

## The Socio-Economic Impact Methodology

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### The context

Against a backdrop of severe population pressure, uneven economic development and extreme poverty, Asia suffers more natural disasters and more *from* natural disasters than any other region of the world. The region is particularly vulnerable to hydro-meteorological hazards such as floods, cyclones and droughts, which have increased in both frequency and severity in recent decades. Floods in 1998, for example, caused a loss of more than \$23 billion in Bangladesh, China, Republic of Korea and Vietnam, and floods in 2000 caused an additional loss of \$250 million in Vietnam and Cambodia. Droughts caused a total loss of \$8.8 billion in Asia between 1991 and 2000. Drought losses are expected to considerably increase in future. Iran, for example experienced an estimated damage to the agriculture and livestock sectors alone of up to \$2.5 billion in 2001, while Afghanistan and Pakistan have been affected on a similar scale.

Of greatest concern, hydro-meteorological disasters have the greatest impact on the poorer segments of Asia's populations, while the increasing frequency and severity of these disasters virtually assures that those populations will remain impoverished. The extent of poverty in Asia is critical. An average of 75% of the populations in Bangladesh, India and Nepal live below the poverty line, whilst this figure in the Lao PDR lies at 73% and in Vietnam at 63%. In addition to low income, other factors contribute to the vulnerability of these populations: chronic malnutrition, high morbidity and mortality rates, low literacy rates, and a lack of access to basic services such as water, health, and transport complete the picture.

In response to the threat posed by hydro-meteorological hazards, the approach of disaster management practitioners and agencies in Asia has gradually evolved from one of reliance on structural interventions to reduce hazard levels, to one of *ad hoc* responses to disaster events, to early warning, to the strengthening of preparedness capacities, and to reducing vulnerability through strengthening community resilience. Most recently, leading practitioners and theoreticians have come to advocate the combination of all of these approaches into one of integrated disaster risk management, incorporating a broad range of anticipatory, compensatory and reactive measures into sustainable national economic development policies and programmes. Progress toward achieving this integration, however, has to date been limited, in large measure because the negative impact of disasters on economic and social development have not been readily appreciated.

Assessments of disaster impact have traditionally been restricted to counting the numbers of persons dead or injured and calculating the cost of repairing or replacing damaged or destroyed infrastructure. Such assessments have provided a mono-dimensional picture of disaster impact and have obscured the effect of the disaster on the economic and social well-being of the community and of the nation. The lack of an accepted methodology for carrying out assessments that could determine the impact of disasters on economic activity and on social development has greatly limited the capacity of disaster management practitioners to present a more comprehensive picture. Consequently, the need to effectively address disaster risk in order to achieve national economic development objectives, poverty alleviation and the Millennium Development Goals has gone largely unrecognized.

In addition, although the concept of integrated risk management has not been challenged, national disaster management agencies often have an interest in continuing to focus on increasingly robust disaster preparedness and response efforts to meet the short-term needs of disaster victims. Popular pressure for relief assistance is often intense, and these activities generate more visibility for disaster response agencies than the longer-term and more developmental risk reduction approach.

This situation strongly suggests that disaster risk reduction efforts must focus more on national agencies whose over-riding concerns are long-term economic and social development, and must provide those agencies the information necessary to affect inclusion of disaster risk management in national development programmes. In this context, the identification and introduction of

methodologies to assess the impact of disasters on national/sub-national economic development and, as importantly, their impact on specific social and economic groups, are seen as essential to integrating disaster reduction into the socio-economic development process.

### Going forward

The ESCAP Socio-economic Assessment of Disasters activity will integrate two approaches to address the problem identified: assisting governments to assess and recognize disaster impact in the national planning process, and assisting agencies to adjust on-going data collection activities to include elements that help identify linkages between poverty and disaster vulnerability. To assist national governments assess the economic and social impacts of disasters, to apply those assessments to the development planning process and to monitor progress toward alleviating poverty through reducing disaster vulnerability, ESCAP will engage in four levels of activity:

First, ESCAP will introduce assessment methodologies currently employed in other regions—particularly the methodology developed by the United Nations Economic Commission for Latin America and the Caribbean (UN-ECLAC)—and to adapt those methodologies, as appropriate, for the Asia-Pacific region.

The ECLAC methodology for assessing socio-economic impacts of natural disasters stands out as a particularly successful approach, which has been applied by a number of countries in Latin America and the Caribbean, **as for example in Belize and Dominican Republic in 1998, in Venezuela in 1999 and in El Salvador in 2001.** The methodology follows a series of steps covering (1) the compilation of information on the conditions prevailing before the disaster, (2) the compilation of information on the scope and magnitude of the direct and indirect damage as well as the secondary effects of the disaster by sector, (3) an overview of the full extent of the disasters' socio-economic impact, or in other words an evaluation of the global magnitude of damage, and lastly (4) the identification of the most severely affected economic and social sectors and priorities for rehabilitation and reconstruction.

The introduction and adaptation of this methodology will be accomplished through a workshop organized by ESCAP. Participants at this workshop will include an economist and social scientist from each participating country, and several hydrologists and hydro-meteorologists from the region. The workshop will also include the participation of a number of global and regional experts technically knowledgeable about current assessment methodologies and about the collection and analysis of data obtained through periodically administered instruments, such as the UN Human Development Report household survey, Helen Keller International (HKI) household surveys, WFP food security surveys, etc.

The workshop participants will adapt and agree on a provisional assessment methodology for Asia, and will map out a strategy for application of the methodology to pilot/demonstration areas in selected countries. The pilot areas will be chosen with a view toward demonstrating the strong relationship between disasters and poverty in the region, and will be areas from which information applicable to other areas might be extrapolated. Toward that end, every effort will be made to identify areas and economic groups that typify conditions and groups elsewhere in the country, rather than the most vulnerable or the absolute poorest. In addition, the participants will identify the technical requirements and feasibility of obtaining and analyzing, within current on-going efforts, data relating disaster vulnerability and poverty.

Second, ESCAP will provide technical assistance, as required, to undertake assessments in four pilot/demonstration areas in collaboration with national/sub-national institutions (e.g. government agencies, universities, or research institutes) identified during the workshop. **Possible pilot countries include Vietnam, India, Bangladesh, and Cambodia.** The resultant assessment reports on the socio-economic impact of recent hydro-meteorological disasters in the pilot areas will be produced both in English and in the national language. In addition, BCPR will sponsor a follow-on workshop, bringing together appropriate personnel from agencies that implement periodic surveys, with a view toward finalizing arrangements for inclusion in those surveys questions that will help identify the linkages between disaster vulnerability and poverty.

Third, ESCAP will support—through UNDP Country Offices or other appropriate bodies—a national level workshop in each pilot country at which the findings of the pilot studies will be presented and the implications for national economic development policy will be identified and discussed. This will include (1) the drafting of action plans that guide the absorption of the new methodology into national planning systems, and (2) the identification of required support to ensure the implementation of action plans. Participants at this workshop will include representatives of the national planning agency, as well as representatives from economic and social development agencies (e.g., agriculture, education, social welfare, health, etc.), from relevant support agencies (e.g., hydrometeorology, finance, public works, etc.), and possibly from the national legislature.

Fourth, ESCAP will identify the required steps (1) to disseminate the findings from this preparatory assistance phase beyond the countries participating in the pilot studies, and (2) to promote the replication of the socio-economic impact assessment methodology in other countries.