Risk Assessment Training Programme

Dr. Carlos Villacis – GRIP Coordinator

West Africa Sub-regional Training on Risk Assessment – Dakar, November 25-27, 2009

Contents

Basic concepts and terminology and the GRIP approach

Learning from the past – National Disaster Observatories

Supporting humanitarian activities – Realistic scenarios for pre-disaster planning

Making informed decisions – Applications of risk assessment

Exercise for participants – Assessing current country situations

Basic concepts and terminology

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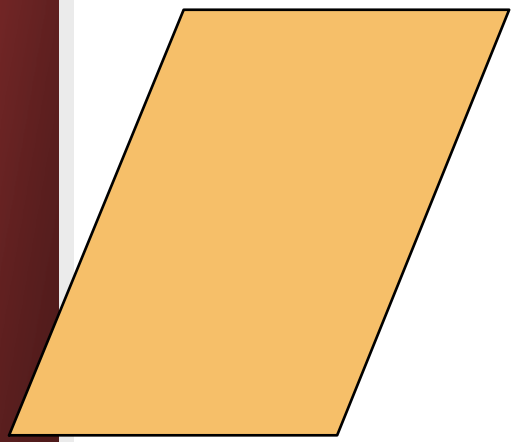
Disasters are NOT natural!

Risk = 0



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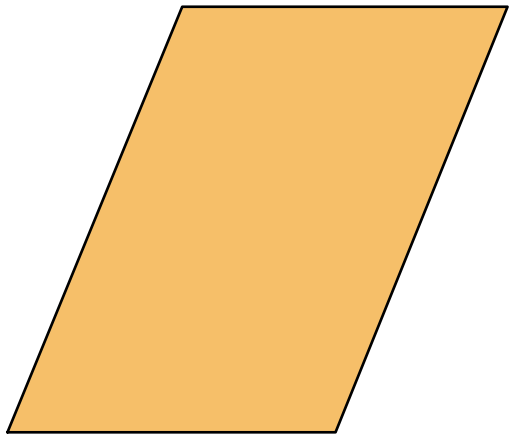
Risk = 0



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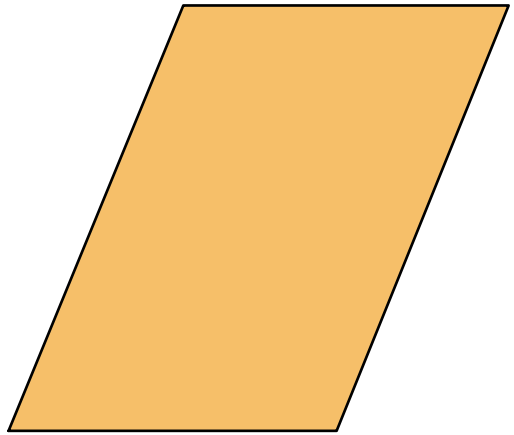
Risk = 0



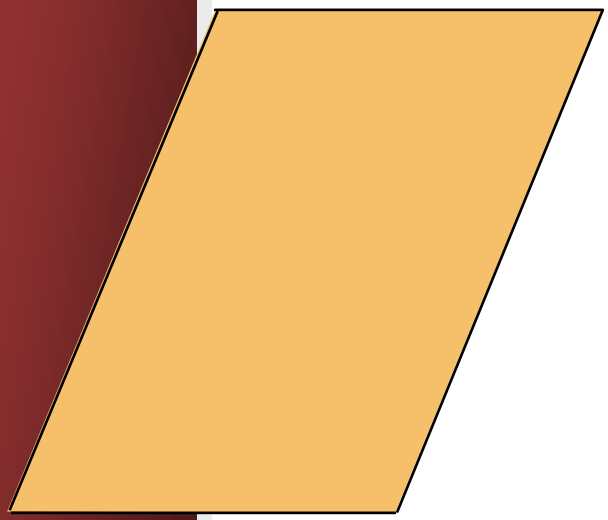
No construction

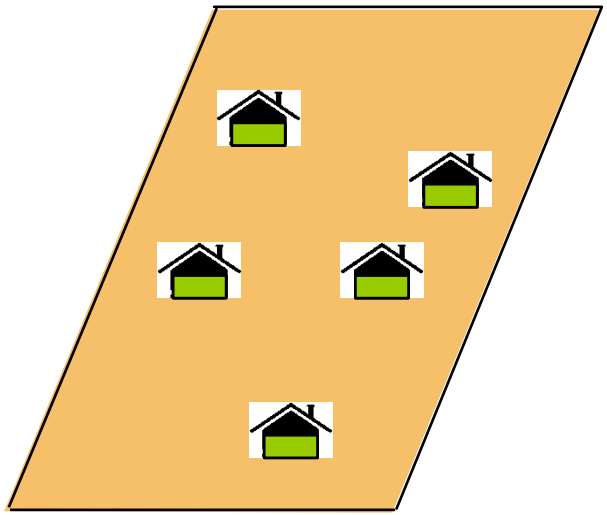
Disasters are NOT natural!

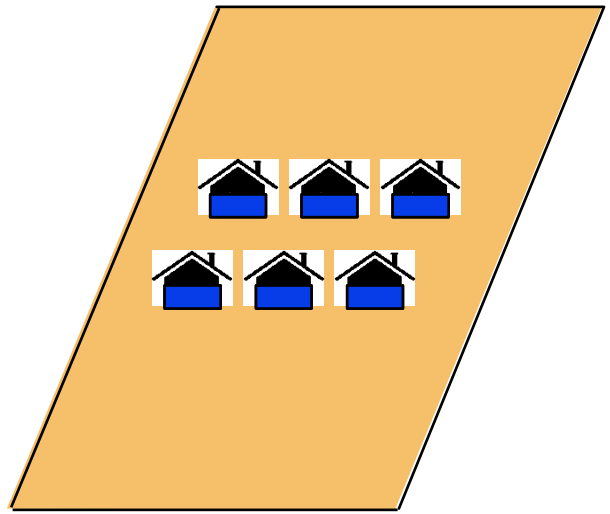
Risk = 0

There is risk

Very low risk







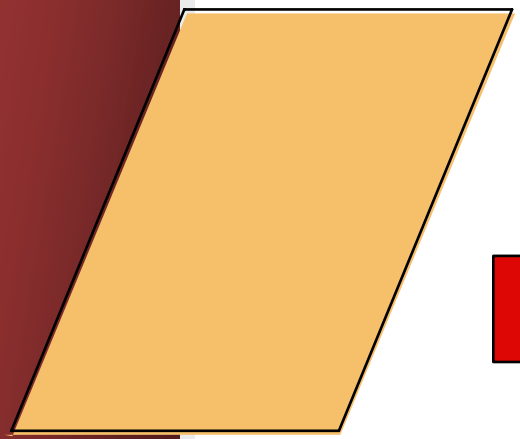
No construction

Bad construction
No planning

Good construction
Good planning

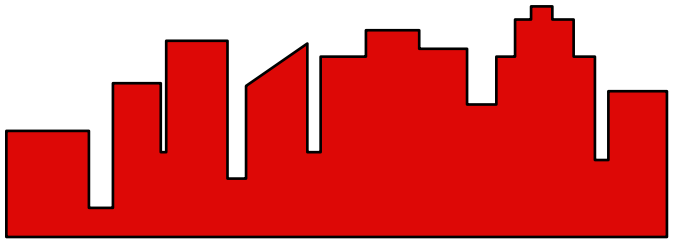
Disasters are NOT natural!

Risk = 0



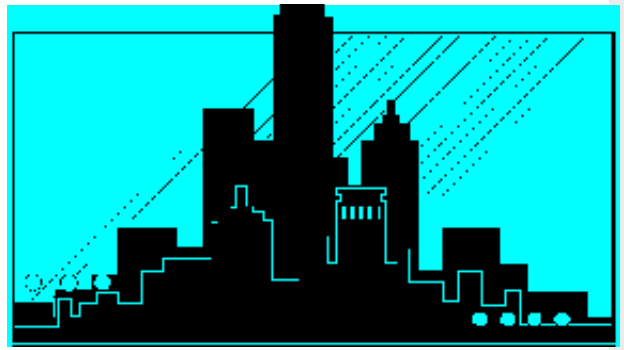
No construction

High risk
Difficult to control



Bad construction
No planning

Low risk
Controllable



Good construction
Good planning

We, with our decisions, increase or reduce the risk

Changing the Risk

$$R = f(H,V,E)$$

If we want to reduce the risk: $R \rightarrow 0$

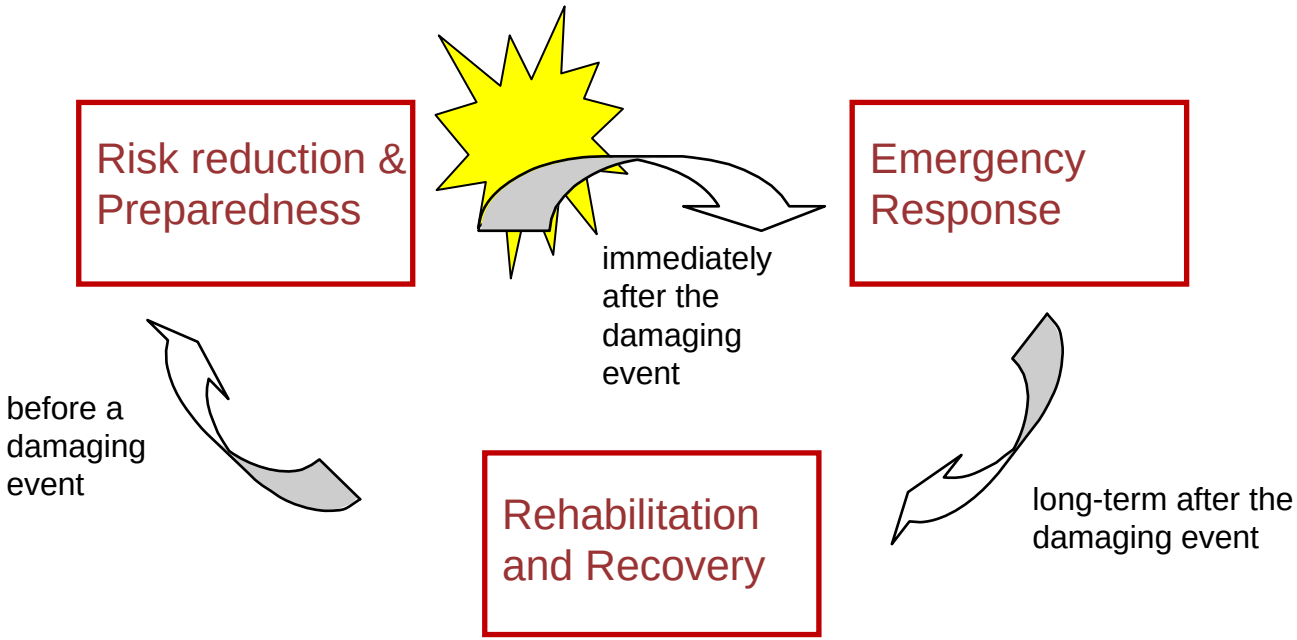
Hazard H → 0 (Impossible if hazard cannot be controlled)

Exposure → 0 (Impossible if the exposed object is needed)

Vulnerability → 0

NOTE: It is also possible to increase the risk!

The Disaster Cycle

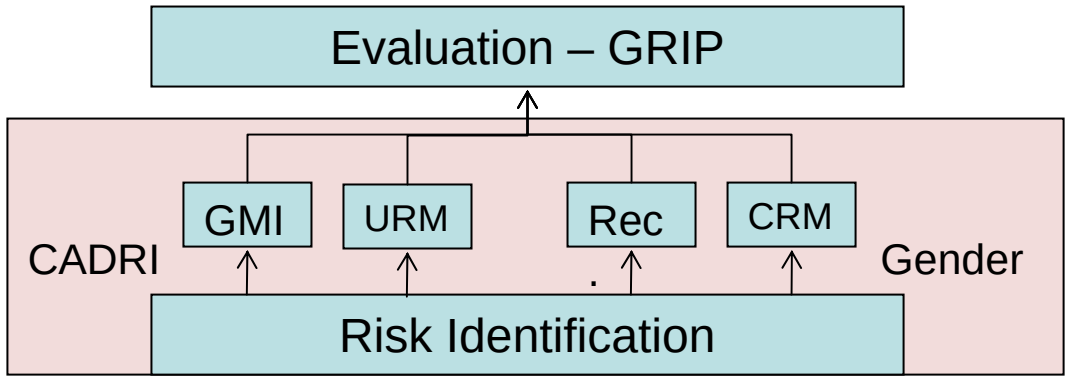


Risk management has to be a continuous, coordinated process

Comprehensive DRM – UNDP approach

Disaster Reduction and Recovery Team – BCPR

- Risk Identification – GRIP
- Mainstreaming – GMI
- Urban risk – GRIP
- Recovery
- Climate Risk Management – CRM
- Gender
- Capacity Development – CADRI (OCHA, ISDR)



Ignoring the problem

Armenia, Colombia, January 1999

18 policemen were killed in the collapse of the only Police Station

Ignoring the problem

Armenia, Colombia, January 1999

5 (out of 17) firemen were killed, and 5 injured, by the collapse of the only fire station

Only 3, out of 16 vehicles “survived”

Ignoring the problem

Mexico,
September 1985

Are the buildings where we send our children everyday safe?

Summary

- Disasters are NOT natural
- Reducing vulnerability is the only way to reduce Disaster Risk
- We control the level of risk. We can reduce or increase the risk with our decisions
- Disaster risk reduction is a long-term, continuous process
- The time to start is now

Global Risk Identification Programme

Thematic Platform for Risk Assessment
Hyogo Framework for Action - Priority 2

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Overview

The Problem: Disasters and Development

GRIP's history

Services to Countries – Comprehensive RA solutions

Services to the DRR Community

Regionalization

The impact of disasters

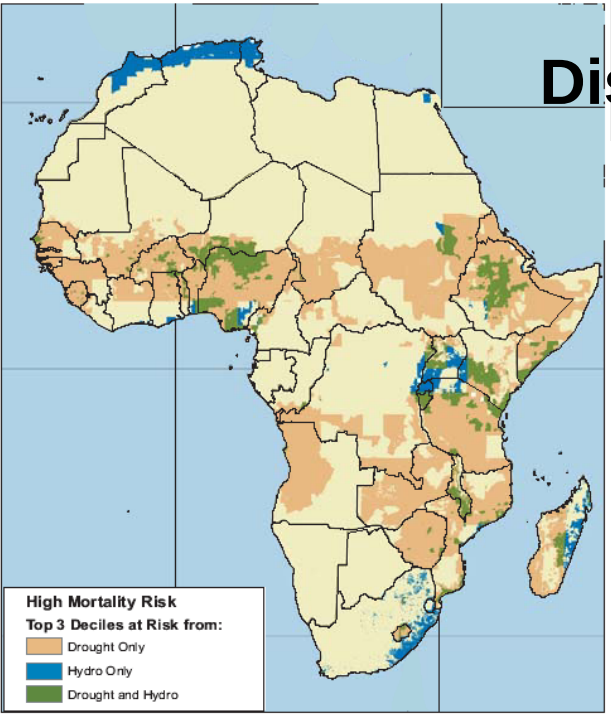
In 2008,

- 354 natural disasters were reported
- 235,000 persons were killed (138,366 by Cyclone Nargis, Myanmar)
- More than 214 million people were affected (~ 18 times Senegal's population!)
- USD 190 billion in economic damages (~ 14 times Senegal's GDP!)

Note: These are only major reported events (≥10 killed, ≥100 affected, state of emergency, call for international assistance)

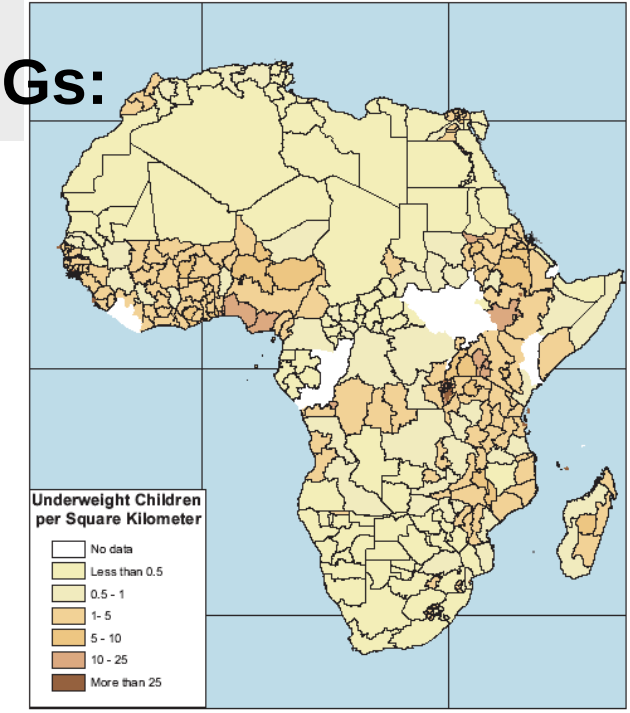
Source: Annual Disaster Statistical Review, CRED, 2009

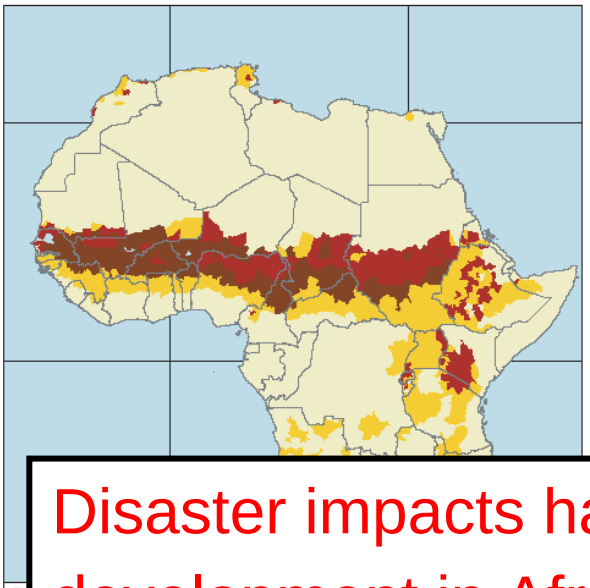
Disaster risk and the MDGs:



← Disaster-related mortality risk

Underweight children →





← Epidemic meningitis

Epidemic malaria →

Disaster impacts have become impediments to sustainable development in Africa

(Report on Disaster Risk Reduction for Sustainable Development in Africa, 2004)

The Problem

Understanding of the problem

Risk Assessment

Proper Planning

Evidence-based development

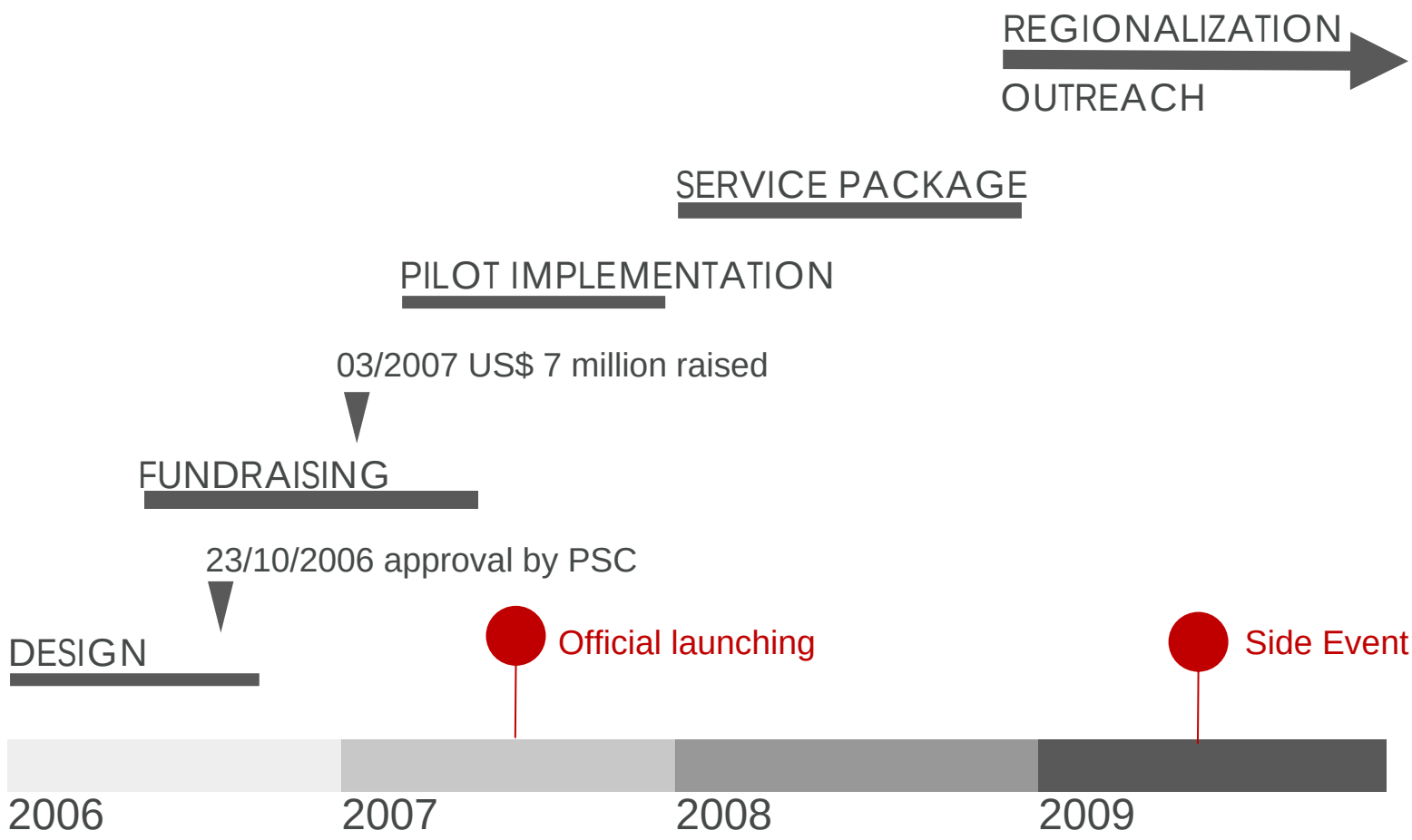
Disaster Risk Reduction + Safe Development Processes

Effective Actions

Global Risk Identification Programme - GRIP

- Goal:
  - Promote sustainable development by reducing the impact of natural hazards in high risk areas
- Specific objectives:
  - To improve risk information
  - To ensure its application in disaster risk management and development processes

GRIP's history



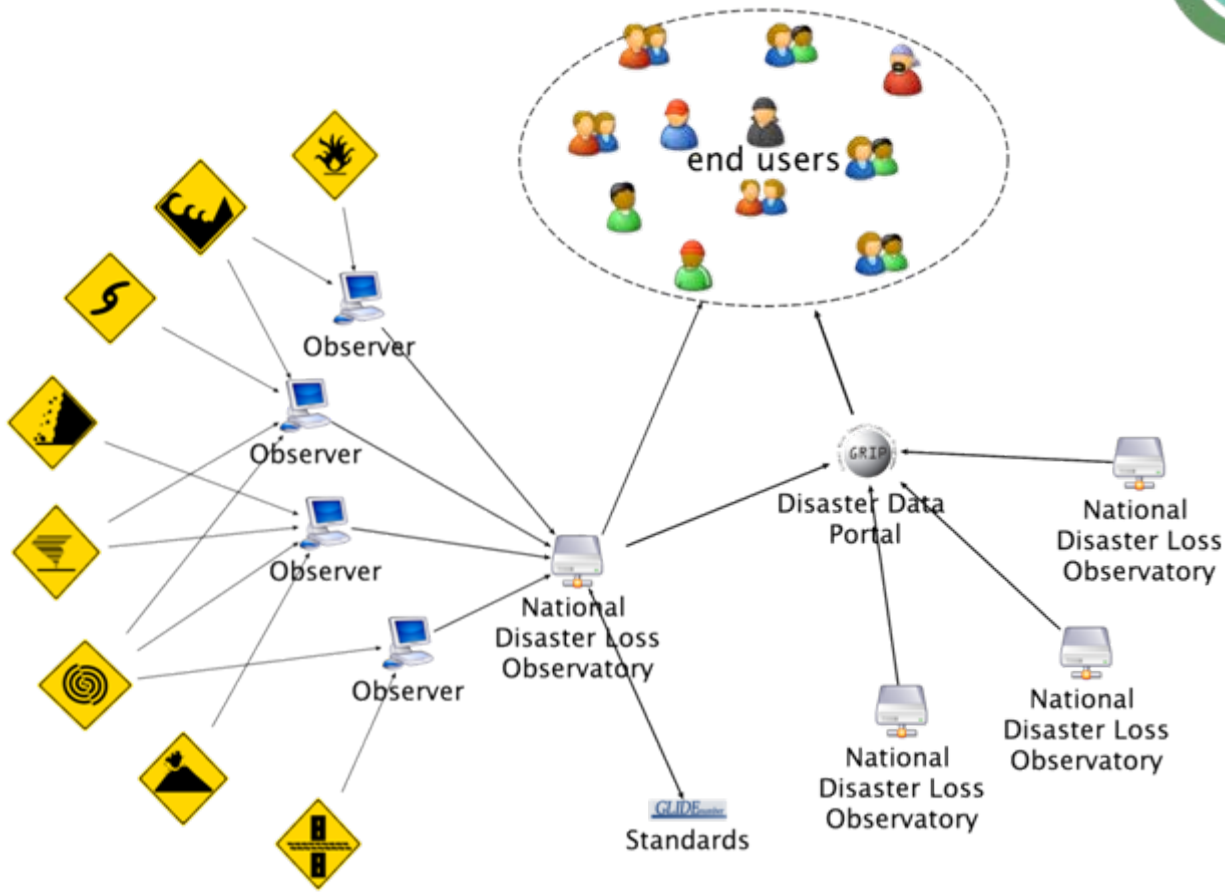
Identified DRR needs of countries

- **Learning from the past**: to understand their vulnerabilities, high-affected areas and recovery capacities
- **Basic risk information and risk baselines**: to set up measurable goals and prepare evidence-based DRR strategies
- **Monitoring and evaluation mechanisms**: to measure progress (or lack of it) and evaluate and correct strategies
- **Local Capacity:** To produce realistic and locally supported solutions and ensure sustainability

GRIP's Services to Countries

- **National Disaster Observatories**: sustainable institutions for systematic collection, analysis and interpretation of loss data
- **National Risk Assessments**: multi-hazard risk evaluations to understand the characteristics and distribution of risk and identify disaster risk reduction options
- **Urban Risk Assessments**: assessments to support urban risk reduction policies and actions
- **Capacity Development:** all the work is done by local institutions, authorities and experts

National Disaster Observatories



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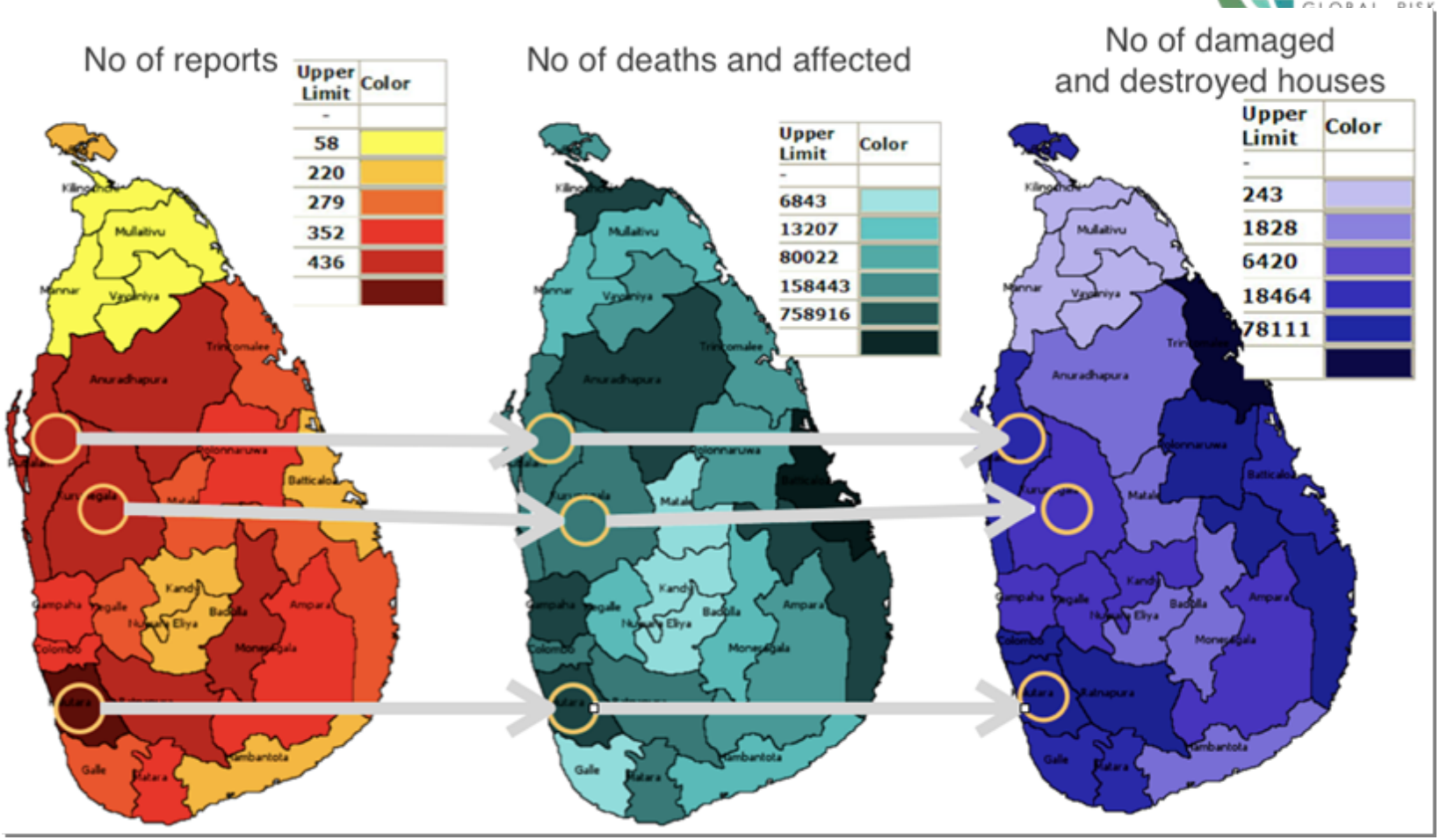
Most disaster prone districts



The Districts of Kalutara, Ratnapura, Puttalam, Kurunegala, Anuradhapura

Outcomes & Applications

- **Inputs to the National Disaster Risk Reduction Strategy**
  - Better definition of goals, priorities and structure of risk reduction measures
- **Calibration and validation of Risk Assessments**
  - Confronting estimated vs. realized losses
- **Assessment of vulnerability and recovery capacity**
  - Physical, social, financial, political vulnerabilities
- **Monitoring effectiveness of risk reduction strategies and measures**
  - HFA's goal is reduction of losses

National Disaster Observatories

- Existing (run by Governments, GRIP or Partners)

  Asia

  Sri Lanka, Tamil Nadu, Orissa, Indonesia, Iran, Maldives, Thailand, Nepal

  LAC

  Mexico, Costa Rica, El Salvador, Colombia, Ecuador, Peru, Bolivia, Venezuela, Argentina, Chile, Paraguay, Panama

- Proposed or underway (countries implementing, interested or having Disaster Database)

  Asia

  Armenia, Afghanistan, Bhutan, Cambodia, Laos, PNG*, Vietnam*

  Africa

  Mozambique, Malawi, Madagascar

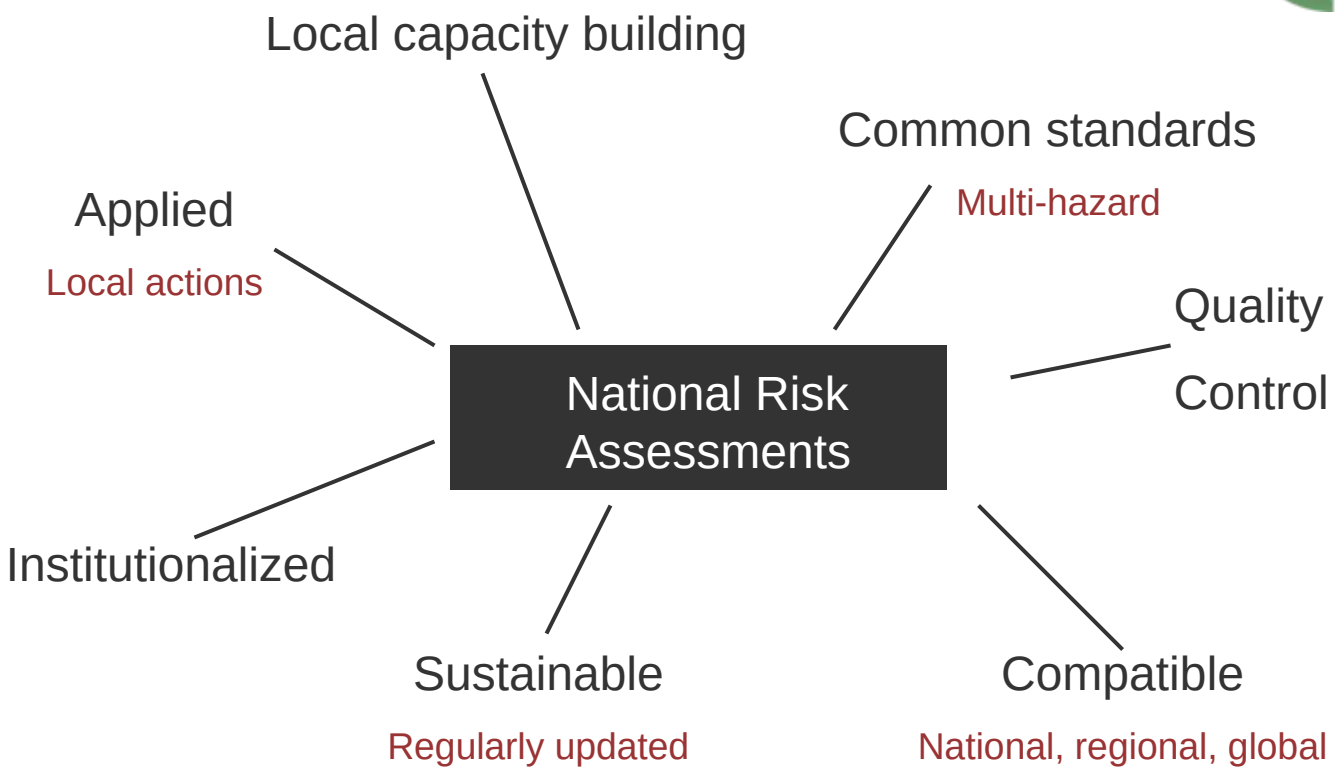
  LAC

  Nicaragua*, Guatemala*, Honduras*, Jamaica*, Cuba, Trinidad and Tobago*, Guyana*, Antigua & Barbuda, Uruguay, Organization of Eastern Caribbean States

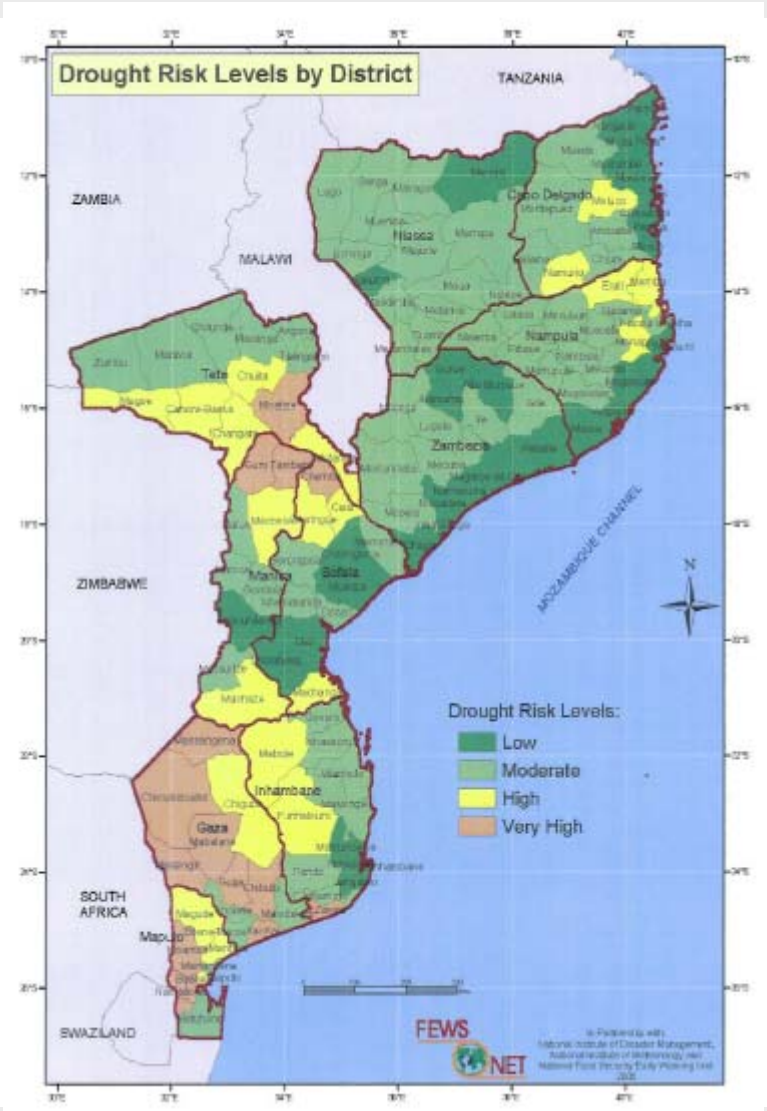
  * Have national disaster databases

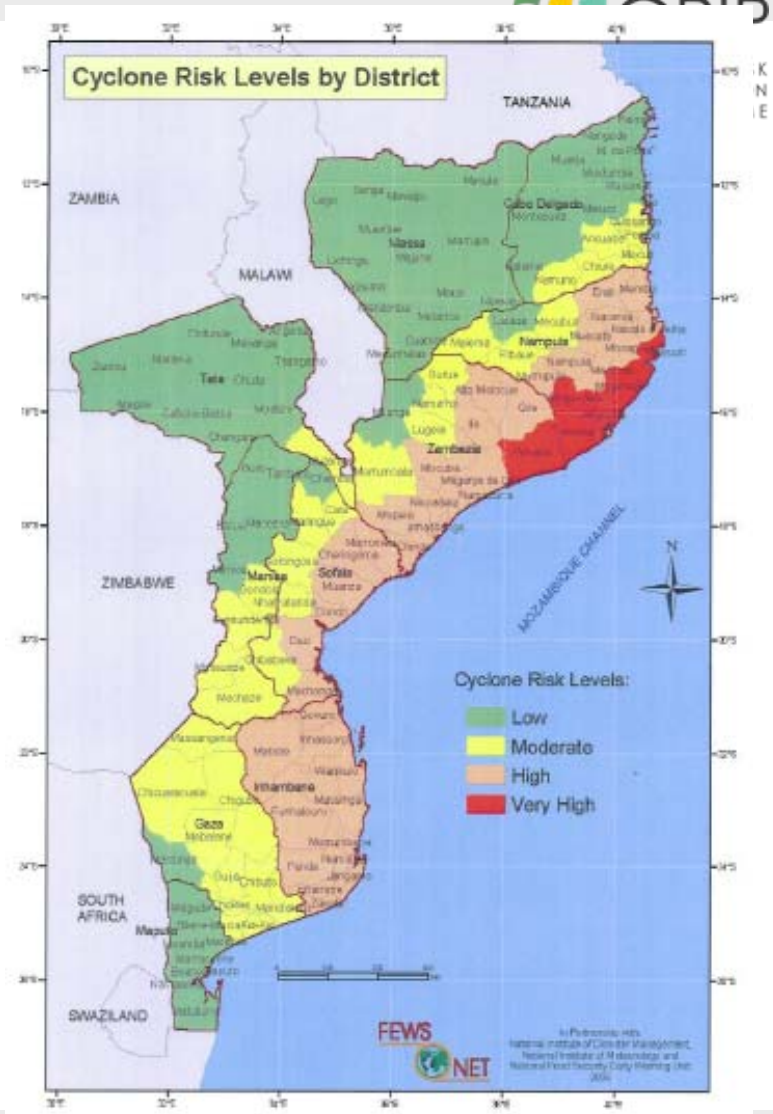
GRIP - Global Risk Identification Programme, UNDP Bureau for Crisis Prevention and Recovery, +41 22 9178399, info@gripweb.org, www.gripweb.org

National Risk Assessments



NRA: Risk profiles





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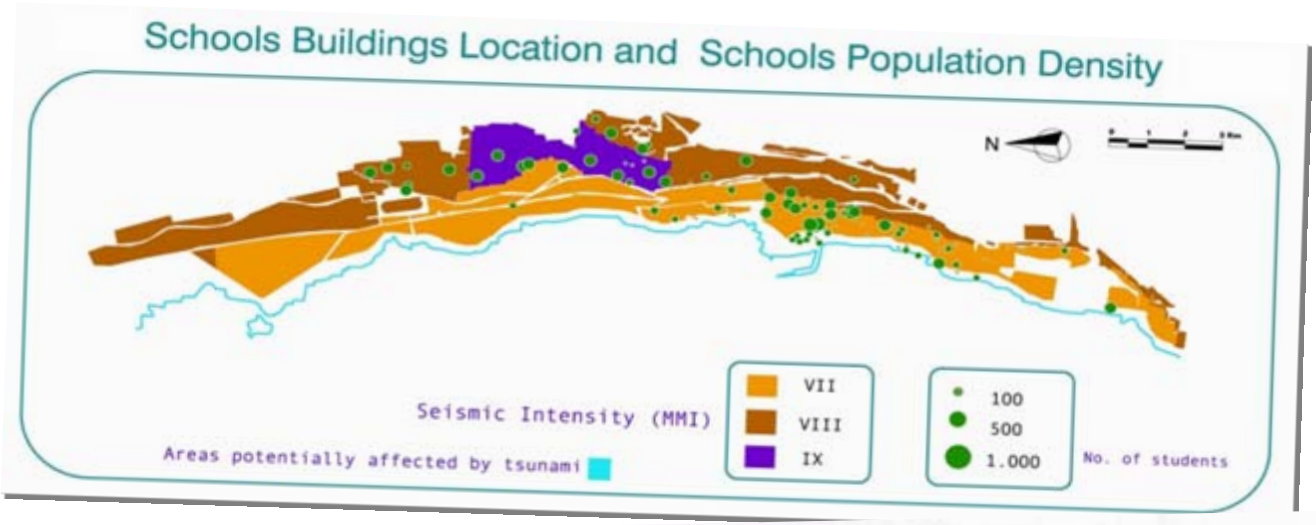
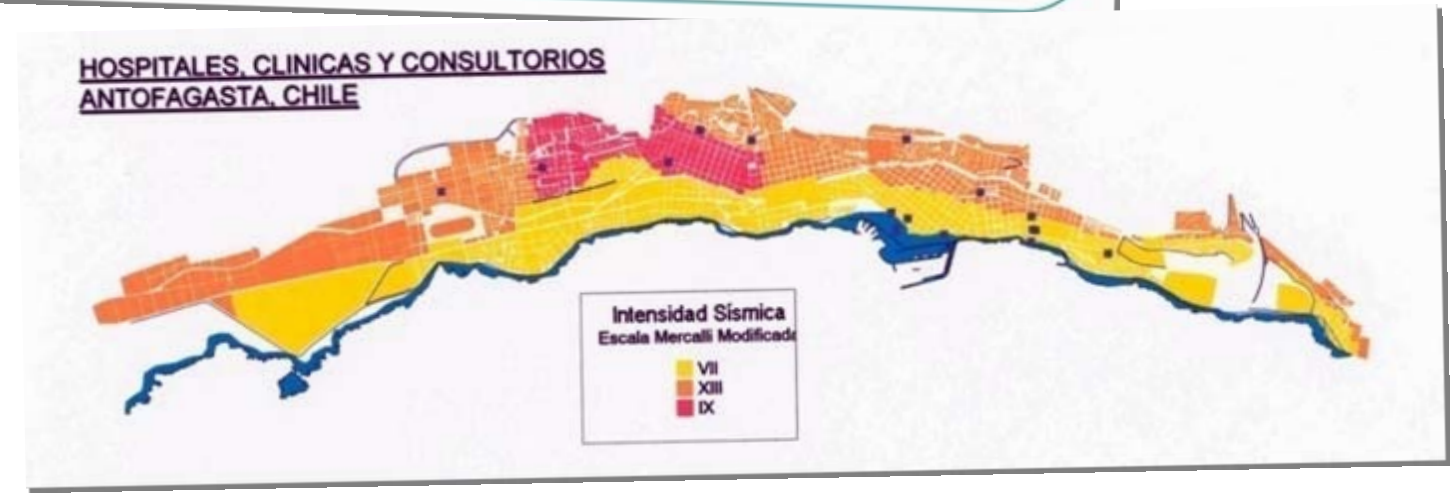
Outcomes & Applications

- **National Risk Information System**
  - Collected information, findings and results are integrated and made available to all end users
- **Delineation or revision of the National Disaster Risk Reduction Strategy**
  - Definition of goals, priorities and effective actions for risk reduction. Existing strategies can be evaluated and improved
- **Strengthening of the National Disaster Risk Reduction System**
  - All major risk management actors work closely together, generating awareness, partnerships and arrangements. Roles and responsibilities are clearly defined

Urban Risk Assessment





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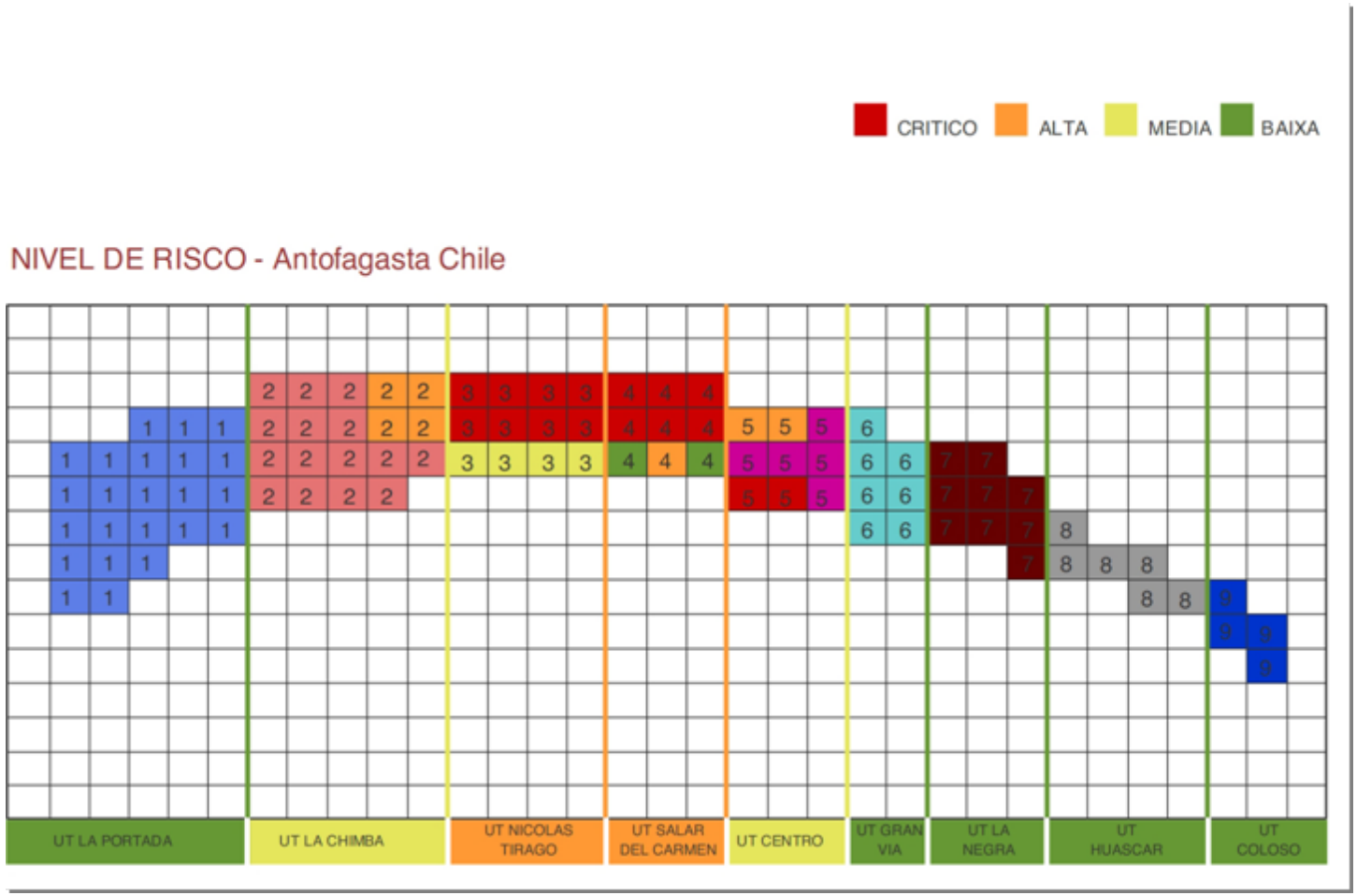
Planning development



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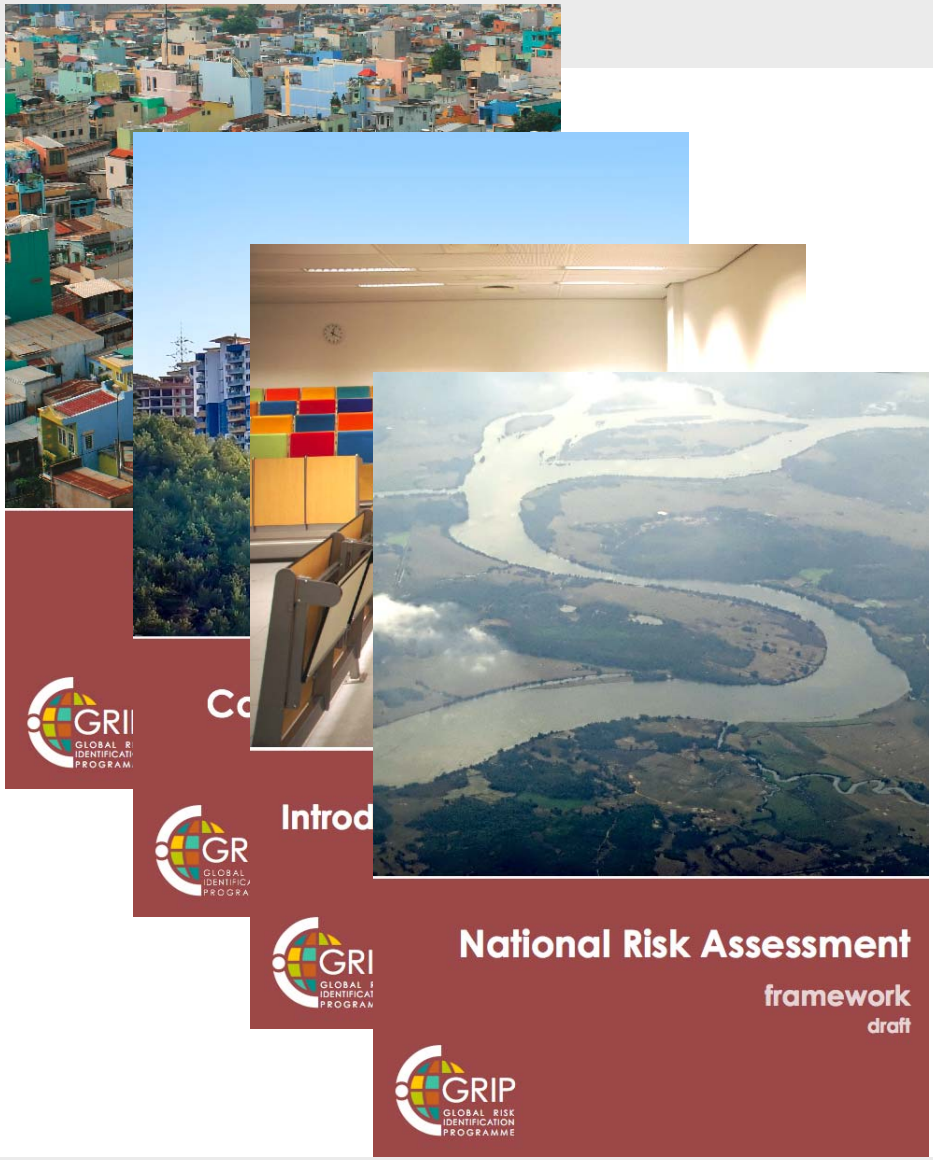
Outcomes and Applications

- City Risk Information System
- Contingency plans - Pre-disaster shelter planning
- Disaster risk reduction action plans
- Incorporation of risk management in urban planning

Assistance provided by GRIP

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



- Methodologies
- Guidelines
- Training materials

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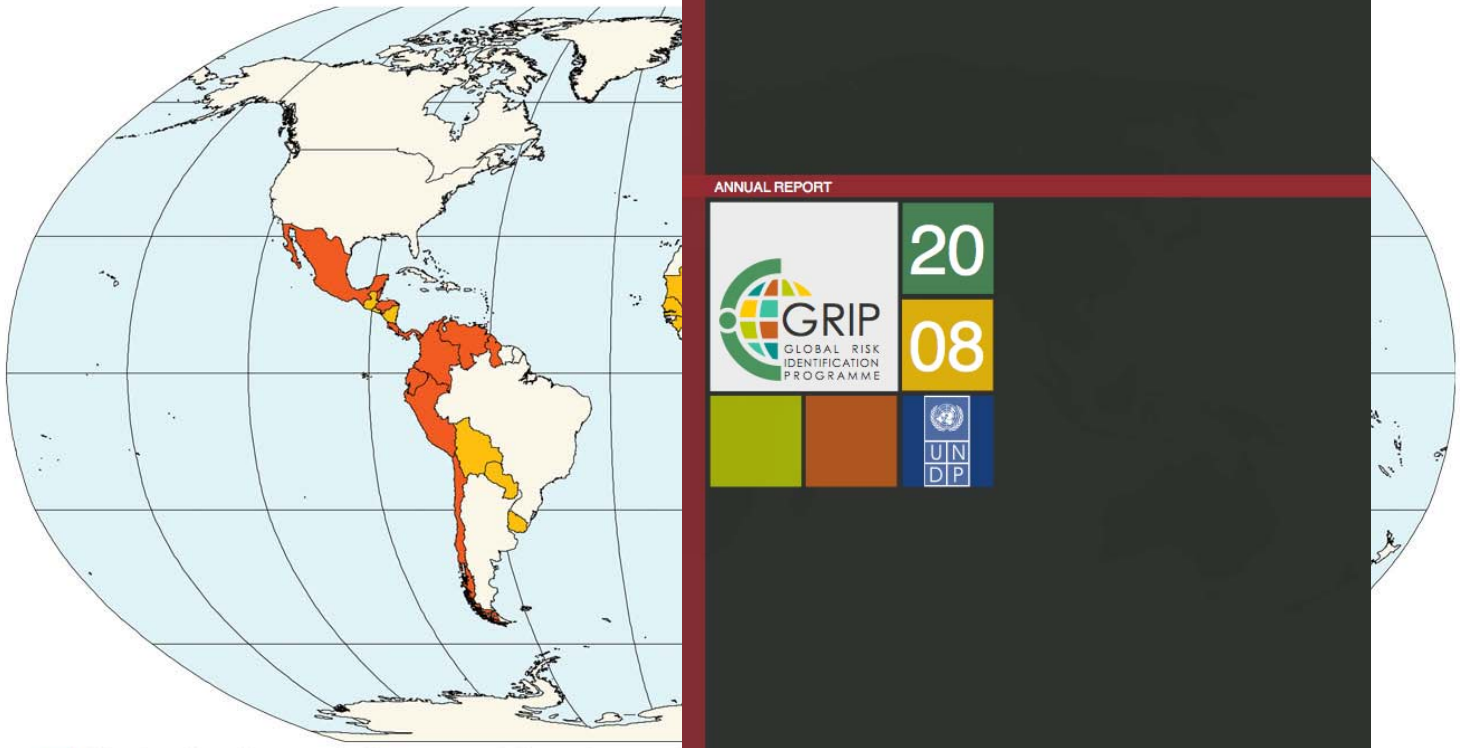
GRIP countries

Countries where GRIP's activities are proposed or under implementation



Under implementation countries: Armeni
Ecuador, Guyana, Honduras, India, Iran,
Nepal, Pakistan, Panama, Peru, Sri Lan
Project proposed countries: Afghanistan
Eastern Caribbean States, Egypt, El Sal
Mali, Mauritania, Nicaragua, Pakistan, Paraguay, Senegal, Turkey, Uruguay.

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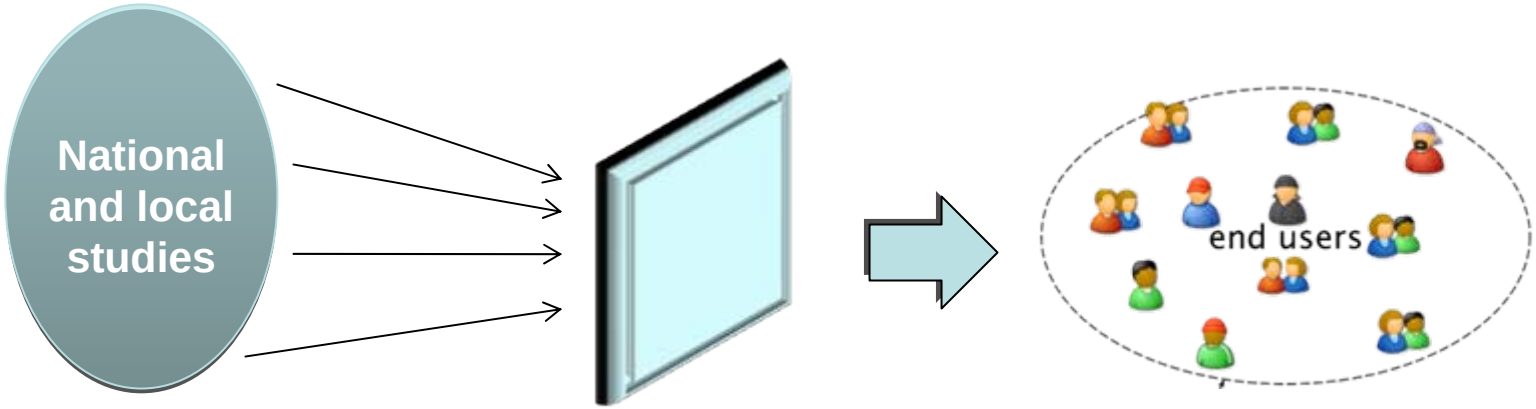
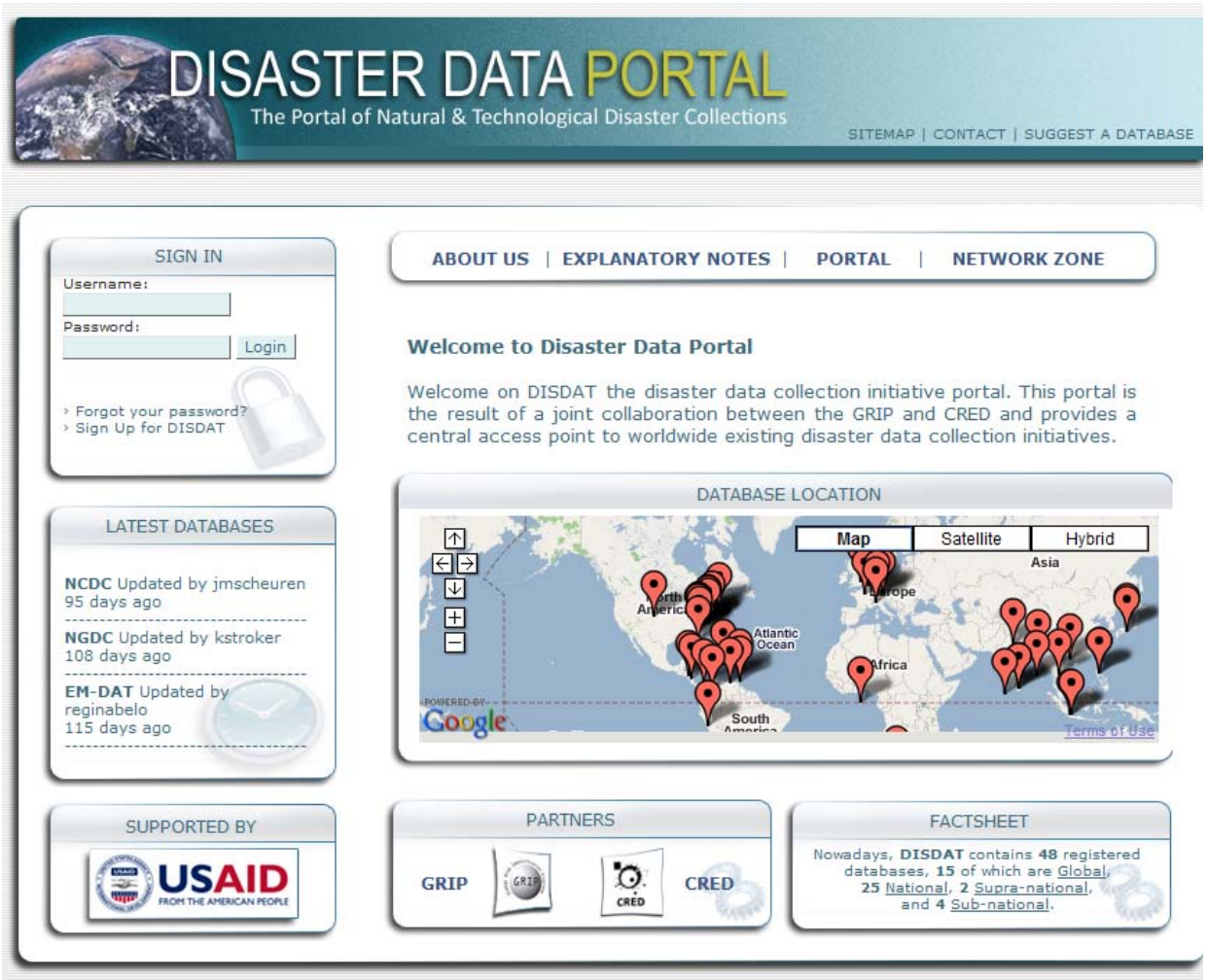
GRIP Services to DRR Community

– **GRIP Portal**: Comprehensive service provider for Risk Assessment at every level

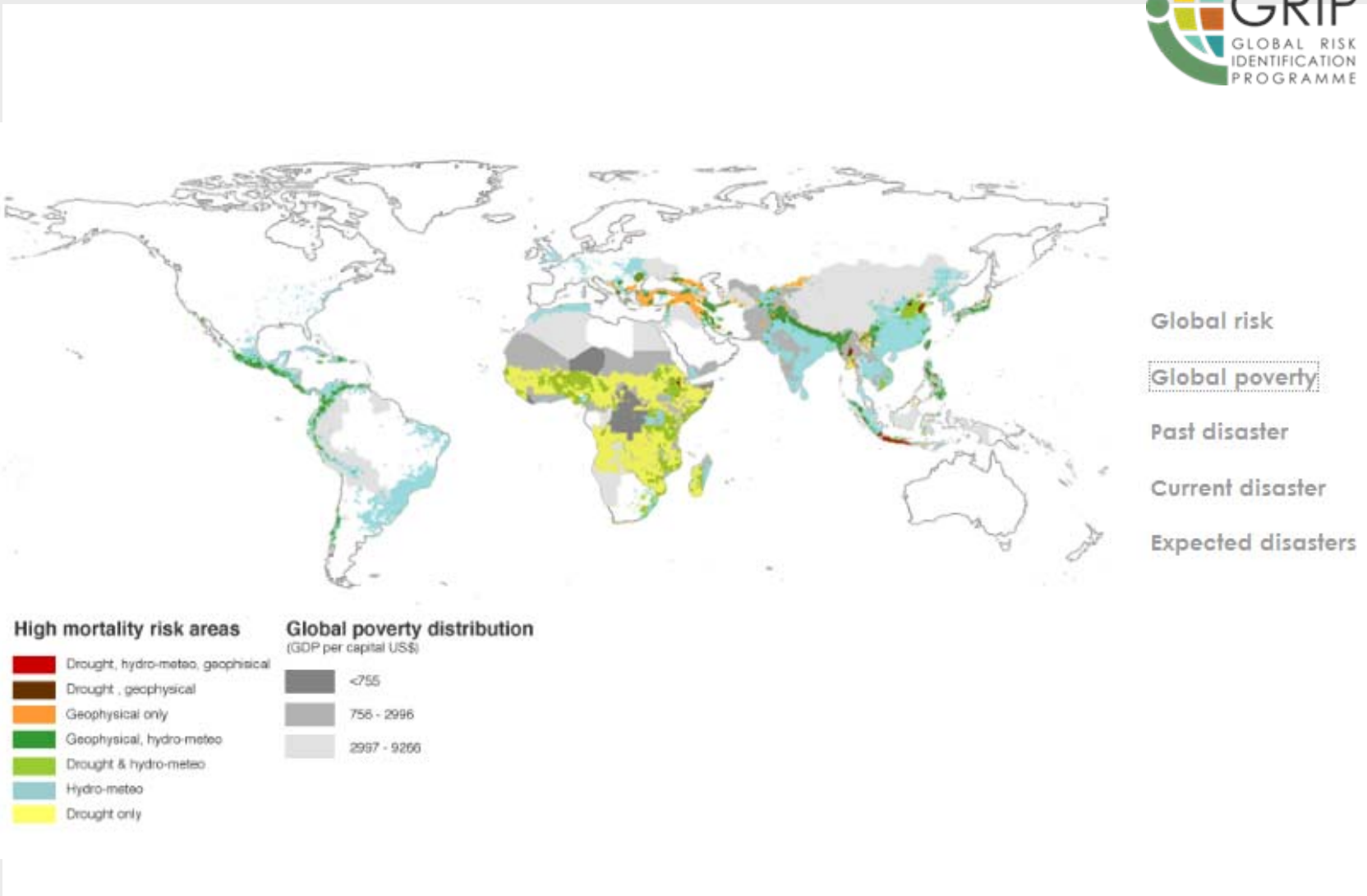


- The Disaster Analyst – Analysis of past disasters
- The Risk Informer – Estimation of potential losses
- The Capacity Developer – Capacity development

The Disaster Analyst: DisDat – Database Catalog



The Risk Informer - The Disaster Watch



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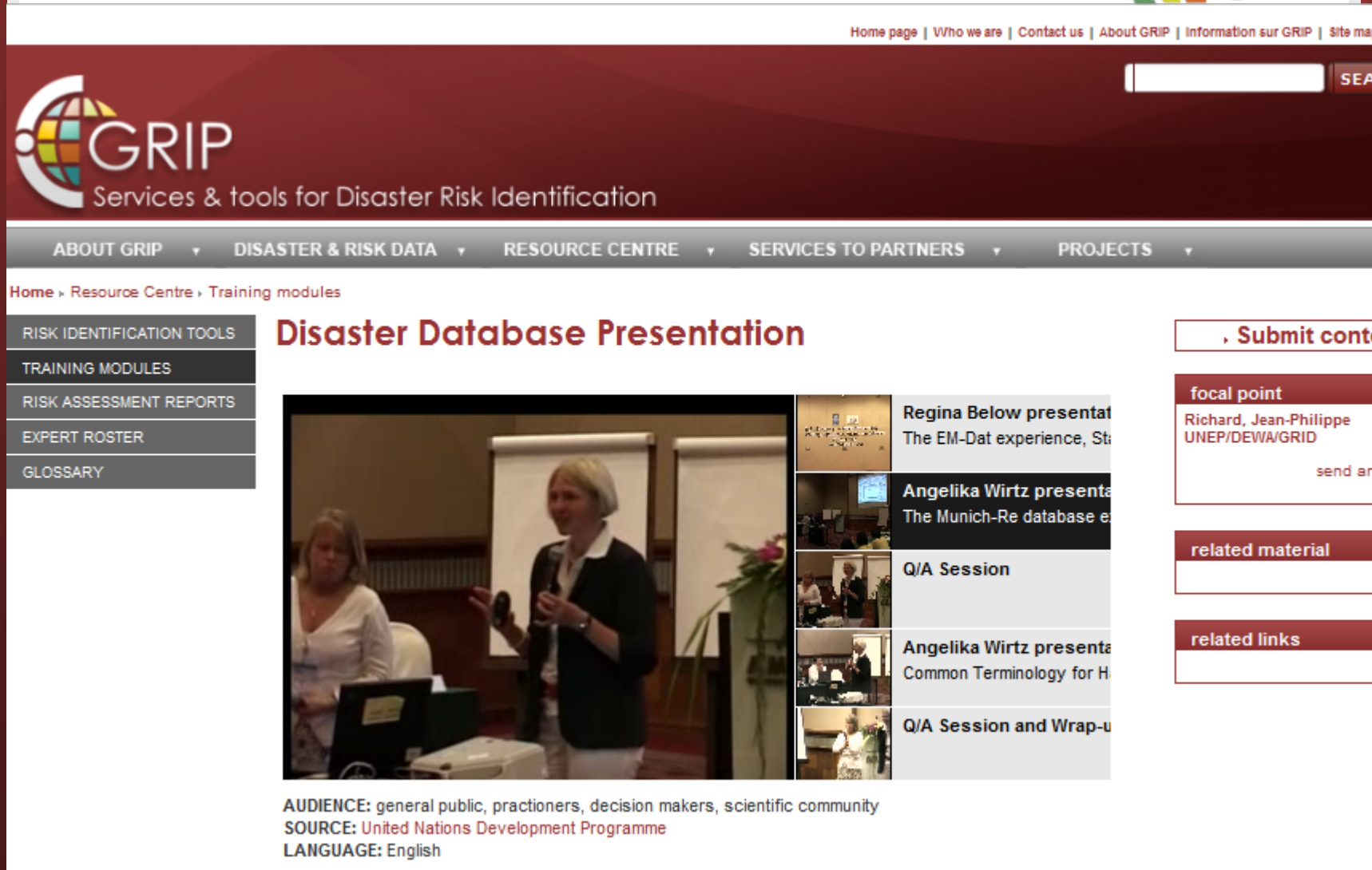
The Capacity Developer - Online training



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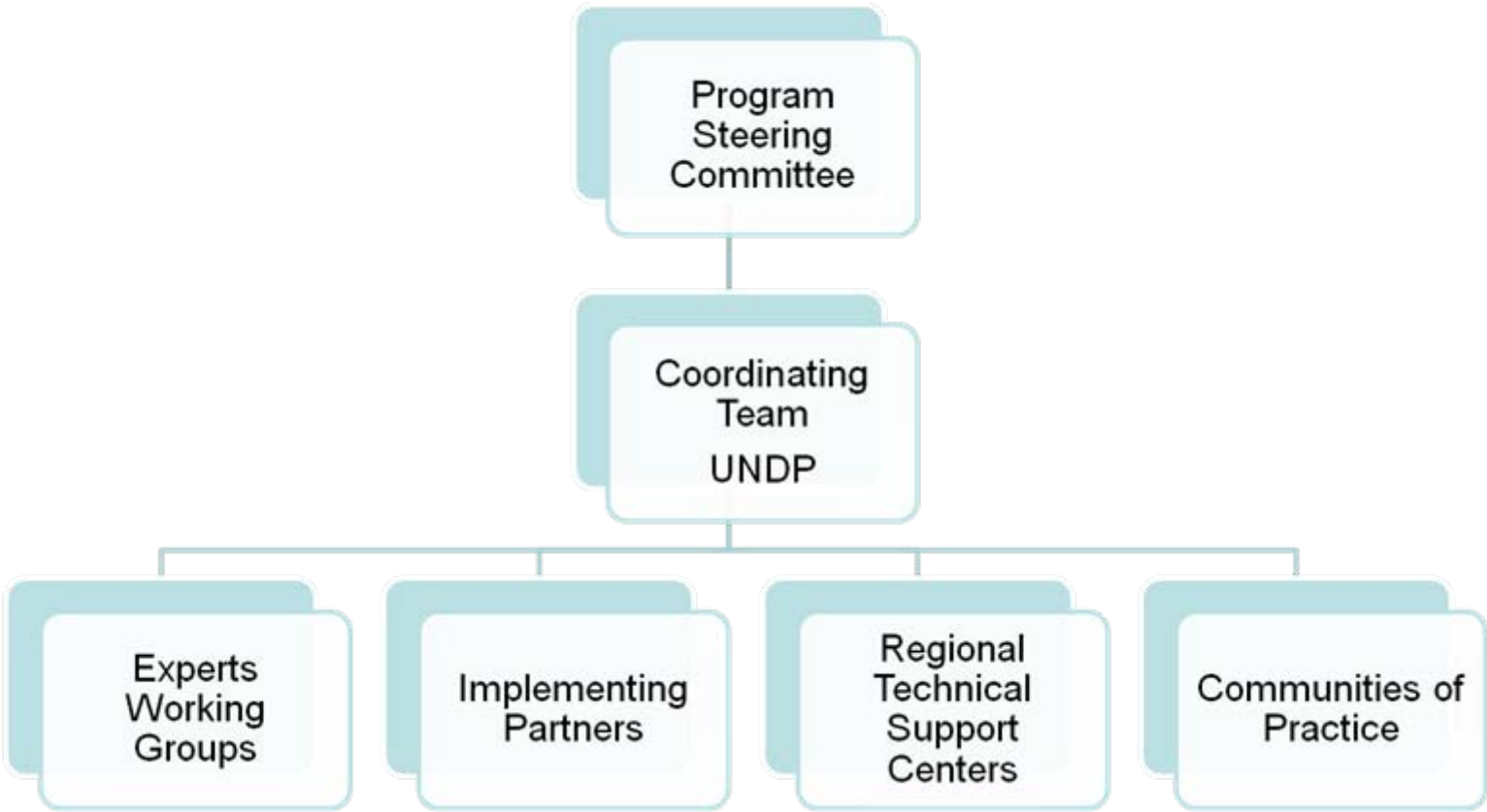
Who we are


Program Steering Committee
Coordinating Team
UNDP
Experts Working Groups
Implementing Partners
Regional Technical Support Centers
Communities of Practice

Steering Committee

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Inter-American Development Bank

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Expert working groups

Disaster loss data

- CRED, Munich-Re, ADRC, La Red, ISDR,UNDP

Implementing partners

Governments:

•Centro Nacional de Prevención de Desastres (CENAPRED)
•CENOE, Moz
•INGC, Moz
•National Disaster Management Coordinating Board of Indonesia
•National Institute of Disaster Management, India
•Orissa State Disaster Management Authority, India
•Government of Uttar Pradesh
•State of Tamil Nadu, Government of India
•Department of Urban Development and Building Construction, Government of Nepal
•Regional Government of Arequipa
•State Government of Baja California, Mexico
•Government of Tijuana, Mexico
•Government of Chile
•Government of Myanmar
•Government of Republic of Dominicana
•Ministry of Civil Defense of Guyana
•Ministry of Defence and Finance, Government of Maldives
•Ministry of Interior, Government of Iran
•Municipality of Illam
•Municipality of Kathmandu
•Municipality of Maputo
•Municipality of Panauti
•Government of Mexicali, Mexico
•Government of Rosarito, Mexico
•Government of Tecate, Mexico
•Government of Ensenada, Mexico
•Municipality of Iquique, Chile
•Municipality of Arica, Chile
•Municipality of Antofagasta, Chile
•Municipality of Mejillones, Chile
•Municipality of Taltal, Chile
•Regional Government of Antofagasta, Chile
•Regional Government of Tarapaca, Chile
•Municipalidad de Pampacolca, Peru
•Municipalidad de Viraco, Peru
•Municipalidad de Machahuay, Peru
•SENAMHI, Peru
•INRENA

NGOs/INGOs:

•OSSO
•NSET
•COPASA
•La Red
•RADIUS Working Group, Mexico
•IFRC
•ADRC
•NGI
•OYO International
•ProVention Consortium
•ISDR

Academia:

•NASA Socioeconomic Data and Applications Center (operated by CIESIN)
•University of California at San Diego (UCSD)
•Universidad Autónoma de Baja California (UABC)
•Instituto Tecnológico de Tijuana (ITT)
•Dartmouth Flood Observatory
•Universidad Catholica del Norte, Chile
•University Eduardo Mondlane, Mozambique
•University of Florida
•University of West Indies
•CETYS Universidad
•CRED
•Columbia University
•CICESE, Mexico
•Colegio de la Frontera Norte (COLEF)
•Instituto Geofísico de la UNSA , Peru

UN system:

•UNDP BCPR
•UNDP (14 Country Offices)
•WMO
•UN Habitat
•UNEP/GRID
•UNESCO

Regionalization

SE Europe - Sarajevo
- January - 2009
- ~ 80 participants
- 9 countries

South Asia - Colombo
- March- 2009
- ~ 100 participants
- 7 countries

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Feedback and invitation

- Feedback
  - The Programme
  - The Services

- How can you be a part of GRIP?
  - Would you implement a service? Which one?
  - Be part of a CoP? Which one?