*

Abstract:

This paper discusses the role of statistics in Planning with emphasis that government at all levels should embark on building a very viable information system in order to have an adequate statistical information for designing a formidable evidence based policy.

Background:

Statistics is an indispensable tool for planning and without reliable statistics; no proper planning could be done. With good planning, implementation cannot go wrong. Monitoring of plan programmes is a continuous process that requires data which is generated to assist in establishing whether planned targets are likely to be achieved or not. This is another area where statistics play an important role. In monitoring and evaluation of ongoing programmes, statistical data is at the same time imperative as it will provide the necessary information on performance indicators which serve to measure the impact of policy and programmes on the quality of life of target populations.

Governments at all levels should embark on building a very viable information system in order to have adequate statistical information for designing a formidable social and economic policy. Hence statistical system in any country should be given more attention, if the country is to have an orderly and definite development programme.

In any development policy, the aspirations of a policy should be to attain such goals as full employment, price stability, and economic growth, equilibrium in the balance of payment, equitable distribution of income, educational development, social security, and so on. To achieve a fair measure of success in the goals stated, there is need to map out strategic plans, set up machinery for execution of the plans and monitor the implementation process; this is exactly the point at which the role of statistics is vital and relevant. Timely, complete, accurate and reliable statistics is critical to creating and sustaining an environment which fosters strong, equitable development, and is an essential ingredient for formulation of sound economic development policies. Statistics is a pathfinder for solution as well as a genuine tool in assessing the extent of development of an economy in a given period. The economic policies and complex interactions among various sectors of the economy make it imperative for building up macroeconomic planning models. This kind of model build-up is only possible with statistical information enables us to monitor the performance of the economy and the social well-being of the people; the basic statistics required in economic policy formulation include:

- Macroeconomic aggregates (GDP, GNP, Capital Formation, External transactions, input/output coefficients, etc).
- Consumption data (Government & Private)

**Sri. B.Janakiram, Senior Director (I/C), PFR Divn., Planning Department.*

- Investment Expenditure (Government & Private)
- Import and Exports
- Prices and Inflation
- Industrial Production and Indices
- Energy and Power production/ consumption
- Agricultural and raw Material Production
- Transportation & Communication Indicators
- Government Services
- Housing & Finance
- Interest Rates & Exchange Rates
- Banking & Finance

Also some basic statistics needed in social policy formulation and execution include:

- Basic Statistics on Education
- Health Indicators
- Population Characteristics
- Sanitation and Water Supply Indicators
- Basic Statistics on Housing

Planning for economic and social development is a complex issue involving the process of constructing, executing and checking interrelated sets of decisions. The outcome of such series of tasks when prepared for a given period is normally called a Development Plan. Planning has become a permanent part of major government decision making; the integration of the entire exercise necessitates the exercise of a highly organized and well-developed statistical system, without which a planned economy is unthinkable. Such statistical system must make available a well integrated mass of accurate data at different degrees of aggregation, which can be used at each stage of the plan process. However, planned decisions rely very heavily on high quality statistical data. Development in any sector requires a well organized statistical system allowing planners to work on the broad set of statistical indicators that are indispensable for the development and improvement of planning.

The production process for statistics can be compared with the well known and understood Industrial production process. It begins with planning, statistical/survey designs, data collection, data processing and analysis to report writing and dissemination of final statistical products. Every one of these stages is crucial and important. However, proper planning of a statistical project is extremely crucial for its success. Indeed it has been suggested that, if a survey project is to be completed within a stipulated time, substantial amount of time must be devoted to planning.

Some of the recommendations to strengthen the Statistical System is given below.

Recommendations:

- Many Departments do not have statistical wings / persons. This has led to no proper analysis statistical data. Hence every department should have a statistical wing.
- Awareness about importance of statistical need to be created.
- Capacity Building in statistical aspects is required in every department ie., more number of people need to be trained in statistical aspects.
- More and more advanced statistical tools need to be adapted in every department to analyse the statistical data.
- The Directorate of Economics and Statistics needs to be strengthened by creating more number of statistical posts within the Directorate and in other departments.
- Outsourcing of the statistical work needs to be given up and in-house training is required.
- The purpose of any department would be defeated, if statistical wing in that department is not strengthened.
- Computer training supporting the Statistical Analysis is also need to be given to the statistical persons.
- Training in basis statistics need to be given.
- Deputation of officers to other States / Abroad to learn the best practices in their statistical system is required.

7. Evolving Standards for Data Collection & Reporting*

INTRODUCTION:-

I am giving the facts about the Data collection and reporting pertaining to the Directorate of Agricultural Marketing, where I am working as Assistant Director (Statistics), this is with regard to the Karnataka Arthika Mathu Sankhyaka Sammelana on 21st and 22nd December 2012.

This Department is working for improved regulation of Agricultural Marketing to ensure fair marketing practices, to provide infrastructural facilities for trading of agricultural commodities and to ensure an efficient Agricultural Marketing System in the State to promote and protect the interests of the farmers in particular and Stakeholders of the Market in general.

Sources of Data Collection in the Department:

The 155 APMC's working through out the State, provide information regarding the price of the commodities, arrivals and transaction, which is fed to the Department Website called "Krishi Marata Vahini".

Prices are determined on the basis of Produce being marketed through E-Tendering System, Manual Tendering, Auction System and on Mutual agreement basis.

Arrivals in the APMC's and the rates prevailing are uploaded to the Krishi Marata Vahini daily. and in turn it is linked to National level and finally it is reflected globally.

In Agricultural Marketing Department "Krishi Marata Vahini" is a Website launched in 2002 for giving information on arrivals, prices and transactions to Farmers, Traders, Producers, Processors, Commission agents and researchers and others.

Daily Prices are uploaded on this Website after 3 P.M. Out of 155 APMC's sometimes, Price variations are pointed out by stake holders and the variations are set right in concerned APMC's.

On the basis of Krishi Marata Vahini information, UAS (University of Agricultural Sciences) is forecasting the Prices of different commodities e.g., Turmeric, Potato and Maize etc.,

Dr.Swami Nathan institute in Chennai have identified Agricultural University Proffessor for carrying out forecasting. Dharwad and Bangalore Universities are selected for this purpose. This Institute is doing a marrolous job in forecasting of prices. With nominal infrastructure, this institute with the support of Tamilnadu and Pandichery Govt is carrying out forecasting on time and with accuracy.

Rural students and Researchers in far flung areas are using this on line information for their studies.

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This information is crucial for Exports and Importers.

Planners use this information as basis for formation of plans and policies.

Department of Electronics & Information Technology Govt of India have identified, out of 7000 websites, Krishi Marata Vahini, along with 4 other for awardal of Gold Icon. A Copy of the certificate is herein enclosed.

This Website is linked to Agmark, Agmark net, Directorate of Marketing and information, faridabad, with its regional Branch office at Bangalore at Yeshwanthpur APMC Yard. This enables the Stakeholders to have market information at national level also.

Govt of India is giving incentives to operators who are feeding information to APMC @ 500 per month to encourage the timely update of information and to ensure quality of Data fed.

Agmarknet conducts Orientation workshop annually to refresh the knowledge of the staff and introduce new and advanced methods of Data collection and dissemination. This is proving fruitful in timely collection and reporting of data.

Difficulties faced is collection of Data.

The Meetings are being conducted at Divisional levels regularly. The Agenda in this meeting is mostly revenue aspect. Market fees, licence fees and other income of the APMC is discussed. This meeting is conducted on a Divisional level, minute topics and grass root level problems do not have the scope here.

The key subject of collection of online information and its reporting is neglected.

Solution: It would be very helpful and practical if review meetings are conducted at District level involving National Informatic Centre conducting meeting locally at District level would solve the grass root level local problems, thereby minimizing the co-ordination difficulties among the Secretary, APMC's and District Officers. Secondly fixing of targets for both Secretary APMC's and District Officers would also ensure accuracy and timely collection of Data.

Another problem is of the staff. Most of the Data operators and feeders are employed on contract / Daily wage basis. Responsibility cannot be fixed on them.

Solution:- Entrusting the work of data collection and reporting to permanent / responsible employees would solve this problem. Workshops and Seminars can be held periodically to highlight the importance and uses of the data-collection.

Low Weighing, Lower Prices, Procedural hurdles in entering the APMC's, is Keeping the farmers away from the APMC's, farmers avoid APMC's and sell their commodities outside the yard which is diminishing the revenue of the APMC's, thereby correct picture of the commodities produced is not reflected.

Solution:- Procedural hurdles in entry should be minimized. Poor illiterate farmers should be guided and their entry should be made easy. There should not be any fees and middle men collecting exorbitant commission. Entry level hurdles should be removed. Transporting the produce costs heavily to the farmer. If APMC's arrange to get the farmers commodities transported to the yard, farmer would be inclined to sell their produce at APMC. This, besides enhancing the APMC revenue, would render correct data with regard to commodities produced.

Easy Procedural aspect and nominal commission on the part of commission Agents would encourage the farmers to bring their produce to the APMC's. Thankfully the Govt is paying Rs.1000/- as incentive to the farmers who bring their Produce to APMC's this incentive money can be enhanced. Farmer has to shell down money at various levels and his produce is weighed low for e.g. if farmer brings 1000/- Quintals it is weighed as only 800 causing the loss of 200 Quintals.

Low Payment and late payment to the farmers should be avoided. Timely and full payment would attract the farmers to the APMC.

8. ಜಿಲ್ಲಾ ಪಂಚಾಯತದಲ್ಲಿ ಯೋಜನಾ ಕಾರ್ಯಕ್ರಮಗಳ ಸಂಕ್ಷಿಪ್ತ ವಿವರಗಳು*

ಜಿಲ್ಲಾ ಪಂಚಾಯತ ಅಧೀನದಲ್ಲಿ 36 ಇಲಾಖೆಗಳು ಬರುತ್ತಿದ್ದು ಅವರಿಂದ ವಿವಿಧ ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ಅನುಷ್ಠಾನ ಮಾಡಲಾಗುತ್ತಿದೆ. ಗ್ರಾಮೀಣ ಪ್ರದೇಶದಲ್ಲಿ ಕುಡಿಯುವ ನೀರು, ರಸ್ತೆ, ಶಿಕ್ಷಣ, ಆರೋಗ್ಯ, ಸಮಾಜ ಕಲ್ಯಾಣ ಹಾಗೂ ಮಹಿಳಾ ಮತ್ತು ಮಕ್ಕಳ ಅಭಿವೃದ್ಧಿ ಇಲಾಖೆಗಳು ಪ್ರಮುಖ ಪಾತ್ರ ವಹಿಸುತ್ತಿವೆ.

ಕೃಷಿ, ತೋಟಗಾರಿಕೆ, ಪಶು ಸಂಗೋಪನೆ, ಆರಣ್ಯ ಇಲಾಖೆಗಳಿಂದ ಗ್ರಾಮೀಣ ಭಾಗದಲ್ಲಿ ಐ.ಪಿ.ಎಲ್. ಜನರಿಗೆ ತುಂಬಾ ಅನುಕೂಲ ಮಾಡಿಕೊಡುತ್ತವೆ. ಇವುಗಳು ಹೆಚ್ಚಿನ ಸೌಲಭ್ಯಗಳು ಒದಗಿಸಿದರೆ ಐ.ಪಿ.ಎಲ್. ಜನರು ಎ.ಪಿ.ಎಲ್. ಮಟ್ಟಕ್ಕೆ ಬಂದು ಸರ್ವತೋಮುಖ ಅಭಿವೃದ್ಧಿ ಹೊಂದಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ.

ಗ್ರಾಮೀಣ ಪ್ರದೇಶದಲ್ಲಿ ಪಡಿತರ ವ್ಯವಸ್ಥೆ, ಸಾಮಾಜಿಕ ಭದ್ರತೆ, ವಿಶೇಷ ಘಟಕ ಕಾರ್ಯಕ್ರಮ ಹಾಗೂ ಲಿಜನ ಉಪ ಯೋಜನೆಯಡಿಯಲ್ಲಿ ಗ್ರಾಮ ಪಂಚಾಯತಿಗಳು ಫಲಾನುಭವಿಗಳನ್ನು ಆಯ್ಕೆ ಮಾಡಿ ಅವರಿಗೆ ಸದರಿ ಕಾರ್ಯಕ್ರಮಗಳ ಫಲ ತಲುಪಿಸಿದರೆ ಮಾತ್ರ ಅಲ್ಲಿನ ಜನರ ಜೀವನ ಮಟ್ಟ ಸುಧಾರಣೆ ಆಗುತ್ತದೆ.

ನಮ್ಮ ಹೈದ್ರಾಬಾದ ಕರ್ನಾಟಕ ಪ್ರದೇಶದಲ್ಲಿ ಡಾ: ನಂಜುಂಡಪ್ಪ ಉನ್ನತಾಧಿಕಾರ ಸಮಿತಿ ಶಿಫಾರಸ್ಸು ಅನ್ವಯ ಗುಲಬರ್ಗಾ ವಿಭಾಗಕ್ಕೆ 40 ಪ್ರತಿಶತ ಪ್ರತಿ ವರ್ಷ ನೀಡುತ್ತಿರುವುದರಿಂದ ಈ ಕಾರ್ಯಕ್ರಮದಲ್ಲಿ ಸಹ ಗ್ರಾಮೀಣ ಭಾಗದಲ್ಲಿ ಹಂತ ಹಂತವಾಗಿ ಅಭಿವೃದ್ಧಿ ಆಗುತ್ತವೆ. ಇದರಿಂದ ಅತ್ಯಂತ ಹಿಂದುಳಿದ ಎಲ್ಲಾ ತಾಲೂಕುಗಳನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸಲು ಈ ಅನುದಾನ ಬಳಕೆ ಮಾಡಲಾಗುತ್ತಿದೆ.

ಜಿಲ್ಲಾ ಪಂಚಾಯತ ಮುಖ್ಯವಾಗಿ ಎಂ.ಜಿ.ಎನ್.ಆರ್.ಇ.ಜಿ.ಎ. ಗ್ರಾಮೀಣ ಜನರಿಗೆ ಉದ್ಯೋಗ ಒದಗಿಸುವಲ್ಲಿ ಪ್ರಮುಖ ಪಾತ್ರ ವಹಿಸುತ್ತಿದೆ. ಎನ್.ಆರ್.ಡಿ.ಡಬ್ಲ್ಯೂ.ಎಸ್. ಮತ್ತು ಜಲ ನಿರ್ಮಲ ಕಾರ್ಯಕ್ರಮಗಳು ಜಿಲ್ಲೆಯಲ್ಲಿ ಫ್ಲೋರೈಡ್ ಸಮಸ್ಯೆ ಬಗೆಹರಿಸುವಲ್ಲಿ ಹಾಗೂ ಎಲ್.ಪಿ.ಸಿ.ಡಿ. ಪ್ರಕಾರ ಗ್ರಾಮಗಳಿಗೆ ನೀರಿನ ಸೌಲಭ್ಯವನ್ನು ಒದಗಿಸಬೇಕಾದರೆ ಪೈಲೆಟ್ ಪ್ರಾಜೆಕ್ಟ್ ಪೂರ್ಣಗೊಳಿಸಿದರೆ ಮಾತ್ರ ನಮ್ಮ ಹಿಂದುಳಿದ ತಾಲೂಕುಗಳಲ್ಲಿ ನೀರಿನ ಸಮಸ್ಯೆ ಹೋಗಲಾಡಿಸಬಹುದಾಗಿದೆ.

ಗುಲಬರ್ಗಾ ಜಿಲ್ಲೆಯಲ್ಲಿ ಸತತವಾಗಿ ಮಳೆ ಸರಾಸರಿಗಿಂತ ಕಡಿಮೆ ಇಳುತ್ತಿದೆ. ಇದರಿಂದ ಜನರು ವಲಸೆ ಹೋಗುತ್ತಿದ್ದಾರೆ. ಎಂ.ಜಿ.ಎನ್.ಆರ್.ಇ.ಜಿ.ಎ. ಯೋಜನೆಯ ಮಾರ್ಗಸೂಚಿಗಳನ್ನು ಪರಿವರ್ತನೆ ಮಾಡಿ ಕೂಲಿ ಹೆಚ್ಚಿಗೆ ಮಾಡಿ ಐ.ಇ.ಸಿ. ಕಾರ್ಯಕ್ರಮದ ಮೂಲಕ ತಿಳಿಸಿ, ಅವರು ವಲಸೆ ಹೋಗಲಾರದ ಹಾಗೆ ಮಾಡಬಹುದಾಗಿದೆ ಮತ್ತು ಮೂಲಭೂತ ಸೌಕರ್ಯ ಒದಗಿಸಬಹುದಾಗಿದೆ.

ಕರ್ನಾಟಕ ರಾಜ್ಯದಲ್ಲಿ ಇದರ ಮತ್ತು ಗುಲಬರ್ಗಾ ಜಿಲ್ಲೆಯಲ್ಲಿ ಪೈಲೆಟ್ ಪ್ರಾಜೆಕ್ಟ್ ಎಂ.ಎಸ್.ಡಿ.ಪಿ. ಯೋಜನೆಯ ಮೂಲಕ ಅಲ್ಪಸಂಖ್ಯಾತರಾದ ಮುಸ್ಲಿಂ, ಜೈನ, ಕ್ರಿಶ್ಚಿಯನ್ ಹಾಗೂ ಪಾರಸಿ ಜನಾಂಗದವರಿಗೆ ಈ ಯೋಜನೆಯ ಲಾಭ ಒದಗಿಸಿಕೊಡಲಾಗುತ್ತಿದ್ದು, ಈಗ ಈ ಯೋಜನೆಯು ಮುಗಿಯುವ ಹಂತದಲ್ಲಿ ಇದ್ದು, 14 ಅಲ್ಪಸಂಖ್ಯಾತರ ವಸತಿ ನಿಲಯಗಳ ಕಟ್ಟಡಗಳು, ಎ.ಎನ್.ಎಂ. ವಸತಿ ಗೃಹಗಳ ಕಟ್ಟಡಗಳು ಹಾಗೂ ಅಲ್ಪಸಂಖ್ಯಾತರ ಜನಾಂಗದವರಿಗೆ ಮನೆಗಳನ್ನು ನಿರ್ಮಿಸಲಾಗಿದೆ. ಇವುಗಳಿಂದ ಅಲ್ಪಸಂಖ್ಯಾತರ ಜನಾಂಗದವರಿಗೆ ತುಂಬಾ ಅನುಕೂಲವಾಗಿದೆ. ಈ ಯೋಜನೆಯನ್ನು ಮುಂದುವರಿಸಲು ಕೇಂದ್ರ ಸರ್ಕಾರಕ್ಕೆ ಕೋರಬೇಕೆಂದು ನನ್ನ ಸಲಹೆ.

ಜಿಲ್ಲೆಯಲ್ಲಿ 7 ತಾಲೂಕುಗಳಲ್ಲಿ 6 ತಾಲೂಕುಗಳು ಅತ್ಯಂತ ಹಿಂದುಳಿದಿರುವುದರಿಂದ ಸರ್ಕಾರವು ಪ್ರತಿ ತಾಲೂಕಿಗೆ ತಾಲೂಕು ಯೋಜನಾಧಿಕಾರಿಗಳು, ಸಹಾಯಕ ನಿರ್ದೇಶಕರು, ಎಮ್.ಜಿ.ಎನ್.ಆರ್.ಇ.ಜಿ.ಎ. ಹಾಗೂ ಲೆಕ್ಕಾಧಿಕಾರಿಗಳ ಹುದ್ದೆಗಳನ್ನು ಮಂಜೂರು ಮಾಡಿದೆ. ಆದರೆ ಕೆಲವು ತಾಲೂಕುಗಳಲ್ಲಿ ಈ ಹುದ್ದೆಗಳು ಭರ್ತಿಯಾಗದೇ ಖಾಲಿ ಇದ್ದುದರಿಂದ ಯೋಜನೆಗಳ ಅನುಷ್ಠಾನ ನಿಗದಿತ ಅವಧಿಯೊಳಗೆ ಮಾಡಲು ಆಗುತ್ತಿಲ್ಲ. ಇವುಗಳನ್ನು ಭರ್ತಿ ಮಾಡಿದರೆ ಮಾತ್ರ ತಾಲೂಕು ಪಂಚಾಯತ ಯೋಜನೆಗಳು, ಗ್ರಾಮ ಪಂಚಾಯತ

* ಶ್ರೀ ವೀರಸಾಕ್ಷಪ್ಪಾ ಇ. ಕಿರಣಿ, ಮುಖ್ಯ ಯೋಜನಾಧಿಕಾರಿಗಳು, ಜಿಲ್ಲಾ ಪಂಚಾಯತ ಗುಲಬರ್ಗಾ.

ಯೋಜನೆಯ ಕಾರ್ಯಕ್ರಮಗಳು ಅನುಷ್ಠಾನಕ್ಕೆ ತರಲು ಅನುಕೂಲವಾಗುತ್ತದೆ. ಸರಕಾರವು ನಿಗದಿಪಡಿಸಿದ ಕೆ.ಡಿ.ಪಿ., ಎಂಪಿಕ್, ಮಾಸಿಕ ಸಭೆ, ಸ್ಥಾಯಿ ಸಮಿತಿಗಳ ಸಭೆ ಮತ್ತು ಸಾಮಾನ್ಯ ಸಭೆ ಹಾಗೂ ಮುಖ್ಯವಾಗಿ ಗ್ರಾಮಸಭೆಗಳು ಸಹ ಸಲಿಯಾಲಿ ಜರುಗುತ್ತಿಲ್ಲ. ಗ್ರಾಮಸಭೆಗಳಿಂದ ಜನರು ಯಾವುದೇ ಲಾಭ ಪಡೆಯುತ್ತಿಲ್ಲ. ಕಾರಣ ಮೇಲ್ಕಂಡ ಮೂರು ಅಧಿಕಾರಿಗಳಿಗೆ ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ಅನುಷ್ಠಾನ ಮಾಡುವ ಕುರಿತು ತರಬೇತಿ ನೀಡಿದರೆ ಮಾತ್ರ ಅನುಕೂಲವಾಗುತ್ತದೆ.

ಜಿಲ್ಲಾ ಪಂಚಾಯತಿನಲ್ಲಿ ಮೌಲ್ಯಮಾಪನ ಅಧಿಕಾರಿಗಳು ಇದ್ದು ಅವರಿಗೆ ಮೌಲ್ಯಮಾಪನ ಯಾವ ರೀತಿ ಮಾಡಬೇಕೆನ್ನುವ ಕುರಿತು ಮಾರ್ಗದರ್ಶನ ಇರುವುದಿಲ್ಲ. ಇದರಿಂದ ರಾಜ್ಯ ಮಟ್ಟದಲ್ಲಿ ಪ್ರತಿ ವರ್ಷ ಜಿಲ್ಲಾ ಮಟ್ಟದಲ್ಲಿ ಮೌಲ್ಯಮಾಪನ ಮಾಡುವ ಸಲುವಾಗಿ ಪ್ರತ್ಯೇಕ ಅನುದಾನ ಒದಗಿಸಬೇಕು. ಇಲ್ಲದಿದ್ದಲ್ಲಿ ವಿಶ್ವವಿದ್ಯಾಲಯದಿಂದ ಮೌಲ್ಯಮಾಪನ ಮಾಡಿಸಬೇಕು. ಜಿಲ್ಲಾ ಪಂಚಾಯತಿನಲ್ಲಿ ಕೆಲವು ಯೋಜನೆಗಳನ್ನು ಥರ್ಡ್ ಪಾರ್ಟಿಯಿಂದ ತಪಾಸಣೆ ಮಾಡಲು ಅವಕಾಶವಿದೆ. ಆದರೆ ಕೆಲವು ಕಾಮಗಾರಿಗಳನ್ನು ಥರ್ಡ್ ಪಾರ್ಟಿಯಿಂದ ತಪಾಸಣೆ ಆಗುತ್ತಿಲ್ಲ. ಇದರಿಂದಾಗಿ ಗುಣಮಟ್ಟದ ಕಾಮಗಾರಿಗಳು ಆಗುತ್ತಿಲ್ಲ. ಈ ಬಗ್ಗೆ ಸರ್ಕಾರದ ಮಟ್ಟದಲ್ಲಿ ತೀರ್ಮಾನ ತೆಗೆದುಕೊಳ್ಳಬೇಕು.

ನಮ್ಮ ಜಿಲ್ಲೆಯಲ್ಲಿ ಜಿಲ್ಲಾ ಯೋಜನಾ ಸಮಿತಿ ಸಭೆಯಲ್ಲಿ ಕೇವಲ ಐ.ಆರ್.ಜಿ.ಎಫ್. ಯೋಜನೆಯ ಪ್ರಗತಿ ಪರಿಶೀಲನೆ ಮಾತ್ರ ಮಾಡಲಾಗುತ್ತಿದೆ. ಈ ಸಮಿತಿಗೆ ನಗರ ಸ್ಥಳೀಯ ಸಂಸ್ಥೆಗಳು, ಗ್ರಾಮ ಪಂಚಾಯತಿಗಳು, ತಾಲೂಕು ಪಂಚಾಯತಿಗಳು ಹಾಗೂ ಜಿಲ್ಲಾ ಪಂಚಾಯತಿಗಳ ಯೋಜನೆಗಳನ್ನು ಕ್ರೋಡೀಕರಿಸಿ ಅವುಗಳನ್ನು ಜಿಲ್ಲಾ ಯೋಜನಾ ಸಮಿತಿಯಲ್ಲಿ ಮಂಡಿಸಬೇಕು. ಆದರೆ ಇದು ಆಗುತ್ತಿಲ್ಲ. ಕಾರಣ ಜನಪ್ರತಿನಿಧಿಗಳಿಗೆ ತರಬೇತಿ ನೀಡುವ ಕಾರ್ಯಕ್ರಮವನ್ನು ಹಮ್ಮಿಕೊಂಡರೆ ಅನುಕೂಲವಾಗುತ್ತದೆ.

ಜಿಲ್ಲಾ ಪಂಚಾಯತಿಯಲ್ಲಿ ಪ್ರತಿ ತಿಂಗಳು ಸುಮಾರು 15 ದಿವಸ ಸಭೆಗೆ ಸಮಯ ಹೋಗುತ್ತಿದೆ. ಇದರಿಂದ ಗ್ರಾಮೀಣ ಮಟ್ಟದಲ್ಲಿ ಪರಿಶೀಲನೆ ಮಾಡಲು ಆಗುತ್ತಿಲ್ಲ. ಆದುದರಿಂದ ಸಭೆಗಳನ್ನು ಜರುಗಿಸುವಾಗ ಒಂದೇ ದಿನ ಎರಡು ಸಭೆಗಳನ್ನು ಜರುಗಿಸಿದರೆ, ಸಮಯವನ್ನು ಉಳಿತಾಯ ಮಾಡಬಹುದಾಗಿದೆ.

ಗ್ರಾಮ ಪಂಚಾಯತಿಗಳಲ್ಲಿ ಇರುವ ತಾತ್ಕಾಲಿಕವಾಗಿ ತೆಗೆದುಕೊಂಡ ಕಂಪ್ಯೂಟರ್ ಆಪರೇಟರ್‌ಗಳು ಇದ್ದರೂ ಸಹ ಅವರನ್ನು ನಿಯಂತ್ರಣ ಮಾಡಲು ಸಾಧ್ಯವಾಗುತ್ತಿಲ್ಲ. ಕಾರಣ ತಾಲೂಕು ಪಂಚಾಯತ, ಗ್ರಾಮ ಪಂಚಾಯತಿಗಳಲ್ಲಿ ಖಾಯಂ ಕಂಪ್ಯೂಟರ್ ಆಪರೇಟರ್‌ಗಳನ್ನು ನೇಮಕಾತಿ ಮಾಡಿಕೊಂಡರೆ ಅವರಿಗೆ ತರಬೇತಿ ನೀಡಿ ಎಲ್ಲಾ ಯೋಜನೆಗಳನ್ನು ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಅಳವಡಿಸಲು ಅನುಕೂಲವಾಗುತ್ತದೆ. ಅಲ್ಲದೆ ಐ.ಎಸ್.ಎನ್.ಎಲ್. ಅವರಿಂದ ಕೆಲವು ಗ್ರಾಮ ಪಂಚಾಯತಿಗಳಿಗೆ ಖ್ರಾಂಡ್‌ಬ್ಯಾಂಡ್ ಇಂಟರ್‌ನೆಟ್ ಸೌಲಭ್ಯ ಸಿಗುತ್ತಿಲ್ಲ. ಸರಕಾರದಿಂದ ಐ.ಎಸ್.ಎನ್.ಎಲ್. ಅವರಿಗೆ ಇಂಟರ್‌ನೆಟ್ ಸೌಲಭ್ಯ ಒದಗಿಸಲು ನಿರ್ದೇಶನ ನೀಡಬೇಕು. ಬೇಕಾದರೆ ಇಂಟರ್‌ನೆಟ್ ಸೌಲಭ್ಯವಿರದ ಗ್ರಾಮ ಪಂಚಾಯತಿಗಳ ಯಾದಿಯನ್ನು ಒದಗಿಸಲಾಗುವುದು.

ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಮತ್ತು ಪಂಚಾಯತ್ ರಾಜ್ ಇಲಾಖೆಯ ಅಧಿಕಾರಿಗಳನ್ನು ಮಾತ್ರ ತಾಲೂಕು ಪಂಚಾಯತಿಗಳ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಧಿಕಾರಿಗಳನ್ನಾಗಿ ನೇಮಕಾತಿ ಮಾಡಬೇಕು. ಬೇರೆ ಇಲಾಖೆಯವರಿಗೆ ನೀಡಿದರೆ ಅವರಿಗೆ ಜಿಲ್ಲಾ ಪಂಚಾಯತಿನ ಯೋಜನೆಗಳ ಕುರಿತು ಸಲಿಯಾದ ಮಾಹಿತಿ ಇರುವುದಿಲ್ಲ. ಇದರಿಂದ ಯೋಜನೆಗಳ ಅನುಷ್ಠಾನ ಮಾಡಲು ತೊಂದರೆ/ ವಿಳಂಬವಾಗುತ್ತದೆ.

ಜಿಲ್ಲಾ ಪಂಚಾಯತಿನ ಯೋಜನಾ ಶಾಖೆಗೆ ಕೆಲವು ಯೋಜನೆಗಳ ಮಾರ್ಗಸೂಚಿಗಳು ಬರುತ್ತಿಲ್ಲ. ಇದರಿಂದ ಸದರಿ ಯೋಜನೆಗಳ ಮಾಹಿತಿಯು ಯೋಜನಾ ಶಾಖೆಗೆ ಸಿಗುತ್ತಿಲ್ಲ. (ಎನ್.ಆರ್.ಡಬ್ಲ್ಯೂ.ಎಸ್., ಎಂ.ಜಿ.ಎನ್.ಆರ್.ಜಿ.ಎ., 13ನೇ ಹಣಕಾಸು ಹಾಗೂ ಇತರ ಯೋಜನೆಗಳು)

9. Sampling method as a means of data collection and reporting*

Every Society is faced with Serious Social, Economic and Political Problems, which need Systematic, intelligent researching about their causes and also for finding out their remedies. Usually real cause of a problem is actually not what it appears to be. Needles to say that without finding out real cause of a problem its real remedy cannot be found out since these problems deals with human beings. Who are born unpredictable and undependable in behaviours. Therefore different Methods for studying their behaviour become an avoidable for finding out the truth. Research methodology has thus come to stay at all integral part of social research. Today it is accepted that identification as well as solution of all social and economic problems lies in extensive and proper use of social research methods. These methods help in providing theoretical frame work and narrowing down the areas to be studied.

Required information or data for study or research or for planning etc., can be obtained by complete enumeration i.e., by collecting data for each and every unit of universe. This procedure of obtaining information is 'census' but this method is time consuming, costly and complex as well as financially uneconomical. It is, therefore convenient to pick up a sample out of the universe proposed to be covered by the study. However, if the information is required for each and every unit in the domain of study, a complete enumeration survey i.e., census is clearly necessary. But there are many situations where only summary figures are required for the domain of study as a whole or for groups of units and in such situations sampling method is used to get reasonably accurate estimates of these figures.

What is sampling?

When a social researcher undertakes a research work he has to decide, basically two important things; (i) the scope of his study and (ii) what will be his population or universe. As said earlier a researcher may decide to cover whole universe provided, he has time, energy, resource, manpower and capacity. But that is usually not possible due to several constraints. Most of the times census method is ruled out due to several constraints. Researcher can pick up a small sample out of the whole study. Such a unit is expected to be representative of the whole population. It is felt that when this unit has been studied, the whole population has been studied. In other words the conclusions drawn will be representative of the whole group. When it is done it is called sampling method.

Here it may be mentioned that the concept of sampling is not of recent origin since consciously or unconsciously sampling is resorted to in everyday life from time immemorial in making decisions. For instance the trader examines sample of grains taken from sacks of grains to determine the quality of the whole stock and the housewife examines a spoonful of dish, she has prepared to determine whether it has been properly cooked. However the use of sampling method for the development of practical problems is of fairly recent origin.

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In the words of P.V.Young “A statistical sample is miniature picture or cross section of the group or aggregate from which the sample is taken. The entire group from which sample is chosen is known as ‘the population’ ‘universe’ or ‘supply’.

‘Universe’ ; the term ‘Universe’ has to be understood properly. It is used to refer to entire area. Which has been chosen for undertaking a particular research study. A sample is derived out of this universe ; It is a miniature of the universe.

Take for example a researcher has chosen the district of Gulbarga to study the impact of Mahathma Gandhi National Rural Employment Guarantee Scheme in containing migration problem. All the beneficiaries who are employed under the scheme in Gulbarga district can be considered as “The universe of the study” However for the purpose of the study a sample has to be selected. A cross section of the beneficiaries from different Taluks different villages are selected for carrying out the investigation.

Basic presumptions in sampling:

The sample should be picked up in such a way that it represents the entire population to be studied. A wrong sample will lead to wrong conclusions. Hence sampling techniques should be adopted with certain basic assumption and on certain well established basis.

The first basic presumption is that there is some underlying unity in the sample of the population which is being picked up.

The second basic presumption in sampling is that it is always possible to pick up a sample which will represent the group as a whole.

Third basic presumption is that the researcher must go with the idea that the study, which he is conducting does not require absolute and 100% accuracy.

What is a good sampling?

P.V. Young says “The size of a sample is no necessary insurance of its representatives. Relatively small samples properly selected may be much more reliable than large samples poorly selected. The actual selection of the sample should be so arranged that every item in the universe under consideration must have the same chance for inclusion in the sample”.

Sample should be adequate in size; So that it can be reliable, really Though there is no fixed sample size as such for all studies, the number of units selected as sample must effectively reflect the characteristics of the universe. Depending upon the nature and scope of the study and the time available for the researcher for completing the research process, the size of the sample has to be determined. The sample selected should be large enough to permit him/her to draw reliable and valid conclusion about the unit of the study. For example, if in a study universe there are 50000 persons and the size of the sample drawn is 50 persons. Then the researcher cannot draw any meaningful conclusions. The size of the sample should be such that, it permits the researcher to derive meaningful results.

The most affective sample is one, which is also the most representative. Representativeness refers to the capacity of the sample to represent the universe in such a way that, all its chief features are reflected. It is not enough if a sample is large in size. It must be a true replica of all the diversities, which one sees in the universe. Let us take an example. A study of self-help groups in promoting economic and social empowerment of women from deprived classes in a district require samples from all taluks in accordance to the size of the population.

The selection of the sample should be unbiased. The items which are included in the sample should be based on objectivity rather than on subjectivity.

The source of the sample from which the sample is drawn must be updated from time to time.

It is expected of good sample design that its results can be applied and in it biases, if any can be controlled.

The units included in the sample should have some homogeneity. i.e., these should have some sort of likeness with each other. It is this likeness which will make it scientific. Otherwise the unit will become unscientific and thus not good for drawing proper conclusion.

While drawing sample a researcher should not hesitate to draw some benefit from the experience of his predecessors who have been on the field. They have knowledge about practical difficulties. Which are likely to come on the way. Consultation with them are bound to benefit the study as a whole and the researcher is not likely to lose much by consultation.

While constructing a sampling design it is important that measurable or known probability sample technique should be used. If such method is used then expected discrepancies between estimated value from the sample and the true value will decrease. Only simple, straight forward, workable method which have been adopted to available facilities should be used. Availability of personnel should also not be lost sight of. As far as possible elaborate and complicated techniques should be avoided. It should always be remembered that much work of coding and translating is to be done by non-technical staff. As such procedures that are practicable and readily understandable should be used.

Types of sampling method.

Sample can be picked up through different methods. A sample can be probability sample or non-probability sample. The former is based on the concept of random selection. It can be unrestricted sampling like simple random sampling and restricted sampling which includes complex random sampling, cluster sampling, systematic sampling and stratified sampling. A non-probability sampling is non-random. It can also be restricted or unrestricted. A restricted non-probability sampling includes haphazard sampling or convenience sampling. Whereas restricted non-probability sampling, includes quota sampling, judgement sampling etc.

A non-restricted sampling is which is drawn individually from the population at large. What is not covered under unrestricted sampling falls under the category of restricted sample.

Random sampling.

Random sampling is an example of a probability sample. Randomness is the basis of all sound sample designs. The term random is often understood to mean careless, casual, or haphazard. But in social research, the term random has a different meaning. Random sampling is the process of sample selection in which each individual or element in the universe is assured an equal and independent chance of being included. The random method of sample selection ensures equal probability of selection to every unit in a given universe. If the extent of universe is known then each case can be numbered on a slip of paper. Put the slips into a box and thoroughly shuffle. After that draw out the required number of slips by using the lottery method. This is done in order to ensure that at each stage every item has the same probability of being selected. This method is called sample selection with replacement. If the slips are not put into box, the total number of slips goes on getting reduced, and at every stage the slip has an equal probability of selection. This method of sample selection is known as sample selection without replacement. In the words of P.V.Young. "This procedure of mixing the slips or discs in the universe selecting one item at a time, making a record of the selected items and then inserting it in the contained is continued until the entire sample is obtained". This method is also known as lottery method.

Goode and Hatt say " A random sampling is one which is so drawn that the researcher from all pertinent points of view, has no reason to believe that a bias will result. In other words the limits of universe must be so arranged that the selection process gives equal-probability of selection to every unit in the universe. This really means that the researcher does not know the universe sufficiently well to duplicate it exactly in his sample, what he is, therefore, doing is that he is attempting to randomize his ignorance in this area."

2. Stratified random sampling:

A simple random sample can be used if the universe is homogeneous in character. If the universe consists of diverse groups, the method of selecting the sample by the simple random method is either likely to totally eliminate some groups or over present a few and under represent others. In such cases stratified random sampling method is used. It is a method in which in the first instance the whole population that is required to be studied is divided into different groups or stratas. Once this has been done, certain number of items are taken from each group at random and this is done not with the some deliberate intention but at random. Stratification also employs randomness. For example an investigator is interested in studying fertility rates of the people of particular area. This he can do with the help of a stratified sample. First by dividing the whole area into different stratas that is on the basis of race religion, education, social status and economic stratas. Then from each stratum he selects a

sample on a random basis. This method of selecting the sample ensures that all the sub groups in the universe are given an opportunity to be represented in the sample.

Types of stratified sampling are described below

- i. **Proportionate stratified sampling** is one in which the cases are drawn from each strata in the same proportion as they occur in the universe . For example if in a particular universe of study the actual population on the basis of race is that 70% persons belong to one and 30% to the other race, the sample should be such that this proposition is also reflected in it . Obviously, such a sample ensures a proper representation of attributes or variable which is always very significant in a study.
- ii. **Dis-Proportionate stratified sampling** is a method of sampling in which equal number of cases are taken from each stratum without any consideration to the size of strata in proportion to the universe. It is also sometimes called “controlled sampling” The advantages in this method is that an investigator proceeds with the presumption that all units are equal and he is not required to secure unnecessarily large volume of information from most prevalent groups in the population.
- iii. **Stratified weighted sampling** is a method which tries to remove the disadvantages of both the proportionate and disproportionate stratified sampling. In this method an attempt is made to pick up only equal number of cases from each strata and the weight is in proportion to the size of the stratum in relation to the whole universe.

A Researcher before applying stratified sampling method he has to study the whole universe, characteristics, qualities, peculiarities, limitation of each variable in the strata. Because of this comparative out looks grows and gets developed in the researcher. It is the main advantage. In this method investigator has greater control over the sample. In this method there is no problem of replacement of units. These are some of the advantages.

However stratification in itself is a very difficult problem and its really very difficult to scientifically and properly arrange samples on the basis of arranged stratification. Therefore, once a mistake occur in the initial stages, whole sample is likely to get biased. In this way the study is likely to become faulty and defective, which is a great disadvantage of the study.

3. Purposive sampling:

It is a non-probability sample design in which sampling procedure adopted does not afford any basis for estimating the probability that each element in the population has equal chance of being included in the sample. In this method it is left to the investigator to decide which type of method he will pick up for his study. The investigator has all the material before him and out of that in his best wisdom he picks up some material for his study. It is for him to decide that the items which he is picking up are representative of the whole study. Thus he purposely selects and also purposely leaves some items. This method ensures the complete control of the researcher. However there is the danger of biased sample also.

4. Systematic sample or sampling at regular intervals:

It is just another form of random sampling. If we have a list of units, such as , for example a directory, a list of voters, or a register every n^{th} case is selected from the list. Let us for example that there 100 women beneficiaries in a village, from among a sample of 20 is to be selected. Then we have to decide the sampling interval by dividing 100 by 20, the resulting member is 5, then any number between 1 and 5 is selected at random. Beginning from 2 and at an interval of 5, we select numbers 2,7,12,17,22,27,32,37,42,47,52 and so on till the required number of cases is selected. According to P.V. Young “It is obvious that this technique can be used only on finite universe where complete listings are available.

5. Multi stage or cluster sampling:

In this method the items to be studied are picked at random at different stages. For example if the idea is to study the problems of middle class working couples in a state, the first stage will be to pick up the random few rural and urban areas for the study. The next stage will come when from each area few families belonging to the middle class will be picked up and last stage will come when working couple out of these families will be chosen for study. These stages will be as follows.

State→ districts→ Rural and urban areas→ middle class families→ working couple in these families.

This method is usually applied when the area to be covered for the study is very wide and it is felt that it is shall not be possible to study the whole population at one stage.

This method combines the advantages of both random as well as stratified sampling and as such If judiciously applied this method can prove really useful.

6. Multi-phase sampling is a type of sample in which basis data are gathered from the sample selected for the study and for gathering more detailed information about the sample group a sub sample of the main sample is selected. For example, A researcher is taking up a study of family budget in a town. He selects a sample of 500 families in the town to elicit the required data, relating to family size, income, occupational and educational background of members. But for a more detailed study of spending patterns, factors affecting such as spending and spending priorities, a sub sample of 200 families from among the 500 family is selected as the main sample. This type of sample selection also facilitates a comparison between the main sample and the sub-sample.

7. Quota sampling method:

It is a non-probability sampling design. In this method a universe of study is decided before hand. This method allows freedom to researcher to select a sample. The quota will have to be decided by the investigator himself, according to his will. For example, if in a class of 50 students 10 students are to be identified for canvassing a questionnaire the researcher chooses these 10 students. It is true that a sample which does not adopt the principle of

equiprobability can create misleading results. Also there is the criticism that a researcher may misuse his/her freedom to deliberately include or eliminate certain persons because of personal reasons. But such fears can be overcome by following certain norms strictly like ensuring proportional representation in the sample.

However quota sampling method and cluster sampling method are not much in common use.

8. Convenience sampling method:

In this method investigator is most important person. The whole sample is picked up by the investigator according to his convenience. He decides what should or should not be included in the sample. He has to ensure about the availability. Accessibility of the sample being picked up him. Sample is not picked up with the help of any scientific method.

Accidental sampling design, self-selected sampling method, extensive sampling method, area sampling, double sampling, repetitive sampling, combining of probability and non probability sampling are some of the other method of sampling.

These days sampling method is becoming more popular. In fact in social research census method is being replaced by sampling method. However in nutshell, they are placed below.

- i. It is a method in which a lot of time, money and energy is saved.
- ii. More attention is paid to the problem to be studied. Since human energies and resources are limited, when these are concentrated on a sample obviously more attention is paid and more interest is taken as compared with a situation where the universe is wide and practically unmanageable.
- iii. More coverage is possible and that too within less time.
- iv. In this method it is possible to scrutinize the available information when the area or population covered is wide, obviously, it is not possible to scrutinize the information once collected.
- v. In sampling method it is possible to carry out an intensive study of the items picked up for research.
- vi. It is possible to establish rapport with the respondents and collect information from them.
- vii. This method helps in solving problem of trained researcher as well. If the area of study or population of the study is wide then obviously more trained and sincere workers will be needed to contact the respondents and collect information from them. But in sampling method the number of persons to be contacted is small and there is need for less number of trained social researchers.
- viii. This method is economical and hence best suited for poor countries with umpteen number of problems and less resources.

- ix. If more areas and population is to be covered for conducting research then an administrative setup will have to be maintained. This set will control the activities of the field investigator and researcher etc. , but when the sample to be studied is small obviously there will be no need to have any big establishment. In this way problem of maintaining establishment and administrative setup will be solved.

Demerits of sampling method

- i. Result obtained with the help of sampling method can be helpful only when sample is properly selected and there are no personal prejudices and biases while picking up sample. When there are bias in picking up sample the results are bound to be misleading and wrong results.
- ii. Sample selective from defective frames and faulty selection of sampling units lead to misleading results.
- iii. Complex and complicated social phenomena come in the way of picking representative samples which again lead to wrong conclusions.
- iv. Sampling method is very complex and complicated. It is very difficult to pick up representative samples unless there are very good and trained persons to do the job. In actual practice number of such persons is very small and quite limited. This leads to inadequate, in accurate or inappropriate methods of interviews, canvassing of schedules, observation etc. and finally result in misleading result.
- v. In this method another defect is that there are more chances of error. It is because the universe or population of study is small and there is very possibility that error may creep in at any point. When population to be covered is wide even if the error creeps in at some point. That does not very much effect the results.
- vi. Quite often small sample comes on the way of analyzing the data collected because there are not enough cases for sub classification and for breaking down of tables.
- vii. It is also argued as to how the results of a sample study can be applied to population as a whole, particularly when we know that in social research no two situation are identical and the people, their habits, attitudes and approaches are not at all identical not only this, but to a social problem, approach of each and every individual even in the same area is not uniform. Under the circumstances it is quite unsafe to apply the results of a sample to study as a whole and draw conclusions for the whole population. Therefore there is every danger that some wrong conclusions may be derived.

But in spite of all these defects sampling method for investigating social problem is being very much preferred particularly when number of units covered in the study are many and it is felt that census method of research is more or less impossible. But sampling method becomes really good and useful when the units to be studied are alike and there are no

variations in their characteristics, though while investigating social problems, it is difficult to find out such units.

On account of its plus points, sampling method is becoming more and more popular today, it is accepted that with the help of this method, it is possible to achieve dependable and reliable results with less cost in a comparatively manageable time and with small administrative and organizational setup. But this method can give good results only when sample is carefully and properly selected and at no stages biases are allowed to enter.

Sampling methods used in 'Agriculture Statistics' of Directorate of Economics and Statistics

Proportionate Stratified Sampling:

Selection of experiments in a taluk in survey on fruits, vegetable and minor crops:- Here area of the villages growing the particular crop is written in a column. Then cumulative area is taken as the basis for selecting the villages by proportionate to area sampling.

Simple Random Sampling:

In crop cutting experiments selecting starting point of a plot, to arrive at a step each in length and breadth of a plot is by simple random sampling

Systematic Sampling or Sampling at regular intervals:

In Timely Reporting Scheme year wise allotment of villages is done through systematic sampling. Here villages are arranged in a order of village accountant circle wise in a taluk. Then a village is randomly selected and numbered as 1. Very next village is numbered as 2, next one 3, then 4 and 5. This 1, 2, 3, 4, 5 are repeated for next villages. After exhausting all the villages, the villages numbered 1 are grouped together and allotted 1st year then villages with 2 to 2nd year and so on.

Cluster Sampling:

In Timely Reporting Scheme and Improvement of Crop Statistics Scheme for area enumeration, this sampling methodology is used. Here in a village a sub survey number is randomly selected, and then including this number a group of five sub survey numbers is formed. Then with equal intervals another three such groups are formed.

Multistage Sampling:

In Timely Reporting Scheme, Improvement of Crop Statistics Scheme and survey on fruits, vegetable and minor crops sample area enumeration is done using two stage sampling. Here villages are 1st stage and sub survey numbers are final stage units.

In crop estimation survey we use 3 stage sampling technique. Villages are 1st stage units, sub survey numbers are 2nd stage unit and the plot in the sub survey number is the ultimate unit.

Purposive Sampling:

In survey on fruits, vegetable and minor crops selection of major taluks is done by purposive sampling. Those taluks having more area of the particular crop and lie within 65% of cumulative area when arranged in descending order are compulsorily selected.
