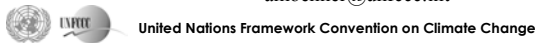


**UNFCCC workshop on climate related risks and extreme events under the NWP on impacts, vulnerability and adaptation to climate change**

- Background paper prepared by Dr. Anju Sharma
- Structure and objectives of the workshop

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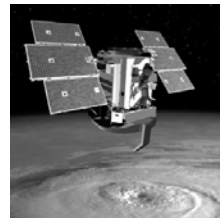
**Background paper on:  
Assessing, predicting and managing current and future climate variability and extreme events, and implications for sustainable development**

Strong synergies exist between efforts of climate, disaster risk reduction, and sectoral communities in building resilience to current and future climate-related hazards



Methods, tools and approaches can be shared and 'borrowed' among the three communities – for instance: agriculture models, tools for stakeholder participation and early warning systems

Two main groups of issues relating to the prediction of climate variability and extreme events



- ✘ Predicting major events on the global scale, including critical thresholds and abrupt events
- ✘ Availability and applicability of existing forecasting for decision-making timeframes at national and local scales



**Assessments** have advanced from being primarily science-driven, towards being policy-driven and interdisciplinary, taking into account the many interactions of climate change with other stresses on the environment and human populations

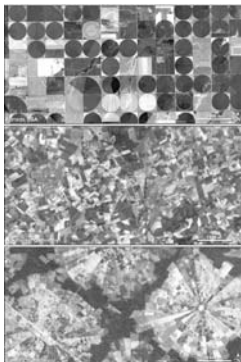
Emphasis on community-based assessments aimed at building resilience and adaptive capacity, and taking into account local and traditional knowledge and preferences

The submissions made by Parties recognise that management of climate change related risks is at a preliminary stage, both in developed and developing countries



Further work is needed in close cooperation with DRR and sectoral communities to strengthen management responses such as early warning systems and financial risk management tools

**Agriculture** identified as very vulnerable extreme events



Areas for further work to build resilience and adaptive capacity include:

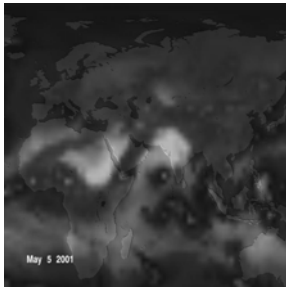
- ✘ seasonal forecasting
- ✘ early warning
- ✘ adapting agricultural practices and technologies
- ✘ review of national and global market factors
- ✘ other livelihood options
- ✘ risk sharing tools
- ✘ integrating traditional knowledge and practices
- ✘ improved water management



The largest uncertainties in **coastal zones** involve the interaction between the natural and human sub-system (IPCC AR4)

- Future areas of work include:
- ✘ improvement in predictive capacity for future global coastal change. Processes and agents that drive coastal change need to be isolated and quantified
  - ✘ coordinated and integrated mechanism for coastal observations, as well as early warning systems for coastal hazards
  - ✘ stronger emphasis on interdisciplinary research and better links and channels of communication between researchers, stakeholders and decision-makers at all levels
  - ✘ risk-sharing mechanisms such as insurance

Cooperation between several sectors (such as meteorological, health, agriculture, education and urban planning) is a key factor in dealing with **climate-related health risks**



**Areas for future work**

- ✘ a better understanding of meteorological and climatologically conditions that favour the development of infectious diseases and epidemics.
- ✘ gaps in information on health issues in low and middle income countries
- ✘ improved early warning and response systems

Key gaps, needs and priorities listed by Parties and organisations in their submissions have been summarised in

**Annex 1**

These relate mainly to gaps in data, further tools needed to improve predictions and assessments, and research priorities



**Annex 2** lists **examples of tools** from the climate and other sectors which could be useful to assess and manage climate risks



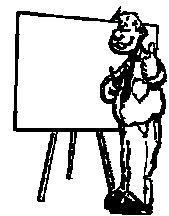
These include existing processes identified by the DRR community as having a direct bearing on efforts to strengthen resilience to natural disasters

For example: Environment, Health and Social Impact Assessments, and Poverty Reduction Strategy Papers

**Structure and objectives of the workshop**

**Framing the discussions**

- Submissions from Parties and organizations
- Background paper
- Breakout groups focusing on sector-specific climate-related risks to formulate outcomes on:
  - assessment and prediction
  - management
  - traditional knowledge
- Plenary discussions on implications for sustainable development



### **Desired outcomes of the workshop**

- **Exchange of experiences, gaps and needs as well as good practices**
- **Sources of outcomes:**
  - Submissions from Parties and organizations
  - Discussions in breakout groups
  - Survey among participants on last day
- **Actionable recommendations for**
  - Specific actions by relevant organizations engaged in the NWP
  - Good practices and experiences that should be disseminated and/or replicated