

ICG/IOTWS Working Group 3 (WG3) Risk Assessment Working Group

REPORT OF SESSIONAL MEETING ICG-II (DECEMBER 2005)

Chair: Dr Sam Hettiarachchi, Sri Lanka

1. Objectives

At ICG-II, it was decided to establish a separate working group dealing with Risk Assessment, while the newly-formed Working Group 4 dealt with numerical modelling, forecasting and scenario development.

The development of a tsunami early warning system for the Indian Ocean needs to be put into a risk management framework that can be applied at global, regional, national and local levels. The goal is to reduce vulnerability and strengthen coping capacities of communities with regard to tsunami risk as outlined below:

- Develop guidelines for tsunami risk assessment as part of a multihazard risk management framework.
- Provide guidance to emergency response managers on the preparation of risk assessment products.
- Facilitate the application and use of model outputs for tsunami hazard and risk assessment.
- Facilitate data sharing, including access to and development of databases, incorporating exposure, tsunami hazard and vulnerability.
- Facilitate capacity building, including knowledge transfer, in the form of workshops, training programs and case studies for risk assessment in all Indian Ocean countries.
- Facilitate and promote the process of developing cost-effective and practical mitigation options and measures.
- Liaise with other modelling committees (including other ICG/IOTWS working groups) and organisations or professional groups that are developing models and data for their implementation.

2. Discussion of Issues

The expected outcome for the suite of activities described for this working group is to facilitate the development and use of the following products by member nations:

- Hazard Maps showing areas of high potential for tsunami inundation.
- Inundation Maps (inundation and run-up) for maximum credible tsunami scenarios for areas of high vulnerability or risk.
- Risk Maps capturing the potential aggregated impact of all tsunami sources on the built environment, population and local and regional economy.
- Evacuation Maps, which include safe areas and shelters, how to get there, and where to go, based on scientific products.
- Decision support for appropriate mitigation options.

3. Agreed Actions and Deadlines

ACTION	PERSON RESPONSIBLE	DEADLINE
<p>Risk Assessment Case Studies Four case studies (Indonesia, Sri Lanka, Kenya, and a sub regional case study in the Oman Sea area) identified for analysis and comparison to inform the development of a methodology and guidelines. They will form benchmarks and best practice, and be used as part of the toolsets for knowledge transfer activities such as workshops and training courses. They will also provide insights into the strategic approaches adopted by different nations for risk assessments. Additional case study contributions are welcomed from other member nations.</p> <p>The working group has committed to identify key datasets to be provided for adoption for this exercise and agree an initial methodology in order to enable comparison and analysis of the identified case studies.</p>	Dr Sam Hettiarachchi	June 2006
<p>Risk Assessment Methodology and Guidelines A common and best practice methodology and guidelines will be developed for use by member nations. Committee will liaise with similar working groups in other IOC tsunami Working Groups to streamline and standardize methods and guides, and share knowledge and information. The working group recognizes that methods and guides will reflect regional diversity. It is expected that documentation of methodologies and guidelines would be available via the internet</p>	Dr Sam Hettiarachchi	December 2006
<p>Mitigation Options and Decision Support Case Studies Case studies developed by June 2006 will be enhanced through the application of mitigation options to demonstrate decision mechanisms for stakeholders including emergency response managers, land use planners, and national and local governments. These options include:</p> <ul style="list-style-type: none"> – <u>Environmental Barriers</u> (e.g., mangroves, sand dunes), – <u>Artificial Countermeasures</u> (e.g., tsunami breakwaters, sea walls), – <u>Land Cover and Land Use</u> (e.g., building setbacks, tsunami-specific zonation), – <u>Tsunami Resistant Infrastructure</u> (eg: building codes and certification), – <u>Evacuation Plans</u> (e.g., vertical evacuation, tsunami-safe zones, time is a factor). – <u>Harness indigenous knowledge</u> for reducing vulnerability (eg: animal behaviour, folklore/songs) 	Dr Sam Hettiarachchi	December 2006
<p>Mitigation options and decision support methodology A common and best practice methodology and guidelines will be developed for use by member nations. The working group will liaise with similar working groups in other IOC Tsunami Working Groups to streamline and standardize methods and guides, and share knowledge and information. The working group recognizes that methods and guides will reflect regional diversity. It is expected that documentation of methodologies and guidelines would be available via the internet.</p>	Dr Sam Hettiarachchi	June 2007

<p>Workshop and training exercises To facilitate knowledge transfer and information sharing a series of workshops and materials to supplement the case studies will be developed.</p>	Dr Sam Hettiarachchi	July 06-June 08
<p>Future Activities It is expected that other activities will be identified through the life of the working group, including information management, data collection standards, and GIS and database development to facilitate access to information for modelling and risk assessment purposes.</p>	Dr Sam Hettiarachchi	TBD

4. Working Group Participant List

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