

# COMPENDIUM ON COMPREHENSIVE RISK MANAGEMENT APPROACHES

Executive Committee of the Warsaw International Mechanism for Loss and Damage



# Compendium on Comprehensive Risk Management Approaches

- Developed by the ExCom, with inputs from the TEG-CRM.
- A tool that provides descriptions, latest insights from ongoing scientific and practical work and 37 case studies at all levels & across five geographical regions, for 6 types of risk management approaches and their interactions:

Risk assessment

Risk reduction

Financial risk transfer

Risk retention

Transfomational approaches

Enabling environment

 Aims at enhancing the understanding of CRM approaches, including social protection, to build long-term resilience of countries, vulnerable populations & communities.

# Overview of the Compendium's 37 case studies

DESALINATION -A CALIFORNIA PERSPECTIVE

**CLIMATE CHANGE RISK** ASSESSMENTS UNDER THE SECURE WATER ACT

NORTH **AMERICA** 

**EUROPE** 

THAMES ESTUARY 2100 PLAN

OPERATION OF THE PORTUGUESE **CONTINGENCY HEATWAVES PLAN** 

CALCHAS - AN INTEGRATED ANALYSIS SYSTEM FOR THE EFFECTIVE FIRE CONSERVANCY OF FORESTS

IMPLEMENTATION OF THE INTEGRATED MASTER PLAN FOR COASTAL SAFETY IN **FLANDERS** 

MULTI-HAZARD APPROACH TO EARLY WARNING SYSTEM IN SOGN OG FJORDANE. NORWAY

CLIMATE BOND FINANCING ADAPTATION ACTIONS IN PARIS

GLOBAL

GLOBAL INDEX INSURANCE FACILITY (GIIF)

VILLAGE SAVINGS & LOAN ASSOCIATIONS (CARE International)

CLIMATE BONDS INITIATIVE/ RESILIENCE BONDS

CONTINGENT CREDIT FACILITY (CCF) OF THE INTER-AMERICAN DEVELOPMENT BANK

MEXICO'S NATURAL DISASTER FUND (FONDO DE DESASTRES NATURALES - FONDEN)

> CARIBBEAN HURRICANE EARLY WARNING SYSTEM

CENTRAL AMERICAN PROBABILISTIC RISK ASSESSMENT (CAPRA)

"FONDOS DE ASEGURAMIENTO" SELE INSURANCE **FUNDS** LIVELIHOOD

**MULTICAT BONDS** CARIBBEAN **CATASTROPHE RISK INSURANCE FACILITY** URUGUAY HYDRO PROTECTION POLICY **ENERGY INSURANCE**  **SOUTH AMERICA** AND THE **CARIBBEANS** 

ASIA AND **AFRICA** PACIFIC

**RE-GREENING THE SAHEL** 

**R4 RURAL RESILIENCE INITIATIVE** 

MALAWI SPATIAL DATA PLATFORM (MASDAP) GEONODE

RADIO STATIONS FOR THE TRANSMISSION OF DROUGHT WARNINGS IN KENYA

PRODUCTIVE SAFETY NET PROGRAMME (PSNP) IN **ETHIOPIA** 

AFRICAN RISK CAPACITY (ARC)

PLANNED RELOCATION IN CARTERET ISLANDS IN PAPUA NEW GUINEA

COMMUNITY DISASTER RESILIENCE FUND (CDRF)

MARSHALL ISLANDS FUND **REMITTANCES IN SAMOA** COMMUNITY-BASED PACIFIC CATASTROPHE RISK

CLIMATE VULNERABILITY

**ASSESSMENT** 

NATIONAL PROGRAMME

FOR COMMUNITY

**EMPOWERMENT IN** 

**URBAN AREAS IN** 

**INDONESIA** 

ASSESSMENT AND FINANCING INITIATIVE (PCRAFI)

> JOINT NATIONAL **ACTION PLAN**

DISASTER RISK MANAGEMENT LEGISLATION IN THE **PHILIPPINES** 

PHILIPPINE CROP MONGOLIA INDEX BASED **INSURANCE CORPORATION** LIVESTOCK INSURANCE (PCIC) PROJECT (IBLIP)

Global scale **Transformational** approaches · Altering of fundamental attributes of a system (e.g., Minimizing residual impacts creation of new markets to substitute the market or staple production to be disrupted due to Regional Risk transfer Risk retention L&D. tourism development with conservatory for biodiversity or •Insurance, reinsurance, Savings cultural heritage to be lost, micro-insurance Contingency financing/ development of new species, DRR credit/planning Sovereign risk financing crops) Assessment Contingency and reserve Risk-linked securities Unprecedented transformation of Early warning systems funds ·Climate bonds, resilience Hazard mapping place-based human environment Retrofitting of infrastructure Social protection bonds, green bonds National systems (e.g. resettlement) Vulnerability assessment Building codes & standards Multi-country/regional risk Exposure assessment Training, communication pooling Potential impact assessment and information sharing Climate risk profiling systems Capacity building and enabling environment •Data and information collection/monitoring systems Local scale •Flexible and adaptive national systems, inter-ministerial collaboration and strategies •Institutional conduciveness in legislative and regulatory frameworks •Participatory approach (multi-stakeholder engagement, community involvement) Capacity building, empowering, and training Adaptation planning **Transformational** Disaster Risk Reduction Residual impacts (loss & damage)

### **RISK RETENTION**

- A country, community, or organization explicitly or implicitly chooses to absorb the impacts of a possible (climatic) hazard
- Accepting risk: while taking actions to reduce impacts, some risks can be retained with organizational and financial planning, such as diverting budgets, savings, or establishing ex-ante reserve funds or non-financial solidarity schemes

#### **Case study example:**

R4 Rural resilience Initiative in Ethiopia, Senegal, Malawi and Zambia to increase the food and income security of poor rural households who face climate risks through asset creation (risk reduction), livelihoods diversification and microcredit (prudent risk taking), savings (risk reserves), and insurance (risk transfer).



## FINANCIAL RISK TRANSFER

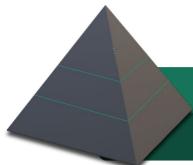
- Shifting financial consequences of risks from one entity to another whereby a household, community, enterprise, or state authority will obtain resources from the other entity after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits.
  - Informally within family and community networks with reciprocal expectations of mutual aid by means of gifts or credit;
  - Formally: governments, insurers, multi-lateral banks and other large risk-bearing entities set up mechanisms to help cope with losses in major events, incl. insurance and re-insurance contracts, catastrophe bonds, contingent credit facilities and reserve funds, where the costs are covered by premiums, investor contributions, interest rates and past savings, respectively.

#### FINANCIAL RISK TRANSFER

Case study example: Mongolia index-based livestock insurance project



Risk layering to reduce the impact of livestock mortality of *Dzud* hazards in Mongolia:



A social safety net of the **government** when losses exceed 25% of the herd value

Transfer of larger losses to the **private insurance sector** – offering affordable options

Herders self-insure losses of up to 7% of their herd's value

→ Low impact-events borne by farmers; less frequent, bigger losses borne by private insurance; catastrophic losses borne by the international reinsurance market.

#### **Key findings:**

- Strong institutional & legal framework allows to design & implement insurance programmes.
- Active role of the government in layering risks.
- Efficient and transparent data management system as a basis for the index-based insurance.

### TRANSFORMATIONAL APPROACHES

- Extreme or rapid climate change impacts, or for particularly exposed or vulnerable populations, call for a more radical response with fundamental changes to attributes of socialecological system (e.g., value systems; regulatory, legislative, or bureaucratic regimes; financial institutions; and technological or biological systems)
- In situations of high vulnerability and low adaptive capacity, extreme climate change impacts make it difficult for systems to adapt sustainably without transformational changes
  - Adaptation measures can become transformational when they are used at a greater scale or combined with other responses leading to much larger effects
  - Some responses are novel or new in the specific context
  - Some responses collectively transform place-based human environment systems or shift such systems to other locations, e.g., climate change-related resettlement

#### TRANSFORMATIONAL APPROACHES

#### **Case study example:**

- Inhabitants of the Carteret islands in Papua New Guinea faced increasing salt water intrusion, land loss and food insecurity;
- Planned relocation organized resettlements of climate change displaced persons; home-grown relocation programme
- "Relocating with dignity", incl. equipping relocated families with new skills;
- Establishing good relations with the existing communities;
- Maintaining cultural bonds to the islands of origin.



Image source: https://ecapra.org/