Disaster Risk Reduction for Climate Resilience

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Disaster and extreme weather trends

Natural catastrophes worldwide 1980 – 2011

Number of events with trend

- Geophysical events: Earthquake, tsunami, volcanic eruption
- Meteorological events: Storm
- Hydrological events: Flood, mass movement
- Climatological events: Extreme temperature, drought, forest fire

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Equation of risk

Risk = The combination of the probability of an event and its negative consequences

Hazard

Expected frequency of occurrence of different intensities and types of threats (e.g. cyclones, floods, earthquakes,...) for a specific area.

Exposure

People, assets, present in the hazard area.

Vulnerability

Percentage of exposure losses should an event of a specific type and severity occur (varies between 0 and 1). Also includes coping capacity.
Disaster Risk Reduction (DRR)

There is no such thing as a 'natural' disaster, only natural hazards.

- Disaster Risk Reduction (DRR) aims to reduce the probable damage caused by natural hazards like earthquakes, floods, droughts and cyclones, through an ethic of prevention.
IPCC 2012: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation
Pre-Intervention Status

1. Information and Data
   - Lack of Systematic Accountable recording of disaster data
   - Lack of coordination between science, politics, disaster managers, the public
   - Lack of practical, accessible, standardized approach to assessment of disaster losses and damages
   - On Hazards, Risk, Disaster Events, Losses, Vulnerabilities, etc...

Advancing DRR @ Country Level

2. Policies & Legislations
   - Informed by Data

3. Public Awareness
   - Informed by public policy

4. Investments Public & Private
   - Resulting from more awareness

5. Implementation/Integration of DRR Measures
   - Resulting from increased investments
Information and data on historical losses coupled with future projections on risk and losses, with risk profiling and analysis will help decision makers develop risk-sensitive policies and make risk-sensitive investment decisions.

2010 = Regional Introduction and starting with Egypt, Jordan, Morocco, Syria, Yemen (Coordinated by UNISDR with funds from SDC and some UNDP country projects)

2011 = Lebanon, Djibouti (Coordinated by UNISDR with funds from UNDP Lebanon and World Bank Djibouti DRM project)

2012 = Palestine, Tunisia, and update to Jordan, Yemen and Morocco (Coordinated by UNISDR with funds from SIDA/ESCWA RICCAR)

2013 = Comoros (Coordinated by UNISDR with funds from EU)

2014 = Mauritania, Sudan (in plan but funds to be raised)

+ discussion with GCC countries on sub-regional database while some like UAE taking steps also to develop the database.
• Under the RICCAR initiative, an MoU was signed between UN-ESCWA and UNISDR in July 2012.

Agreement to contribute to RICCAR objective on the Identification and analysis of projected extreme events in the Arab region through activities to secure historical data and observation on past extreme events and setting up disaster losses databases.

Agreement to establish 1 new database (Tunisia) and update 4 others (Jordan, Morocco, Syria and Yemen). Later modified to establish 2 new databases (Tunisia & Palestine) and update 3 others (Jordan, Morocco, Yemen)
1) **Tunisia** – training conducted in August 2012 and data collection initiated later in 2012, completed in November 2013 and validation meeting took place 27.11.2013

2) **Palestine** – training conducted in February 2013 and data collection initiated in July 2013, to be completed by February 2014. A one day partners and data collectors meeting took place on 1 December to improve data quality, enhance engagement of stakeholder institutions and ensure ownership.

3) **Jordan** update completed January 2013

4) **Yemen** update completed October 2013 but being further refined to cover Nov and Dec 2013 and stakeholders meeting planned 15 December to validate and improve ownership.

5) **Morocco** update is ongoing to be completed Feb/March 2014.
Challenges: frequent government shuffles, unrest and security in the countries, data availability and accessibility.

Opportunities: national ownership, sustainability, multiple use of the database for risk management, national climate change adaptation, vulnerability assessment, risk assessment (with economic losses), etc..

In context of CC global/national process: COP19 in Warsaw decided on the establishment of the Warsaw International Mechanism to address loss and damage associated with impacts of climate change, including extreme events and slow onset events, in developing countries that are particularly vulnerable to the adverse effects of climate change.
CLOSING THE GAP BETWEEN CLIMATE CHANGE ADAPTATION AND DISASTER RISK REDUCTION

- Many climate change impacts will materialize through increases in the frequency and intensity of extreme weather events.
- Both approaches aim to manage risks and reduce potential impacts by anticipating risks, addressing vulnerabilities, and enhancing resilience.

Source: Adapted from Mitchell and van Aalst, 2008.