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Strengthening Statistical Information System
in the context of social and economic development

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Introduction

Development is all about improving the lives of the people. Development policy and planning should therefore be based on the hard evidence about the people; how they live, what are their development and welfare needs and how ongoing development programmes and activities are impacting the living conditions of the people. In other words, development policy and planning should be based on development data that provide the hard evidence about the people and their life styles. Obviously, development data are critical to effective development planning and programming as well as for the successful implementation of all development programmes and activities. It is therefore imperative that the statistical system and associated statistical activities must provide the data that provide the hard evidence necessary for planning and programming development activities and programmes. The current evidence suggests that lack of high quality development data and inability of accessing the existing data are fundamental challenges to their use for evidence-based development planning and programming and evolution of sound development and welfare policies and programmes that have a positive impact upon the quality of life of the people.

Evidence-based development policy and planning may be contrasted with the opinion-based development policy and planning. Figure 1 describes how development data can contribute to evidence-based development policy and planning and how lack of development data or the inability to access the development data or little capacity to use the available development data can shift the focus from evidence-based development policy and planning to opinion-based development policy formulation and planning and programming for development programmes and activities. Opinion-based development policy and planning is generally not based on an objective assessment of the ground situation and actual development and welfare needs of the people as the development data necessary for situation analysis and for the identification of development and welfare needs of the people do not either exist or is used for planning and programming purposes. In such a situation, development planning and programming, generally turns out to be normative in scope and uniform in prescription. It is well known that such a development policy and planning has limited impact in terms of meeting the development and welfare needs of the people.

Figure 1

Development data and development policy planning and evaluation

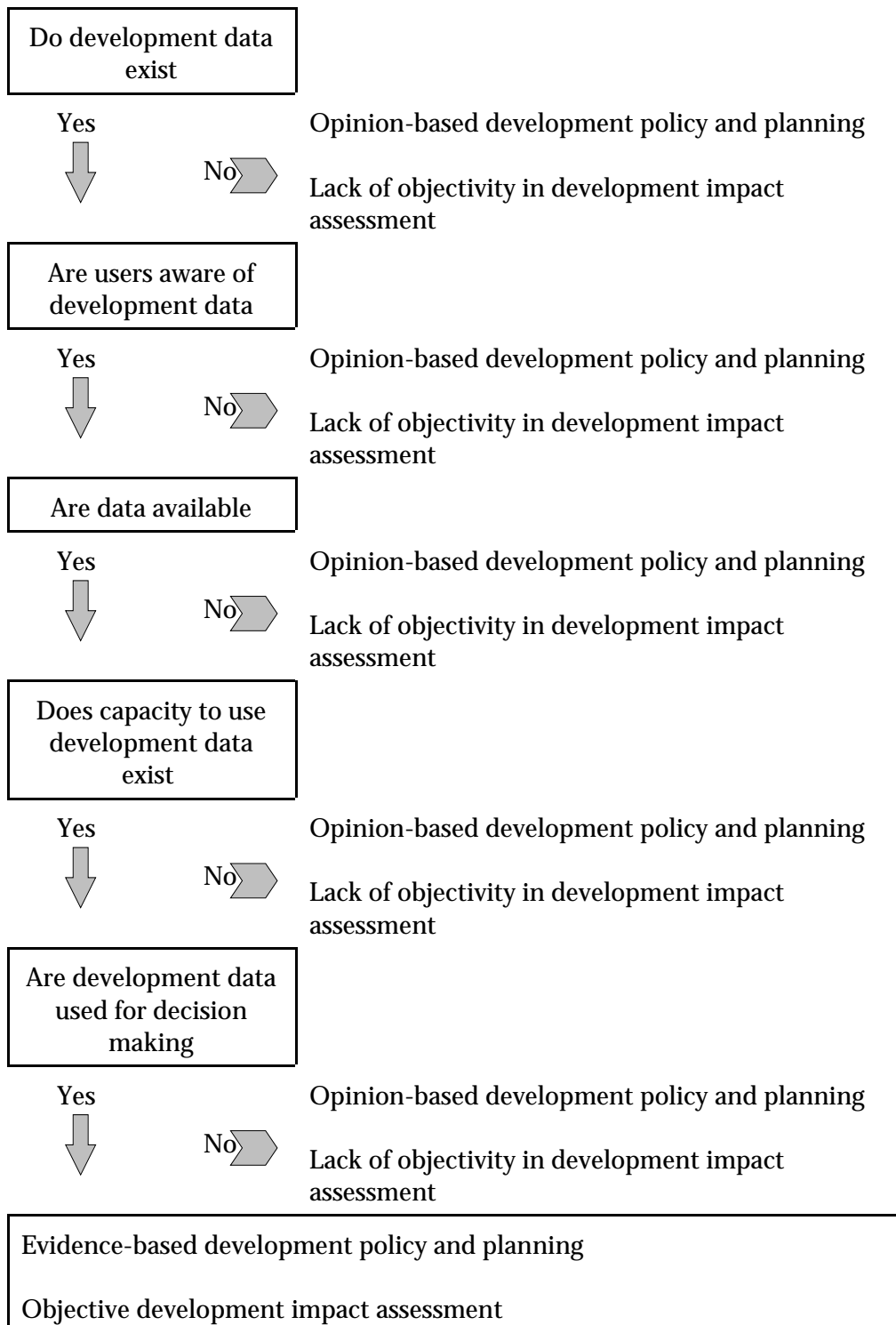


Figure 1 clearly emphasises the need of establishing institutional framework for generating development data and mechanism that ensures easy access to and use of development data for guiding development processes at different tiers of development administration. There is also a need to increase the awareness about development information, facilitate easy access and uninterrupted availability of the development data and to build up the capacity to use the development data for development planning and programming.

The most commonly used framework for development planning and programming is the results framework. This framework breaks down development activities and programmes according to logical components of the implementation process and, for each component, objectively verifiable indicators are defined for the purpose of planning, monitoring implementation and for assessing the impact. In this framework, indicators are defined to measure and monitor programme inputs, programme implementation process, programme outputs and programme impact. It is argued that strengthening the statistical system should follow the results framework of the implementation of development programmes and activities. More specifically, the statistical system should be strengthened in a manner that it generates statistical information required for the estimation of an agreed set of development indicators at different tiers of the development administration system. This approach establishes the direct link between the statistical system and associated statistical activities and the development system and associated development programmes and activities. This link makes the statistical system relevant to the development policy, planning and programming. The indicator based approach of strengthening the statistical system also helps in the institutionalisation of the statistical system within the development and welfare administration system.

The development indicators based approach of strengthening the statistical system requires, a priori, identification of development indicators. Development indicators may be identified in the context of development inputs, development processes and development outputs. Development indicators may also be identified in the context of the impact of development programmes and activities on the quality of life of the people. Development indicators may also be identified for different tiers of development and welfare administration. Here, it may be emphasised that the basic orientation of social and economic development processes varies by the administrative and managerial hierarchy. Basic orientation

of social and economic development policy and planning at the national and State level is radically different from that at the grass roots level. At the grass roots level, the development process must focus on development and welfare needs effectiveness and the capacity efficiency of the development administration system. At the national and State level, on the other hand, the primary concern of development is on the realised efficiency. These means that the basic orientation of development indicators at the national and State level is different from the orientation of indicators at the local level, the interface with the people. At the grass roots level, development indicators should be simple, easy to measure, devoid of technical jargons and capable of straightforward interpretation. More complex development indicators may be retained at the higher level of development administration and management where necessary technical capacity exists or may be created. This means that the development data needs vary by the hierarchy of the development administration system, although it is possible to establish a link between development data needs at different tiers of development administration. This is an important consideration that should be taken into account in strengthening the statistical system.

The development indicators may broadly be classified in to four distinct categories: a) indicators that measure and monitor the outcome and impact of development activities and programmes, b) indicators that measure and monitor the outputs of development processes, c) indicators that are related to the implementation of development activities, and d) indicators that reflect that inputs of development processes and activities. Outcome and impact indicators generally require information that is usually collected directly from the people - the beneficiaries of development activities and programmes. Output and process indicators require information that is usually collected through departments and agencies responsible for the implementation of development programmes and activities. Information required for estimating output and process indicators may also be generated through community-based surveillance systems. Finally, input indicators require information that is usually available through development departments and agencies - information about financial and physical resources , infrastructure and facilities, human resources, etc. The statistical system should therefore have the capacity to produce all the three types of development information. An advantage of this approach is that it is possible to assess the quality and relevance of development data available from different sources.

Development Data Model

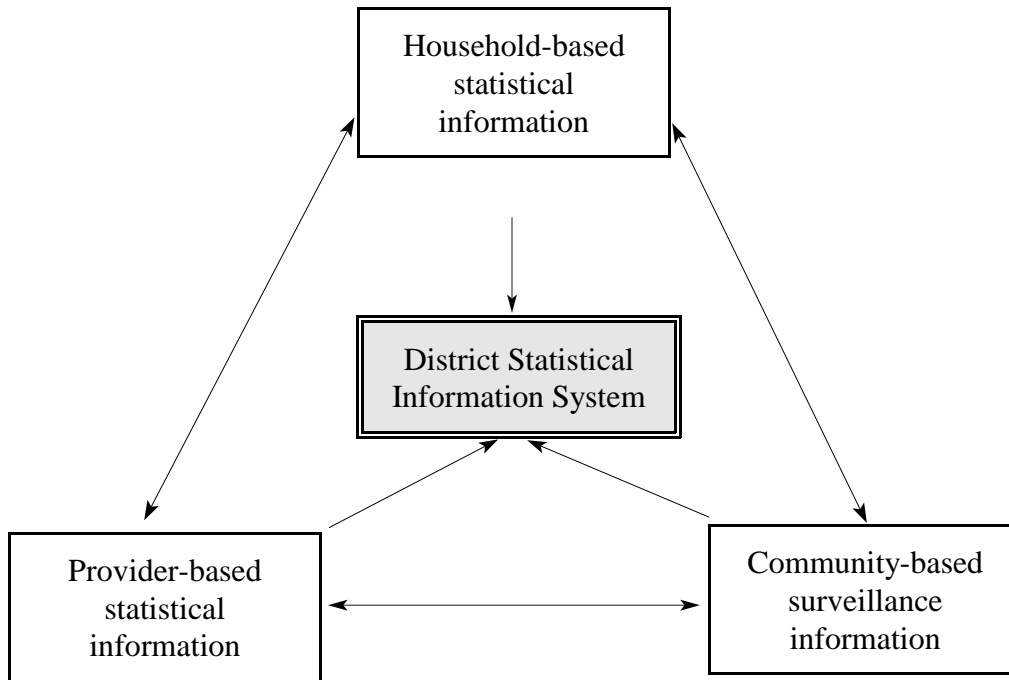
Based on the foregoing considerations, a development data model is described in figure 2 which may constitute the basis for strengthening the statistical system. The model follows the logic model of development data and closely resembles results-based development planning framework. The model generates data related to inputs, processes and outputs of development activities along with the information necessary to measure and monitor the immediate and intermediate development objectives and ultimate development goals.

Figure 2
The Development Data Model

Goals and objectives	Components of development Data System		
	People-based	Provider-based	Surveillance
Development goals			
Intermediate objectives			
Immediate objectives			
Outputs			
Processes			
Inputs			

The development data model presented in Figure 2 suggests that, essentially, three types of statistical data are required for development planning, monitoring and evaluation - data related to development inputs; data related to development processes and associated outputs; and data related to development outcomes and development impact. Incidentally, there is no single data source which can provide all the information necessary for development planning and therefore information available through multiple sources is used. This raises the issue of compatibility of the statistical information available from different sources. The experience is that the statistical information available from different sources is generally not compatible which leads to concerns about the quality, relevance and reliability.

Figure 3
The district statistical system model



The above discussions suggest that it is important that efforts to strengthen the statistical system must ensure that there is a congruence between statistical information available from different sources so as to enhance the credibility of the statistical information. This is also necessary for maximising the use of the statistical information and making the statistical information relevant to development planning, monitoring and evaluation.

The above discussions suggest that strengthening the statistical system should be carried out in the context of strengthening of three inter-linked sub-systems: 1) the household-based data sub-system; 2) the service provider-based data sub-system; and 3) the community-based development surveillance sub-system. The three sub-systems are essentially independent of each other but when linked as shown in Figure 3, they lead to an integrated statistical system which meets almost all the information needs of the social and economic development system. This linkage may be established at all levels of the development administration system right from State level up to the grass roots - village - level. Needless to emphasise, the linkages between the three development data sub-systems are necessary to ensure development data quality, accuracy and relevance.

Development Indicators

The indicators based approach to strengthening the statistical system requires specification of indicators at different tiers of the development administration system. In this context, it is important to recognise that the basic orientation of development management differs by the hierarchy of the development administration system. As such, the basic orientation of development indicators also varies by the hierarchy of the system. At the lowest tier of the development administration system - the interface with the people - the focus of the development efforts is on delivering development and welfare services to the people. Therefore, needs effectiveness of development services delivery system and the capacity efficiency of the development administration system is of prime importance at the grass roots level. As such, the development indicators identified at the grass roots level should focus on measuring and monitoring the needs effectiveness and capacity efficiency of the development services delivery system. The needs effectiveness, in combination with the capacity efficiency, determine the realised efficiency of the development and welfare services delivery system. A high level of the realised efficiency of the service delivery system is essential in meeting the development and welfare needs of the people. On the other hand, at the intermediate level of the development administration system, the focus is on the goal effectiveness of social and economic development processes which means that the development indicators selected for the intermediate level should be oriented towards measuring and monitoring the goals effectiveness of development programmes and activities. Finally at the upper tiers of the development administration system, it is the realised efficiency of the development processes that matters most. As such, the development indicators identified at the top most level of development administration system must be oriented towards measuring and monitoring the realised efficiency of the development administration system. This means that the development indicators at different tiers of the development administration system are essentially different. Development indicators designed for the upper tiers of the development administration may have little relevance at the grass roots level because of the entirely different orientation of development processes at the two tiers. It is, however, important that causal linkages are established between development indicators at different tiers of development administration.

Table 4
Template for identifying development indicators

Particulars	Administrative level			
	Grass roots level	Lower level	Middle level	Upper level
1. Development Dimension I				
1.1 Impact indicators				
a. Ultimate				
b. Intermediate				
c. Immediate				
1.2 Output indicators				
1.3 Process indicators				
1.4 Input indicators				
2. Development Dimension II				
2.1 Impact indicators				
a. Ultimate				
b. Intermediate				
c. Immediate				
2.2 Output indicators				
2.3 Process indicators				
2.4 Input indicators				
3. Development Dimension III				
3.1 Impact indicators				
a. Ultimate				
b. Intermediate				
c. Immediate				
3.2 Output indicators				
3.3 Process indicators				
3.4 Input indicators				

Remarks: The template is only illustrative. Other dimensions of development such as population and family, shelter, environment, disaster management, social protection, etc. may be added in the list.

There are, generally, two approaches to develop indicators for development management - the composite approach and the functional approach. The composite approach is the most commonly used one. It measures general level of progress in one or more dimensions of development. Composite indexes of development could be desegregated by administrative areas, gender and social class.

The functional approach, on the other hand, is used to monitor implementation of development processes. These indicators may be grouped as input, process and output indicators. This approach does not generate outcome or impact indicators. Both composite and functional development indicators are, therefore, essential for development management.

Based on the above considerations, a template for identifying development indicators for decentralised development planning and decentralised development impact assessment is shown in Figure 4. This template will be used for developing the set of development indicators as the basis for strengthening the state and district statistical system. It is obvious that the state and district statistical system must provide information necessary for estimating the identified development indicators at different tiers of the public administration system, as described above.

Finally, it may be emphasised here that a radical change in the existing statistical system is not possible given the huge time and money cost involved in the restructuring the system and enormous manpower needs and involvement of a number of agencies in the collection, analysis and use of statistical information. The only option is to introduce a process of slow but definite change in the entire statistical operations within the public administration system involving not only the Department of Economic and Statistics which is the nodal department but also different line departments and other agencies of the government. Introducing and sustaining this change is challenging in view of the fact that the statistical system runs horizontally and vertically across the entire development administration system. This means that the entire development administration system right from the State level up to the grass roots level must be actively involved in this process of change. Obviously, the approach to strengthening the statistical system must be simple and straightforward so that the process of change is adopted and institutionalised even in the absence of the required statistical capacity. This is necessary for the success of these efforts.

The Way Forward

The present paper outlines an operational strategy for strengthening the statistical system at different tiers of the development administration system in so that the system can generate and manage statistical information required for decentralised development planning and monitoring and evaluation of development programmes and activities at different tiers of the public administration system. This strategy outlined in this paper is in line with the basic philosophy of decentralised development planning which emphasises that the process of development planning must start at the grass roots and the people must be actively involved not only in the development planning processes but also in development monitoring and evaluation.

To summarise, the approach outlined in this paper to strengthen the statistical system in should

- Focus on decentralising the statistical system as there is a pressing need of statistical information decentralised development planning and a decentralised approach to monitoring and evaluation of development programmes and activities.
- Evolve a development indicator framework as the basis for strengthening the statistical system. This is necessary to ensure that the statistical system is able to meet the information needs of decentralised development planning and monitoring and evaluation of development activities and programmes.
- Identify the statistical information required for estimating agreed development indicators at different tiers of the development administration system.
- Assess the availability of statistical information at different tiers of the development administration system in the context of the identified information needs and analysing the reliability, relevance and timeliness of the available information.
- Identify the gaps in the statistical information in the context of decentralised development planning, monitoring and evaluation.
- Characterise the three statistical sub-systems described in Figure 3 and that constitute the integrated statistical system in the context of the statistical information required for estimating the agreed development indicators at different tiers of the development system.

- Outline the operational framework for institutionalising the three statistical sub-systems described in Figure 3 within the existing development and welfare administration system at different tiers.
- Outline the process of combining the statistical information available from the three statistical sub-systems to arrive at an integrated statistical database to support decentralised development planning, monitoring and evaluation.
- Outline a plan for building the knowledge and skills of statistical manpower at all levels of the development administration system so as to facilitate analysis and interpretation of the statistical information thereby enhancing its use in development planning, monitoring and evaluation. Building the analytical capacity is necessary to demonstrate the usefulness of reliable and relevant statistical information in decentralised development planning, monitoring and evaluation.
- Develop a programme of disseminating the statistical information to different stakeholders to emphasise the importance of statistical information in development processes. This dissemination programme is necessary to create a constituency for statistical information within the development administration system.
- Develop a public-private model for building the statistical capacity of the State in the context of the four functions of the statistical system - collection, storage and retrieval, analysis and interpretation, and presentation and dissemination.

To conclude, the statistical system should be evolved within the overall context of information needs of development planning and development monitoring and evaluation. It is imperative that the statistical system provides reliable and relevant information at different tiers of the development administration system which is relevant to decentralised development planning and monitoring and evaluation. The statistical system must provide information necessary to measure

- a. Needs effectiveness of development processes,
- b. Capacity efficiency of the development administration system,
- c. Goal effectiveness of the development programmes, and
- d. Realised efficiency of the entire social and economic production system at different tiers of the development administration system right from the State up to the village level.

Development of the analytical capabilities within the statistical system is a very challenging task but it is essential. However, the first priority of the statistical system is to make available reliable, relevant and timely statistical information of high quality for the purpose of analysis and interpretation. If the information available from the statistical system is of poor quality or is not reliable and relevant then analytical capabilities have little role. At the same time analysis of the statistical information should be carried out in the context of information needs of stakeholders departments and agencies.

A major concern in strengthening the statistical system is the demand for additional manpower, especially at lower tiers of development administration system. There is a need of complete restructuring of statistical organisation so that the statistical system can generate information necessary for development planning, monitoring and evaluation.