LDC Workshop on National Adaptation Programmes of Action

Fact Sheet

Key Adaptation Options – Early Warning Systems and Climate Risk Management

Overview

Climate change is already having a negative impact, a reality that requires governments to invest more in developing adaptation measures to respond to the natural and economic risks associated with climate change, according to the World Meteorological Organization (WMO).

Vulnerability to climate change is determined by the complex interplay of natural and human processes. The extent to which climate impacts will be felt in a given place are often determined by land use patterns, demographic pressures and movements, governance systems, access to markets and the availability of alternative coping mechanisms, and poverty levels, to name just a few. Reducing vulnerability often means addressing these root causes as a matter of priority so as to support local resilience.

Climate monitoring is of pivotal importance in order to devise proper responses to these challenges. Weak meteorological systems in most developing countries hamper the development of realistic home-grown adaptation strategies. Yet adequate and timely meteorological data could provide the basis for the development of resilient sectoral policies and strategies, in sectors such as agriculture and water, health and tourism. Similarly, it has been found that functioning early warning systems and disaster preparedness protocols served greatly in reducing losses from extreme climate events.

Early Warning Systems

Better precipitation forecasts, hazard maps and early warning systems are crucial to reduce impacts and assist decision-makers in their respective sectors like food security, water management, health care and tourism. The objective of early warning systems is to get the right information to the right people at the right time, so that appropriate decisions can be made and damages can be averted.

In order to be truly effective in reducing risk and vulnerability, early warning systems must be multifaceted in the way they analyze data as well as in the responses they include.

Key elements of functioning early warning systems include:

- Adequate climate data collection infrastructure
- Agreed methodologies and indicators
- Functioning communications infrastructure
- Agreed emergency declaration procedures

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- Pre-established response mechanisms
- Multi-sectoral coordination at all levels

Early warning systems may be calibrated to watch and respond to a single climate hazard, or could be combined into a more comprehensive disaster risk reduction framework. In addition, other indicators can be added into the mix so as to provide more elaborate warning, as is the case for food security-based early warning systems, which combine climate and socio-economic indicators in order to prevent famine.

Climate Risk Management

Climate risk management is an approach to climate-sensitive decision making that involves proactive 'no regrets' strategies aimed at maximizing positive and minimizing negative outcomes for communities and societies in climate-sensitive areas. The 'no regrets' aspect of CRM means taking climate-related decisions or action that make sense in development terms anyway, whether or not a specific climate threat actually materializes in the future.[1]

Climate Risk Management is by no means a new approach: rural communities have been managing climate-related risks as part of their daily lives for centuries. However, in the face of climate change, these coping strategies are likely to become insufficient, mostly because the risk and severity of climate shocks will rise, or because there will be less predictability. There is a need to integrate aspects of climate risk management and climate change into regular development planning processes, so as to ensure that climate shocks and longer-term climate changes do not adversely impact on development gains.

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[1] International Research Institute for Climate and Society, 2007, p. 10.