



**KOBE REPORT (draft)**

**THEMATIC PANEL 2**

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**“RISK IDENTIFICATION, ASSESSMENT, MONITORING  
AND EARLY WARNING”**

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## **1. Summary of Discussions**

Risk is dynamic. It changes over time and the factors generating risk exposure stem from multiple hazards all of which are embedded in, and continuously evolving with, processes of social, economic, institutional and environmental change. As a result, efforts to reduce risk require multi-hazard approaches that respond in an on-going manner to the dynamic nature of risk and the array of local, regional and global factors from which it springs. This common lesson underpinned presentations and comments by all panel members. As Erich Plate commented: “we’ve come to realize that risk management is a never ending process.” In a similar vein, Dr. Carby emphasized that we need to change from thinking of risk and vulnerability as static and need to understand the movement of this over time. From this common starting point, presentations by panel members highlighted a wide variety of specific lessons and insights from practical experience dealing with disasters and risk in their respective regions. These are summarized below in the order the presentations were made.

### **Barbara Carby**

Dr. Barbara Carby emphasized the critical and often under appreciated role of policy as a guiding framework for operations and to ensure the continuity of approaches. She also highlighted:

1. the critical need for integration across disciplines, sectors and national boundaries (particularly with respect to preparedness and warning);
2. the need for global standards for warning and preparedness that are not determined by economic considerations alone.
3. the importance of local mobilization in responding to disasters coupled with critical challenges in maintaining such capacity when disasters are infrequent; and
4. the critical role data collection by communities can play in monitoring risk and vulnerability along with the challenges of integrating such data into national data management systems.

### **Kenzo Hiroki**

Mr. Hiroki focused on the critical role early warning can play in reducing lives lost particularly in the case of water related disasters. He demonstrated the manner in which improved forecasting systems combined with increased access to TV as a critical mode of information dissemination reduced deaths and to a lesser extent economic losses in Japan. Critically, he showed that low-tech community-based approaches to information collection and dissemination can be effective as part of an early warning system. Whether or not the source of information is low or high tech, his presentation demonstrated that increases in early warning need to be coupled the development of critical local information (such as flood hazard and evacuation maps), evacuation infrastructure and community level education in order to be effective. He concluded by calling for a global effort to reduce deaths from water related disasters by 50% over the next ten

### **Laban Ogallo**

In his presentation, Mr. Ogallo emphasized the commonality of many issues between slow moving disasters such as drought and rapid onset disasters such as flood. In Africa the two are closely interrelated – flood follows drought and drought follows flood. As a result, response approaches to one can not be isolated from responses to the other. Beyond this, Mr Oballo focused on core data and information issues. Baseline data are often missing or incomplete. More importantly, while climatic data are frequently available, the socioeconomic data required to understand vulnerability and to evaluate risk are generally absent and, even where present, difficult to integrate with available climatic information. Capacity is lacking at all levels and a huge gap exists between the availability of information and the ability to evaluate and use such information effectively. This is particularly important at the community level but also applies at the national level where policies enabling integration of information into development activities are generally lacking. Capacity building is, as a result, particularly critical. He emphasized the need

to enable climate information to reach communities and for communities to collect and use socioeconomic data in conjunction with that.

### **Erich Plate**

Mr. Plate's presentation provided a systematic framework for understanding risk that echoed many themes in the earlier presentations. Risk management is a never ending cycle that moves from an initial disaster event through coping with the effects of that event to demand for risk reduction to planning, implementation and operation of mitigation measures and ultimately back to the starting point when a new event occurs. Effective management and response requires recognition of this cycle. Information to enable mobility and reduction of vulnerability is important. We can influence the number of elements at risk and we can influence the risk exposure facing each element. Doing this requires recognition of the players within response, planning, implementation and operational phases of the cycle and the different requirements, models, tools and methods these players bring to their work. In many cases the natural science information required to support their activities is available but the social science is weak. The development of interdisciplinary approaches that enable different communities (engineers, planners, NGOs, etc...) to work together and that link top down and bottom up information sources are as a result an essential next step.

### **Loy Rego**

Mr. Rego's call was for Actionable Early Warning...i.e. warning systems that enable people to take action. Actionable early warning is the first link in a chain to protect lives, livelihoods and assets. This needs to be linked with preparedness – resilient livelihood and response systems – that incorporate factors such as flood adapted housing structures, evacuation routes and protection for drinking water sources. Critical warning issues for the warning systems themselves include:

- Whom to inform (administrative)
- When to inform (frequency, lead times, level of warning)
- What to inform (what action needs to be taken, based on the level and extent of likely impact)

Warnings must be understandable, hazard and location specific, culturally and socially sensitive and able to reach segmented audiences. They must also enable people to act, reflect inherent uncertainty and avoid "warning fatigue." His presentation emphasized the widespread prevalence of specific examples of good practice in locations such as Cambodia, Bangladesh, the Philippines, Sri Lanka and China and the need to learn from these experiences and traditional knowledge. Such experiences illustrate what can be done and the factors contributing to good practice while avoiding one size fits all notions of 'best practice.'

## **2. Group Discussion**

Questions and responses on the presentations emphasized the dynamic nature of risk and the critical challenges facing the development of approaches to improve understanding with policy and response. Issues related to the quantification of vulnerability and adaptive capacity were raised that related directly to the core issues of socio-economic data availability and interpretation raised by individual presenters. In addition, the dynamic nature of response opportunities was emphasize by Barbra Carby in response to a question on the ability of poor communities to share risk. As she stated: "Very often it comes down to using the window of opportunity after an event ...magically the resources will become available. When you have the opportunity, use it!!! Dynamic responses to changes were also reflected in statements from the audience reflecting the importance of approaches that respond to multiple hazards and reflect systemic and policy issues at local, national and international levels.

### 3. Primary Issues

1. Responding to the dynamic multi-hazard nature of risk. To be effective approaches to addressing risk must reflect the evolving nature of risk factors, the fact that many of these risk factors operate at different scales and the multiple sources from which risk springs. As a result, effective risk management requires interdisciplinary approaches that are ongoing in nature and reflect the diverse (local to global) scales at which interventions or responses are required. Approaches also need to be able to respond to the dynamic nature of disaster events and the windows of opportunity such events can create for longer-term risk reduction.
2. Knowledge: Effective approaches for understanding and integrating socioeconomic information with available information on the physical dimensions of hazards are essential. Vulnerability and adaptive capacity can not be monitored or evaluated until such approaches have been developed.
3. Policy: The role of policy frameworks in guiding efforts to reduce risk exposure and to link local, national and international approaches to risk reduction needs to receive increased attention. Risk reduction can not be achieved in the absence of effective policy frameworks for linking the local, national and international dimensions of risk management particularly in relation to early warning and preparedness;
4. Education and Capacity Building: Education and capacity building are central to effective risk management. In many cases information and understanding is available within local societies and traditional systems. Such sources of knowledge need to be linked with the insights generated at higher levels to develop effective warning systems and catalyze response.
5. Transport, Communications and other Infrastructure: As the interlinked effects of improved forecasting and TV penetration in Japan illustrate, the development of effective early warning systems depends on other multi-function systems within society. Improved understanding of the links between risk reduction and core communications, transport and other physical and institutional infrastructure is important.

### 4. Suggested Indicators to Measure Accomplishments

Proposed goals mentioned by the presenters include:

1. The development of actionable early warning and workable preparedness plans prepared for each at risk community by 2008;
2. The establishment of policies to enable effective cooperation for data sharing and preparedness at national and international levels;
3. A 50% reduction in deaths from water related hazards by 2015.

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