

Presentation to Hazard Definition Launch

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Thank you, Virginia, and thank you Mami and Heide for the opportunity to participate in the Technical Working Group and to make some comments on behalf of the hazards community whose efforts and commitments to disaster risk reduction are the basis for this report.

I would like to make a few comments on the report on three points:

1. Bringing the hazard science community together in the context of global goals;
2. Linking institutions and networks within an international framework; and
3. Improving risk assessment methods and their application to decision making;

A significant achievement of this project was to bring the hazard science community together in the context of assessing and understanding risk to inform the global agendas for sustainability, risk reduction and adaptation. In order to do so, it was necessary to broaden the definition of hazards to *"a process, phenomenon or human activity"*, and to integrate traditional geological and hydro-meteorological hazards with technological, health, social disruption and environmental degradation.

The resulting definitions provide part of the common language for understanding risk to society, and provide the basis for developing the information, methodologies and tools for assessing and understanding risk. As a consequence, it becomes possible to compare hazards from one environment to another, or from one loss database to another.

Interestingly, we find that some hazards can be considered hazards to one community, while at the same time they are vulnerabilities or impacts to another. For instance, building collapse is normally considered to be an impact or consequence to an earthquake engineer, but it may be a hazard to an urban risk manager.

So, while it is important to have common and agreed definitions, we also have to recognize the need for flexibility in how they are used.

Secondly, the hazard definition process demonstrated the importance of linking institutions and networks within an international framework. This institutional framework is necessary to maintain and support the monitoring, analysis, maintenance and dissemination of information.

Institutional ownership of hazards and their definitions is the first step toward developing coordinated, open and accessible databases, and developing consistent guidelines, methodologies and interoperability standards for hazard and risk information.



It is evident that many hazards do not have stewardship in the UN or inter-governmental system. While Meteorology, health and agricultural hazards have ownership through formal organizations, Geohazards (including earthquakes, volcanoes and tsunamis) do not. Nonetheless, foundations like GEM (Global Earthquake Model) and networks like the Global Volcano Network have been developed to provide global leadership in terms of methodologies and tools, and also collaborate with and train local scientists and engineers to improve hazard and risk assessment best practice.

This institutional framework for collaboration across hazards and from global to local is fundamental to Priority 1 of the Sendai Framework, to understand risk.

Thirdly, this hazards definition process is essential to improving risk assessment methods and their application to decision making.

It is important in moving from risk assessments to risk solutions, from reporting on the impact of disasters to reporting on the benefits of risk reduction.

Moving from managing disasters to managing risks actually requires moving from hazard-centric approaches to better understand systemic drivers of risk, such as in relation to climate change.

One of the key recommendations of the report is expand the framework to include exposure, vulnerability, and capacity, which together with hazard, are the fundamental ingredients of risk. A Global Risk Assessment Framework working group is now being established to address this issue. This work will in turn form part of the foundation for the final recommendation, which is to develop an understanding of risk in terms of cascading and complex hazards and risks as a system.

As we saw in Indonesia in 2004 and in Japan in 2011, a major earthquake can have cascading hazards and impacts with global consequences. And if we have a major earthquake or during the current pandemic, the consequences could be n more catastrophic. So, let's continue to bring it all together to turn our understanding of hazards and risk into solutions to reduce risk.