

**CENTRAL STATISTICAL ORGANISATION
MINISTRY OF STATISTICS AND PROGRAMME
IMPLEMENTATION
AND
NATIONAL INSTITUTE OF DISASTER MANAGEMENT
MINISTRY OF HOME AFFAIRS**

**SUMMARY
PROCEEDINGS OF WORKSHOP ON
DEVELOPMENT OF
NATIONAL STATISTICAL SYSTEM ON
DISASTERS IN INDIA**

NASC, Pusa Complex, New Delhi

27th April 2007

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Natural and human induced disasters particularly during the last decade and half have been causing unimaginable loss of life and property and damages to public and private infrastructure, eroding gains of hard earned development and resulting in mounting expenses on relief and rehabilitation. There are projections that disasters would be on the rise due to climate change, unplanned human settlements, unsafe building practices and other factors. All these developments have led to a paradigm shift in disaster management - from one of post disaster relief and reconstruction to a holistic management of disasters encompassing *pre-disaster* prevention, mitigation, preparedness, *on-disaster* response and *post disaster* relief, reconstruction and recovery. Globally this shift is reflected in the adoption of Yokohama Strategy of Safer World in 1994 and Hyogo Framework of Action in 2005. In India the shift is articulated in the development of National Disaster Management Framework and reinforced through the enactment of Disaster Management Act, constitution of National Disaster Management Authority, setting up of National Institute of Disaster Management etc.

2. The holistic management of disasters requires analytical data on hazards, risks and vulnerabilities of different natural and human induced disasters at all levels. At present raw data on different aspects of disasters are collected by various agencies, but mostly these remain confined in news papers reports or official files and sometimes periodical bulletins and

reports are published by some agencies, but there is no system to collect, compile, validate and publish such data in one place on a regular basis for the use of policy makers, analysts, disaster managers and other users. Therefore a need has been felt for the development of a comprehensive national database on disasters which would facilitate formulation of area specific disaster risk profile, assessment of long term impacts of disasters, development of policies, strategies and frameworks, preparation of proper planning for disaster preparedness and allocation of adequate funds for the prevention and mitigation of disasters etc.

3. In this context a brainstorming workshop on the development of a National Disaster Statistical System was organized by the Central Statistical Organisation (CSO), Ministry of Statistics and Programme Implementation in collaboration with the National Institute of Disaster Management (NIDM), Ministry of Home Affairs on 27 April, 2007 at NASC, Pusa Complex, New Delhi. About 80 participants from various Central Government Ministries and institutions like Indian Meteorological Department (IMD), Central Water Commission (CWC), Geological Survey of India (GSI), National Sample Survey Organization (NSSO), State Government Departments of Revenue and Disaster Managements and Directorates of Economics and Statistics (DES) attended the workshop. List of participants is annexed - I.

4. Inaugurating the workshop **Dr. S.K.Nath Director General, Central Statistical Organisation (CSO)** outlined the current status of disaster statistics in India and explained the broad objectives, principles, scope and relevance of the proposed national statistical system in India. He said that the system shall be jointly developed by the Central Statistical Organisation and National Institute of Disaster Management (NIDM) in

close collaboration of all the data collection agencies in the Central and State Governments. He said the role and responsibilities of all the organizations and agencies have to be clearly defined and the methodologies clearly developed for the success of the system. He said that all the relevant issues shall be discussed threadbare in this brainstorming workshop and a road map drawn for the development of a sound hazard and disaster statistical system in the country.

5. **Mr. P.G.Dhar Chakrabarti, Executive Director, National Institute of Disaster Management (NIDM)** made a detailed presentation on the emerging dimensions of disasters and the need for development of a sound statistical system on hazards and disasters in India. He explained the statistical systems developed in other parts of the world and stated that in most of the countries the system is still evolving. While hazards statistics are compiled by meteorological and other agencies, disaster statistics are mostly taken up as research projects of universities, research institutions and non governmental organizations. He said that probably for the first time ever a national statistical organization has taken the responsibility to develop a system for collection of hazards and disaster statistics for the country as whole. This would be a signal contribution of the CSO and NIDM and would be a great help to various organizations and institutions within and outside the government who are engaged in the holistic management of disasters in the country.

6. Executive Director gave a detailed presentation on the existing hazards and disaster statistics in India and pointed out the critical gaps, which need to be addressed. He flagged the following 12 issues for development of a statistical system on hazards and statistics for brainstorming during the day long workshop:

- i) What criteria would be adopted for defining disasters – number of deaths, injuries, damages?
- ii) What would be the geographical unit for collection of data – State, district, block?
- iii) What would be the periodicity of publication of the data – monthly, annual, bi-annual?
- iv) What would be the responsibility of each agency – CSO, NIDM, nodal Ministry/Agency of GOI, State Governments?
- v) Should the report be divided in two parts (a) hazard events of the year which could be the responsibility of the Central agencies and Ministries and (b) disaster events which would be the responsibility of the State governments and of specialized central ministries for specific disasters?
- vi) What fields shall be selected for data collection on hazards – shall these be uniform for all types of hazards or specific to each type of hazard?
- vii) What fields shall be selected for data collection on disasters – deaths, injuries, damage of houses, infrastructure? What sub-categories in each field?
- viii) How shall the formats be developed?
- ix) What would be the standardized methodology for reporting macro-economic losses? How GDP losses due to disasters shall be estimated on a regular basis?
- x) How to measure complex issues such as human impacts, livelihood losses (particularly in the informal sector) and ecological impacts?

- xi) What would be the agreed protocols for the start and end-dates of disasters, geo-referencing of disasters and distinguishing cascading hazards etc?
- xii) How data transparencies and accountabilities shall be maintained?

7. **Mr. R.C. Aggarwal** (CSO) highlighted the key challenges in collection and collation of disaster databases, explored different options for implementation and explained the benefits and limitations of these options. He examined the possibility of survey and validation of data as well and mentioned that there is a need to develop consensus on indicators on various hazards and disasters. He proposed the constitution of a technical coordination committee at the state level.

8. **Ms. Pratima Singh** (Assistant Professor) Gujarat Institute of Disaster Management made a brief presentation on the statistical system in Gujarat and cited the example of State Disaster Resource Network developed by the GSDMA, which maintains the hazard related information and resources for disaster management. She also mentioned about the guidelines developed for the damage and loss assessment and preparation of memorandum for central assistance.

9. **Dr. HR Hatwar** (ADGM, Services), India Meteorology Department mentioned that IMD had a wide network with 6 Regional Meteorological Centers, 19 Meteorological Centers at State Level and large number of observatories which collect meteorological data from all parts of India. IMD is coming up with an annual report on disastrous weather events. He mentioned that there is a time lag in publishing because it requires time for validating the data collected from various sources. Apart from this IMD is

generating reports on seismic activities in India as well as neighboring countries. He said that IMD would be very happy to share every relevant data on hydro-meteorological and seismic events for the proposed venture for the development of national statistical system in India. He further mentioned that such can be disaggregated/ aggregated at the district level for the benefit of decision makers at various levels. He suggested that the formats in which such data shall be compiled and submitted should be further discussed in technical committees.

10. **Mr. A.K. Kharia**, Central Water Commission mentioned that CWC collects data on discharge of water and silts in all major rivers in the country. Besides, CWC maintains daily reservoir levels of all the dams in India. Regarding the coastal and bank erosion no regular data/ statistics are available as of now except for the studies conducted in a few States as per their requests. Apart from this ISO databank (integrated hydrological database) is also available online. The annual publication of CSO on water and related statistics presents data according to the river basins and therefore further efforts shall be required to disaggregate/ aggregate these data at the district level. Mr. Kharia suggested that CSO, NIDM and CWC should meet once again to finalize the indicators and desired geographical resolution.

11. **Dr. Ashis Ganju** from Snow Avalanches Study Establishment (SASE) has mentioned that, SASE is having data on all avalanches in India and SASE would be very happy to share data at the district level.

12. **Dr. Sudip Mitra**, NIDM requested all the participants to give their feedbacks and suggestions on the data collection methodology, format,

sources, accessibility and any potential problem or issues that must be addressed for a smooth progress of this important initiative.

13. Representatives from various State Governments welcomed the CSO-NIDM initiative and agreed that every necessary support and cooperation shall be provided by the State Governments for the development of a national statistical system on disasters. Directorate of Economics and Statistics (DES) from various States took part in the discussion. The following suggestions and recommendations were made by them for successful development of the system:

- a) Hazard data should be collected by the central agencies while the State Governments would collect the disaster data only.
- b) District would be the basic unit of hazards and disaster statistics.
- c) The data would be collected on financial year basis (April to March)
- d) Ownership of data shall belong to the data collection agencies, which would be acknowledged, while presentation and analysis of data shall be done jointly by CSO and NIDM.
- e) All the natural and man made hazards shall be covered. However if the current level of development of such data for specific hazards is not adequate a realistic view may be taken and these shall be taken up in an incremental manner.
- f) The types of disaster data that should be collected such as loss of lives and injuries, damages of houses, crops, infrastructure etc should be clearly defined.
- g) Each item of loss/ damage that would be captured should be clearly defined to avoid any confusion.
- h) A user need assessment should be done before finalizing the types of data that should be collected and compiled.

- i) Sometimes data collected by various agencies of Government are mutually contradictory and therefore CSO should develop clear guidelines for validation of the data.
- j) Relief/ Disaster Management Departments in the States should be the nodal points for collection of such data from the districts and nodal Departments, while the Directorate of Economics and Statistics shall facilitate the collection of such data and finally compiling them for presentation to the CSO.
- k) Directorate of Economics and Statistics should further examine the data to see that these are not mutually contradictory.
- l) A Coordination Committee should be set up at the State and District levels to decide on various logistic, administrative and other matters pertaining to the collection of such data and for monitoring the progress in this regard.
- m) Uniform formats and clear guidelines for collection of data should be developed to avoid any confusion among the data collection agencies.
- n) Available data sets should be analyzed with the help of charts, diagrams etc for the benefit of the users.

14. **Dr. Pronab Sen, Secretary, Ministry of Statistics and Programme Implementation** attended this Conference after the lunch break. He said that development of a sound national statistical system on hazards and disasters is quite challenging and stupendous and should be taken up in an incremental manner. This should progressively cover all the hazards and disasters in the country and capture all the damages and losses including the intangible which would be difficult to quantify. He advised that the task should not end at merely publishing raw data, but these must be analyzed and presented in a user friendly manner and the broad trend

and patterns and implications for the same for the future should clearly brought out in the report. He welcomed these initiatives of the CSO and NIDM and stated that every necessary support of his Ministry shall be available for this project.

15. **Dr. S.K. Nath, Director General, CSO** in his concluding remarks, stated that based on the deliberations of this workshop two Technical Committees shall be constituted to work out the further details in this regard. The Committees should complete their deliberations within a month and thereafter clear-cut instructions shall be issued to all the agencies of the Central and State Governments for the collection, compilation and validation of the data in a time bound manner.

16. **Mr. P.G. Dhar Chakrabarti, Executive Director, NIDM** suggested that one Technical Committee may focus on hazards statistics and chaired by the ED NIDM with representatives from all the Central Government departments and agencies having nodal responsibilities on specific natural and man made disasters. Additional Director General, CSO would also be a member in this Committee. The other Technical Committee may be chaired by Director General, CSO, and have Executive Director, NIDM besides two Relief Commissioners and three or four Directors, Economics and Statistics in the State Governments and a few subject matter specialists as Members. He also suggested that a Coordination Committee may be set up in each state under the chairmanship of the Relief Commissioner which would have all the nodal departments of the State Governments such as Revenue, Relief, Public Works, Public Health, Power, Environment and Forests, Housing and Urban Development etc. as Members. Director Economics and Statistics may be Convener of this Committee. Detailed guidelines, formats and

protocol for collection, compilation and validation of the data shall be prepared on the basis of the reports of the two Technical Committees and circulated to all the agencies of the Central and the State Governments.

17. Executive Director, NIDM suggested that a road map for the development of the system as under:

- Constitution of the two Technical Committees by 18.05.2007.
- Submission of the report of the Technical Committees by 15.06.2007.
- Development of guidelines, protocol and formats by 01.07.2007.
- Collection, compilation of data by Central and State Government agencies and submission of the same to the CSO by 01.09.2007.
- An analysis of data by NIDM-CSO team by 01.10.2007.
- Publication of the first annual India Hazard and Disaster Report 2007 by 01.11.2007.

The Workshop ended with a Vote of Thanks to all the participants.

(P.G.Dhar Chakrabarti)
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