Risk Assessment as an integral part of decision making

- UNDP’s support to DRA solutions at country level -

Carlos Villacis, PhD
UNDP-GRIP
Overview

- Risk assessment as part of the DRM process
- UNDP-GRIP country support
- Application examples
The Issues in DRM/R

Understanding of the problem
Risk Assessment

Proper Planning
Evidence-based decision making

Disaster Risk Reduction + Safe Development Processes
Effective Actions
Issues in Risk Assessment

**Issue 1:** Risk assessment is not always being utilized in decision making processes
- Many activities implemented and resources utilized
- *Without even knowing whether they are solving the problem*
- *They may be even worsening the situation*

**Issue 2:** End-users, the people and institutions that would actually be implementing DRR actions, are not involved in the risk assessment process
- They do not provide inputs in the diagnosis/solutions development
- No opportunity to understand the problem and the effectiveness of the risk reduction options
- No utilization of the risk assessment studies.
Role of Risk Assessment

Understanding of the problem
 Risk Assessment

Proper Planning
 Informed decision making

Disaster Risk Reduction
 Effective Actions

Cost/benefit analyses
 Risk assessment

Monitoring
 Risk assessment

Evaluation
 Risk assessment
How Risk Assessment should be done

• Risk is dynamic and changing over time, due to:
  – Climate change
  – Environmental degradation
  – Urbanization

• Risk Assessment is a continuous process
  – Periodic → Monitoring and evaluation
  – Sustainable
  – Multi-stakeholder engagement
  – Capable of being improved → New information

• Not a one-time effort
• Local capacity is the only way to guarantee sustainability
• Produces solutions (no numbers or nice-looking maps)
UNDP Approach – The Comprehensive DRM

Disaster Risk Reduction and Recovery Team (DRRRT), BCPR/UNDP

- Risk Assessment – GRIP
- Disaster Recovery - IRP
- Governance and Mainstreaming – GMI
- Urban Risk Management - URM
- Climate Risk Management – CRM
- Gender
- Capacity Development – CADRI (UNDP, OCHA, ISDR)
Context

- UNDP’s Mandate to lead DRM at country level
- Country Offices in 134 countries
- USD 170 million per year in DRM
- Works directly with government on Governance, Economic Development, Environment
Mission:
“Better risk information for sound decision making”

Objectives:
• To improve the quality of disaster and risk information
• To ensure its use in disaster risk management and development planning
– **Learning from the past**: to understand their vulnerabilities, high-affected areas, and recovery capacities, etc.

– **Basic risk information for setting up DRR baselines**: to set up measurable goals and prepare evidence-based DRR strategies

– **Monitoring and evaluation mechanisms**: to measure progress and revise strategies

– **Local Capacity**: To produce realistic and locally supported solutions and ensure sustainability
DRA Solutions Package

– **Baseline for Risk Assessment (CSA):** Assessment of what already exists and identification of gaps and needs

– **National Disaster Observatories:** sustainable institutions for systematic collection, analysis and interpretation of disaster info

– **National Risk Assessments:** multi-hazard risk evaluations to delineate national DRM strategies, policies, programmes, budget allocation

– **Local Risk Assessments:** assessments to support urban risk reduction policies and actions

– **Capacity Development:** all the work is done by local institutions, authorities and experts
DRA in Countries – A Road Map

Phase 1 Preparation

National Disaster Loss Database

Country Situation Analysis (CSA)

Phase 2 Assessment

National Disaster Observatory

National Risk Assessment

National Risk Information System

Local Risk Assessment

Phase 3 Applications

• National DRM/R Master Plan and Strategy
• Strong National DRM/R System
• Pre-Disaster Shelter Plan
• Scenario-based Contingency Plan
• DRM/R Action Plan
DRA in Countries: The Total Solution

- Country Situation Analysis (CSA)
- National Risk Assessment (NRA)
- Local Risk Assessment (LRA)
- Disaster Analysis & Mapping (DAM)

- National e-Library
- National Disaster Observatory (NDO)
- National Risk Information System (NRIS)

CERAM = Centre of Excellence for Risk Assessment and Management

Disaster Risk Assessment

Information Integration

Country Capacity Development

- National workshops
- Readiness development
- DRA Programme
- CERAM Establishment

Global Risk Identification Programme (GRIP), UNDP, info@gripweb.org, http://www.gripweb.org
Assistance provided by UNDP-GRIP

- Methodologies and tools
- Training
- Technical advice: technical, policy making
- Coordination and overview
- Interaction with other countries
- Access to financial support
Methodologies and training

- Methodologies
- Guidelines
- Standards
- Training modules

South Asia - Colombo
- March 2009
- 60 participants
- 7 countries
Tools: Disaster Risk E-libraries

- National Disaster Observatory
- National Disaster Observatory in Armenia
- National Disaster Database

Databases or Information System:
- Datasets
- Disaster Risk Profiles
- Documents or Publications
- Hazard Risk Maps

Methodologies or Tools:
- Technical Training on National Risks
- Technical Training on Disaster Risks

Organizations or Institutions:
- Databases or Information System
- Country Support Portfolio
- Databases or Information System
- Documents or Publications
- Hazard Risk Maps

Projects or Programs:
- Get Involved!
Sustainable Capacity for DRA

Centers of Excellence for Risk Assessment and Management - CERAMs

GRIP CERAM Shanghai
Baja California, Mexico
UEM, Mozambique
NSET, Nepal
Implementation - Support activities

15 aspects of support within the typical UNDP project cycle:

• **Project conception**
  – Overall vision on DRR based on risk assessment
  – Preparation of concept notes

• **Project definition**
  – Scoping workshop
  – Proposal development
  – Review and evaluation of technical proposals

• **Project initiation**
  – Project document finalization
  – Access to financial support
  – Interaction with other countries,

• **Project implementation**
  – coordination and overview
  – Provision of appropriate methodologies and tools
  – hands-on trainings
  – technical support and advice
  – monitoring and review,

• **Project closing**
  – result review and evaluation, closing workshop.
Country Support and Services

As of 01/2012

GRIP Country Support Portfolio

Country Support by Region

Country Support by Activity

Legend
- Country Situation Analysis
- National Disaster Observatory
- National Risk Assessment
- Local Risk Assessment
- Component unclear
Applications of Risk Assessment

- Risk assessment for Climate Change Adaptation
- Support to humanitarian activities – Pre-Disaster Shelter Planning
Climate change adaptation
Arequipa - Peru

Dimensions:
15 km: East - West
8 km: North - Sur
The problem

Nevado Coropuna glacier coverage for 1955 (outline in black) and 2003 (in orange outer boundary).
Glacial retreat – Nevado Coropuna

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<th>Years</th>
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Adaptation
Tangible results

Guidelines for CC adaptation in agricultural production

Incorporation of adaptation in development plans
Concrete measures implemented

✓ 3 water and irrigation systems that optimize water usage
✓ 15 community silos to store food
✓ 5 mini-reservoirs
Introduction of CCA in education

- 4 textbooks “Knowing my world to adapt myself to climate change”.

- Implementation by Official resolution of climate change in all the public educational institutions (pre-school and elementary school)
Mainstreaming CCA in daily life

- 1 climatolandia board game.
- 1 climate ludo game
- 3 brochures “The Coropuna and climate change”
- Climate change “Takiy Kausaypaq” Songbook
State strategy for CCA
Replication in other areas of Peru

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<tr>
<th>Estrategias aprobadas</th>
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<td>Loreto, Piura, San Martín y Cajamarca</td>
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Actual impact requires long-term commitment

- Mozambique
  - Mortality reduced to 25%
- Indonesia
  - January 2012 – EQ and Tsunami in Sumatra
- Malawi
  - Last couple of flood seasons did not require international assistance
Evaluation

• **Objective:**
  – Review progress
  – Identify what has worked and what can be done better
  – Chart direction for future

• **Time frame**
  – Mid-May until End of August

• **Consultant:**
  – Mr. Loy Rego
THANK YOU!

www.undp.org
www.gripweb.org
Support to humanitarian activities

Risk Mapping for Strategic Planning of Shelter Response in Tijuana, Baja California, México.

AGREEMENT OF COOPERATION
between
UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME

Antonio Rosquillas and Luis Moreno
Municipio de Tijuana
6 possible earthquakes
Damage Evaluation

Estimated distribution of buildings damage

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### Results

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Number of persons with shelter needs estimated for the six earthquake scenarios
Shelter plan uploaded on Google Map
Simulation exercise with all sectors of society

18 – September – 2009