



Expert Consultation on Sustainable Disaster Databases for South and Southeast Asia

Bangkok, December 11-13, 2012

Meeting report

Disaster Evidence on Asia

The world continues experiencing numerous natural events every year, many of which with disastrous consequences.

South and Southeast Asia¹ are the world's most disaster prone regions: over the last decade, they have experienced more than one third of all worldwide reported disasters and accounted for two third of the global disaster mortality, 90% of the global reported number of total affected people, and half of global economic damages from disasters.

High population density, fast urbanisation and the special role played in the global production chains by a number of fast growing Asian economies, have increased the number of people and assets exposed to natural hazards in Asia. Development patterns and economic growth registered in the past years in Asia risk to be derailed if the impact of disasters is not reduced by including disaster risk reduction in development policies.

While natural hazards are difficult to eliminate, there is scope for increasing the resilience of communities and for reducing their exposure to natural hazards; this would therefore reduce the impact of disasters on populations. Preparedness measures and risk mitigation strategies need to be effective for two main reasons: first, they have the potential to save lives and reduce the economic costs of disasters, and must therefore strive to maximise their performance; second, as limited resources are available in governmental budgets and international humanitarian assistance, intervening where the needs are highest is crucial.

Sound and scientific evidence of need and more importantly of risk is therefore necessary to guide decision-making. Some recent reports by UN and other development agencies pointed out that Asian countries need to do more to advance integrated disaster risk management. This refers not only to physical infrastructures, but also to the financial sector and its capacity to cope with risk and related investments.

Two types of knowledge are particularly needed: on the one hand, we need statistics on occurrence of disasters and their human and economic impact. These include type of disaster, number of casualties, affected population and economic losses. This data allows the monitoring of disasters' impact in a region, frequency of their occurrence, the size and location of the population affected and at risk. Historical data can be used to model disasters' impact and serve as basis for preparedness strategies.

¹ In this report, South and Southeast Asia includes following countries: China P Rep, Hong Kong (China), Japan, Korea Dem P Rep, Korea Rep, Macau, Mongolia, Taiwan (China), Brunei Darussalam, Cambodia, Indonesia, Lao P Dem Rep, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Viet Nam, Afghanistan, Bangladesh, Bhutan, India, Iran Islam Rep, Maldives, Nepal, Pakistan, Sri Lanka.

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On the other hand, the impact of disasters on communities needs to be better understood to unpack vulnerability and strengthen preparedness, disaster mitigation and prevention. Studies on risk factors at community level are required to increase the understanding of the human impact of disaster in the short and long term. Such studies would also capture adaptation strategies of affected populations. Understanding of local factors that enhance or compromise resilience at population level is central for achieving preparedness.

In this context, CRED organised the “Expert consultation on sustainable disaster databases for South and Southeast Asia” and brought together key regional and national actors (academic and technical institutions, policy makers, governmental agencies, private companies, UN and donors). The meeting aimed at scoping out existing data initiatives, as well as discussing which evidence is needed and how better evidence could be provided through increased effort at regional and national level. Specifically, the meeting aimed to: (i) share experiences and limitations of collecting disaster data and providing evidence to policy makers; (ii) identify ways in which data usefulness can be improved; (iii) identify what data is useful for policy and realistic to collect in a sustainable way; (iv) discuss potential engagement in a joint regional initiative.

Data collection initiatives

Numerous data collection initiatives are already existing and functioning at the global level. EM-DAT contains systematically collected and validated data from 184 countries from 1900 to present. Based on many years of experience, its sound scientific structure and methodology make the data comparable across time and across space, allowing for global comparisons at a national resolution level. The two other well-known global disaster databases are MunichRe’s NatCatSERVICE and SwissRe’s *sigma* catastrophe database.

After 20 years of activity, EM-DAT has achieved a level of data quality that is quite good and satisfactory at the global level. In fact, definitions, indicators and data collection procedures have been defined, tested and now run in routinely. Coverage and completeness of record could however still be improved.

The next step to improve disaster data has to occur at regional and national levels where a greater proportion of disaster data, disaggregated at a sub-national level, could be captured, contributing to the completeness and precision of EM-DAT data.

Several valuable country-level disaster impact data compilation initiatives exist in the South and Southeast Asia regions, based on the DesInventar² model as well as models developed by national governments. In addition, field agencies collect an important amount of data in order to monitor their activities, which are not systematically compiled and used for the development of preparedness strategies.

² <http://www.desinventar.net/index.html>



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Challenges

Major barriers to the utilisation of existing data remain.

First, comparability and interoperability of data are limited: while a certain degree of standardisation has been achieved at the global level, no agreement on definition, indicators and methodologies is found at regional and national level. Therefore, data collected at different resolutions is not compatible among databases.

Second, data collection initiatives have often been project-based and not embedded in a sustainable and user-oriented institutional structure, therefore lacking a long-term perspective.

Third, the pressure to include a large variety of indicators spanning all sectors and including direct and indirect effects is strong. This brings the risk of many indicators remaining unreported, leading to a database with scattered data and fields that remain mostly unfilled.

As consequence, it remains difficult, if not impossible, to combine data from different sources and generate additional value from combined analysis.

A further challenge is the lack of a comprehensive data policy among involved organisations. While this could be desirable, the lack of a designated agency and the involvement of actors with different mandate and nature (e. g. public bodies – universities, governments, UN - and large corporate and smaller private sectors - including risk analysis and simulation industry) make it an improbable achievement in the short run (if at all), which goes beyond the scope of this consultation. However, it has been recognised that decision-making requires access to and interoperability of results, more than access to and interoperability of data itself. This could be an important recognition that would not impede improvement of much needed disaster risk reduction strategies.

The way forward

The meeting laid the groundwork for enhancing disaster data collection and use at national and regional levels, and identified ways to move forward:

- This scoping workshop roughly defined the need for a concrete initiative on improving disaster evidence and data in South and Southeast Asia. For ease of reference and for the purpose of this document, we suggest to call this initiative NEMDAT. This clearly reflects a lack of imagination from CRED's part. Alternative suggestions for names are very welcome.
- There is a need for guidelines and protocols for disaster data to be compiled at national and regional levels to ensure compatibility and standardisation with global initiatives.
- The participants agreed that the South and Southeast Asian region, with its strong regional networks, institutions and national government ownership is best placed to take up this effort.
- National and regional technical institutions already exist and have the required skills to contribute to NEMDAT. As credibility and objectivity of data is a priority,

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- independent academic institutions should play a critical role. In addition, the involvement of universities would ensure intellectual sustainability and scientific rigour in data collection and analysis. Nonetheless, complimentary funding to allow the functionality of such a service would have to be secured.
- Regional university networks can have multiplier effects and facilitate reaching out.
 - With the overall goal of improving quality and use of disaster data, a stronger involvement of national governments is required. Not only they have greater access to national and sub-national data and a better understanding of local context and needs, it is also their role in providing for their population and securing support to academic institutions.
 - There is need for better understanding the impact that disasters have on communities. This is crucial for designing risk reduction policies and enhancing preparedness actions. Research and analysis is needed to identify causal links and comprehend human adaptation to disasters.
 - A concerted effort like this requires the involvement of numerous actors.
 - Institutions who have expressed an active interest to participate in NEMDAT are the following:
 - o The EC Joint Research Centre has a prestigious track record in this area and are prepared to contribute to the development of guidelines and provide concrete support in Information Technology application.
 - o The Asian Development Bank (Director General of Independent Evaluation of the Asian Development Bank) expressed strong support for CRED and the regional consortium initiative. They specifically indicated their involvement in natural disaster operation support, where data availability and quality continue to be a key element.
 - o The Nanyang Technology University (Singapore) expressed their firm engagement especially at the regional level in such a data project. Their technical competences as exposed in the workshop, will clearly add value to NEMDAT.
 - o Other interested parties include the Asian University Network of Environment and Disaster Risk Management as well as the University of Engineering and Technology, Dhaka.
 - The role of private companies, who took a constructive and active part in this discussion, will have to be clarified within this initiative.
 - National government bodies (Vietnam, Indonesia, Philippines, Cambodia, Bangladesh) were enthusiastic to work closely with technical institutions and within a regional framework. They expressed a strong felt need for technical and methodological support.

Support for this initiative will be explored amongst international donors, regional organisation and national governments. The potential supporters for this initiative who were present at this workshop were positive and interested in supporting a concrete project that fills a needed gap on disaster data.



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Next steps

- 1) Establishment of the NEMDAT Drafting Group (by April 2013)
- 2) Preparation of a first project design and proposal (by early summer 2013)
- 3) Establishment of a project steering committee (by April 2013)
- 4) Organisation of the next NEMDAT meeting to discuss the project document. Opportunities are as follow: Global platform for Disaster Risk Reduction (Geneva, May 2013), UN ECOSOC Substantive session (Geneva, July 2013), ADB annual meeting (May 2013), or the EMDAT TAG meeting which will be organised in collaboration with OFDA in Washington DC in the first half of this year. This will focus on the use of disaster data and mapping options (by early summer 2013)
- 5) Establishment of specific connections to key ongoing initiatives such as the Post-MDG Agenda.

All partners who would like to participate in this process should indicate their interest, and also the preference for the timing of the next meeting.

This is a collaborative effort and will be reinforced by the engagement of our group.

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