



KOBE REPORT draft
Report of Session 2.1, Thematic Cluster 2

**Integrated Flood Risk Management through Appropriate Knowledge
Sharing and Capacity Building Systems**

1. Summary of the session's presentations and discussions

With a background that the risk of flood is increasing and to promote disaster-resistant communities, the importance of,

- Raising awareness of hazards before disaster strikes, and enhancing the early-warning system to ensure it works effectively in case of disaster,
- Building capacity through the technical, legal and institutional means in order to make communities more disaster resilient,
- Promotion of international cooperation to enhance or create networks among the meteorological, hydrological, disaster prevention and other related communities was discussed.

The co-chairs, Mr Bruce Stewart and Mr. Akira Terakawa briefly mentioned a background of the current global situation concerning water related disasters and explained the objectives of this session.

Topics on knowledge sharing as well as capacity building were discussed based on relevant presentations made by speakers.

In terms of knowledge sharing, three topics, meteorological and hydrological data management, an early warning mechanism for sediment-related disasters in mountain regions and interagency activities for river basin management were presented.

- 1) A presentation on meteorological as well as hydrological data management was given by Mr. Atu Kaloumaira of SOPAC. He introduced the unique characteristics in the Pacific region, and stressed the importance of adopting integrated coastal flood management.
- 2) "Integrated Sediment-related Disaster Management Project for Volcanic Areas" in Indonesia, which has been supported by JICA, was presented by Mr. Bobby Probowo from Indonesia. He emphasized the importance of building early warning mechanism at community level for flash-flood and sediment-related disasters in this tectonic and volcanic country.
- 3) Lessons learned from interagency activities in the Red River basin in Canada and the US were introduced by Prof. Dr. Slobodan Simonovic from Canada. He provided a case example where an integrated approach to flood management has been exercised on an international cooperation basis.

With regards to capacity building, three topics, legal frameworks on flood management, flood hazard maps and community-based flood management activities were presented.

- 1) "Desirable legal framework to support integrated approach to flood management" was presented by Mr. Joachim Saalmüller of WMO. He stressed the important role of the legal setting in carrying out integrated flood management, and introduced some key considerations which need to be included in legal systems.
- 2) Topics concerning a project on flood forecasting and flood hazard mapping supported by JICA were introduced by Mr. Andreas Haiduk from Jamaica. He introduced Jamaica's experience in extending community-based early warning system, and training of local people.

- 3) A presentation on “Typhoon Committee’s activities on flood hazard mapping” was given by Dr. Il-pyo Hong from Korea. Lessons obtained through participatory flood hazard mapping exercises were introduced as a good example of international cooperation.
- 4) A case study of community based flood management mechanism supported by the Associate Program on Flood Management by WMO and GWP was introduced by Dr. Q. K. Ahmad from Bangladesh. He introduced successful experience in formulating a Community Flood Management Committee, which acted as a central function in achieving community-based flood management.

After the discussion and based on these presentations, the following key issues were confirmed as being required for reducing water related disasters.

- *Flood Management*
 - A river basin should be the basic unit of planning flood management strategies based on Risk Management principles and should be carried out within the overall context of integrated water resources management.
 - Flood Management being inter-disciplinary, interactive dialogue among various stakeholders should be facilitated, including the scientific community (such as meteorology and hydrology), engineering community, sociological community (such as disaster prevention), environmental community and development community).
 - To enable all sections of stakeholders, including the less able sections, to participate in the process effectively, legal and institutional framework should be established and streamlined.
- *Monitoring and awareness building*
 - Monitoring of floods over long periods of time and sharing this knowledge with all stakeholders to support planning, design and execution of policies and options for flood management is essential.
 - Raising awareness of the extent and magnitude of the hazard through, for example, flood hazard maps, vulnerability assessment before undertaking development activities in flood prone areas as well as enhancing early-warning systems to ensure that they work effectively in case of extreme events is fundamental for the successful flood responses.
 - Issuing of timely warnings with clear messages, including accurate flood and debris flow forecasts, is essential.
- *Training for capacity building*
 - It is necessary to build resilience in the society to withstand the hazard with minimal disruption to the economic activities and by minimizing the economic losses and loss of human life.
 - Strengthening community participation in preparedness and disaster response right from the planning stage is crucial for its success.
 - Evacuation drills should be carried out repeatedly including the testing of communicating forecasts and warnings, and guiding evacuees to shelters.
 - Community leaders at all levels who may lead the emergency activities should be included in capacity-building activities.
- *Promotion of international, regional, interagency and multidisciplinary cooperation*
 - It is important to share the experiences around the world through technology transfer.
 - Cooperative programs or initiatives among organizations working on water-related disasters such as the IFI (International Flood Initiative) should be encouraged.

The session supported the proposal made by Mr. Ryutaro Hashimoto and Secretary General of WMO to set a new MDG goal as follows – to halve the number of human loss of life as a result of water related disasters by 2015. The session suggested that this should be expressed in terms of the average number of human life losses over specified periods to set measurable goals.

The following concrete actions (undertaken in an integrated manner with other initiatives) should be implemented to support the activities mentioned above.

- Countries should be supported at the international level through Interdisciplinary approaches to Integrated Flood Risk Management through programs such as the Associated Programme on Flood Management (APFM).
- Knowledge sharing should be promoted through network systems for information exchange supported by organizations such as, *inter alia*, the IFNet (International Flood Network) or the Portfolio of Disaster Reduction Actions, a monitoring mechanism, being newly proposed by Japan.
- Methods and technology for compiling hazard maps, providing flood forecasts, issuing warnings, communicating information and building structural measures should be continuously transferred from developed countries and international organizations to developing countries through an international research center such as, *inter alia*, the International Centre on Water Hazard and Risk Management under the auspices of UNESCO (CHARM).

Training programs for capacity-building to realize the above should be effectively carried out through an international cooperation framework involving groups such as IHE Delft, CHARM and WMO.