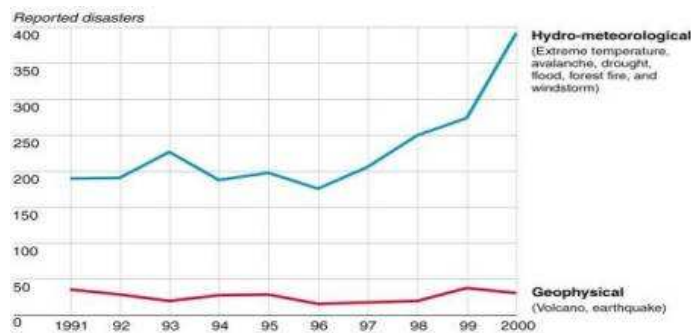


A Climate Risk Management Approach to Adaptation to Climate Change and Disaster Reduction

Kamal Kishore
Regional Disaster Reduction Advisor
UNDP



Increasing disaster losses due to temperature rises and climate change ?!



Note: Includes all natural disasters declared by national authorities in OECD and non-OECD countries, regardless of their severity.

Source: Center for Research on the Epidemiology of Disasters.

Di Design Center/MPO 379322A/ 9-04



What is disaster risk?

Hazard * Vulnerability = Disaster Risk

It's not that simple!



Progression of approaches

- ⊕ Better Disaster Response Preparedness
(stockpiling of relief goods, warehouses, contingency planning)
- ⊕ Applications of engineering solutions (dams and embankments)
- ⊕ Vulnerability as the central theme (VCA methodologies, social science approaches)
- ⊕ Total/ integrated/ comprehensive/ Risk Management



Risk Management

Risk Management guides decision making through a logical and systematic process of considering all possible future outcomes at all time scales taking into account all the risks to all the stakeholders, as well as all the costs and all the benefits



What have we learned?

- ✦ Risk is socially constructed in contexts where hazards interact with exposed and vulnerable communities or societies
- ✦ Resources and hazards are part of the same equation and continuum
- ✦ Between “natural” and anthropogenic hazards there is a third category of hazards created at the interface of human activity and natural or modified ecosystems – socio-natural hazards
- ✦ Discussion on disaster risk has to be within the context of development debate



However,...

- ❖ Despite the awareness raised by UN-IDNDR, disaster risks have continued to accumulate
- ❖ Most national and international efforts remain fundamentally preparedness and response focused
- ❖ Isolated successful experiences at “piloting” risk management approaches have built a substantial body of knowledge



Climate Change, Complexity and Uncertainty

- Processes of climate change are adding new and more intractable dimensions to the problem of risk
- In a sense “everybody lives downstream” – territorial complexity, concatenation of causal factors, scale
- It is accepted that climate change will alter the severity, frequency and complexity of climate related hazards
- However, there is great uncertainty about the local level manifestations (even “natural” variability impacts are varied from event to event)



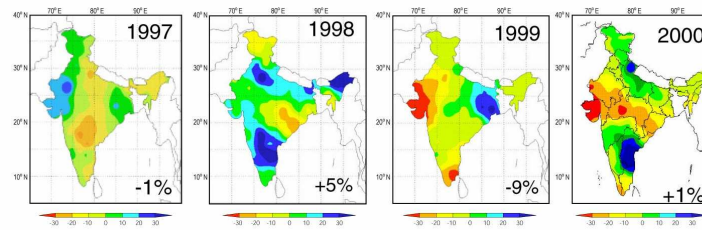
Four near normal monsoon years over India

Climate Forecasting Applications in Bangladesh

CFAB



UN
DP



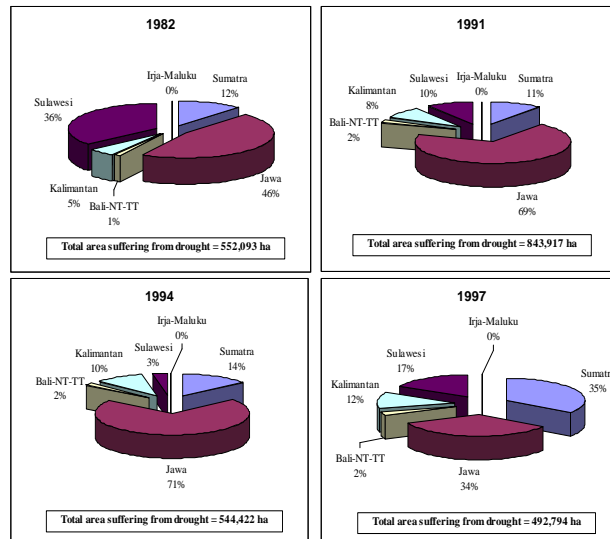
The mean summer rainfall over India plotted as % of the long term average relative to the colour code. Each year falls within the definition of a normal precipitation season falling within $\pm 10\%$ of normal. However, coherent variations exist from year-to-year. Bangladesh not included in analysis.



Drought Occurrence in Indonesia in El Nino years



UN
DP





Integrated Climate Risk Management

- Adaptation to climate change **can not be based solely on scenarios** of what **might happen** in 15-20 years
- Risk management for a wide range of elements at risk, ranging **from communities to ecosystems**, at **short and long** time scales and **across spatial scales**.
- Learn to manage your “now” to be prepared for “future”



Integrated Climate Risk Management

- Climate related risk is one of the central development issues of our time
- Parallel institutional and programming mechanisms for addressing what is a holistic development issue is counterproductive



Integrated Climate Risk Management



- The current development situation and needs in a particular location is the most appropriate starting point
- Adaptation has to be often extension of on-going efforts to reduce climate related disaster risks.
- While past climate is not a good guide as to the future climate, past experiences and lessons learned are
- Adaptive learning comes from doing. It is highly unlikely that adaptation will come from a priori planning.
- Adaptation will require continual adjustment of risk management practices



Integrated Climate Risk Management



Requires the search for coherence and coordination across

- Geographical scales: community, local, regional, national and global.
- Time scales: seasonal, inter-annual, decadal and centennial.
- Climate affected sectors-- water resources, health, agriculture, food security, ecosystems etc.
- Development concerns—poverty reduction, CZM, rural development, urbanisation, economic growth etc.
- Stakeholder groups—scientists, experts, politicians and nation states, non-governmental organisations, regional and international organisations, financial institutions and civil society in general