## Operational DRFI Framework: Actions for governments to build financial resilience across society

### Government Actions for Financial Protection of the State

**BENEFICIARIES**

- **Homeowners and SMEs (Property Catastrophe Risk Insurance)**
  - Collect and manage risk and loss data
  - Quantify potential disaster-related loss from property damage
  - Collect and manage risk and loss data

- **Farms (Agricultural Insurance)**
  - Collect and manage risk and loss data
  - Quantify potential disaster-related loss from property damage
  - Quantify potential disaster losses on low-income households (including farmers)

**Actions**

- **Assess Risks**
  - Collect and manage risk and loss data
  - Assess and legally establish the state’s contingent liabilities to disasters

**Arrange Financial Solutions**

- **Develop financial decision-making tools**
- **Develop a national strategy for financial protection within broader fiscal risk management**
  - Secure immediate liquidity for budget support following disasters through risk layering using financial instruments such as reserves, contingent credit, and catastrophe risk transfer

**Deliver Funds to Beneficiaries**

- **Establish a national disaster fund**
- **Establish transparent, timely, and effective disaster declaration and post-disaster loss reporting mechanisms**
- **Establish post-disaster budget execution mechanisms to transfer funds from national to subnational level and from the Ministry of Finance to line ministries**

**Delinkages to Disaster Risk Management**

- **Reduce Underlying Drivers of Risk**
- **Promote Improved Risk Information**

### Government Actions for Financial Protection of Society

**BENEFICIARIES**

- **Subnational (Soeverign DRFI)**
  - Assess capacity and solvency of domestic insurance markets
  - Assess potential post-disaster (short-term and long-term) funding gaps

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### The Poorest (Disaster-Linked Social Protection)

**BENEFICIARIES**

- **The Poorest**
  - Improve assessing eligibility of beneficiaries for disaster-linked social protection
  - Develop systems and processes to enable effective execution of scalability component

**Actions**

- **Assess Risks**
  - Assess legal and regulatory environment and insurance supervision to allow private sector to develop private insurance solutions while also protecting consumers
  - Risk data collection, management, and sharing

- **Arrange Financial Solutions**
  - Develop domestic insurance solutions while also promoting domestic demand for insurance through financial incentives through premium subsidies or tax breaks

- **Deliver Funds to Beneficiaries**
  - Secure contingent funding for disaster-linked social protection
  - Improve assessing eligibility of beneficiaries for post-disaster payouts and targeting of payouts

**Delinkages to Disaster Risk Management**

- **Reduce Underlying Drivers of Risk**
- **Promote Improved Risk Information**
Example

The government of Colombia included the assessment of contingent liabilities from disasters in the government’s 2011 fiscal risk management strategy.

In Mexico, R-FONDEN—a probabilistic catastrophe risk modeling tool—creates probabilistic simulations of potential material and human losses from disasters.

Morocco developed a probabilistic catastrophe risk modeling tool to help the government prioritize risk reduction investments. The Philippines has developed a catastrophe risk model to evaluate options for risk transfers and insurance to reduce the fiscal burden of disasters.

The Pacific Risk Information System, under the Pacific Catastrophe Risk Assessment and Financing Initiative, includes a database of over 3.5 million geo-referenced buildings and infrastructure in 15 Pacific island countries. It was used to develop the Pacific Catastrophe Risk Insurance Pilot.
## Example

In Taiwan, China, the Residential Earthquake Insurance Fund has developed an earthquake risk model to strengthen the independence and professionalism of earthquake risk assessments.

The preparation of the Southeast Europe and Caucasus Regional Catastrophe Risk Insurance Facility includes extensive multi-hazard country risk assessments for climate and geological hazards.
Example

Contingent lines of credit provide developing countries with funds immediately following disasters. Products are offered by the World Bank, IDB and JICA.

The first multi-country risk pool, the Caribbean Catastrophe Risk Insurance Facility, established in 2007, offers 16 small island states countries over $150 million in hurricane and earthquake coverage.

In 2006, Mexico transferred $450 million of earthquake risk to financial markets by combining the world’s first government catastrophe (cat) bond ($160 million) with parametric reinsurance ($290 million).

In Colombia, the government uses standardized terms and conditions informed by international best practices to purchase catastrophe insurance for its public buildings.
Example

The Turkish Catastrophe Insurance Pool, a public-private partnership with the domestic insurance industry, provides compulsory, affordable earthquake insurance to homeowners, and has catastrophe insurance coverage from less than 3 percent to over 40 percent of residential buildings in urban areas.

The Japanese public-private earthquake insurance program for homeowners relies on the Japan Earthquake Reinsurance Company, an earthquake reinsurance pool backed by the government.
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**Example**

India has developed detailed agricultural risk assessment tools to help policymakers better understand the economic consequences of drought, quantify its effects, and investigate the impact of risk coping strategies, at both the farm and state levels.

In Mongolia, livestock census and surveys are used to inform the government about the economic and fiscal impact of adverse weather events, and in the design and pricing of index-based livestock insurance policies.
### Example

In the Philippines, a survey is mapping out the poorest communities, making it easier to deliver social welfare support, including assistance following a disaster, to those most in need.

Kenya’s Hunger Safety Net Program is investing in poverty mapping to understand levels of household vulnerability. The International Livestock Research Institute developed models to understand drought risk in northern Kenya.

Africa Risk View, the technical model underlying the African Risk Capacity risk pool, combines existing rainfall-based drought early warning models with data on vulnerable populations to form a standardized approach for estimating the cost of responding to food insecurity across the continent.
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**Example**

The Index-Based Livestock Insurance Pilot in Mongolia protects the livelihoods of 11,000 herders, or 22 percent of all herders in piloted provinces in 2012.

India’s weather-based crop insurance has been in place since 2007 for 11 growing seasons, with 11.6 million farmers and $370 million covered in the most recent season. The national crop insurance program, operating since 2010, offers more than 1.1 million farmers a total of $67 million coverage in yield crop insurance.

In Morocco, the government and the agricultural mutual insurance company have established a crop insurance program for cereal crops that currently covers 700,000 hectares and will soon be extended to fruit trees.
### Example

The Productive Safety Net Programme (PSNP) in Ethiopia aims to help the rural poor facing chronic food insecurity to resist shocks and become food self-sufficient. The PSNP includes including continent grants with the World Bank for emergency scale up.

Insurance products offered through the 'Center for Agriculture and Rural Development Mutual Benefit Association (CARD MBA)' in the Philippines are mandatory for members of a network of institutions including CARD NGO and CARD Bank, providing scale and preventing adverse selection.
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### Government Actions for Financial Protection of the State

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### Government Actions for Financial Protection of Individuals and Households (Disaster-Linked Social Protection)

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### Example

The government of Mexico established a post-disaster loss reporting mechanism managed by the Natural Disaster Fund (FONDEN). Affected states can therefore access timely payments from FONDEN, reducing time-consuming coordination problems.

In the Cook Islands, the establishment of the government’s Disaster Emergency Trust Fund has served to reduce delays in emergency response.
<table>
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<th><strong>Example</strong></th>
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<tr>
<td>A public-private partnership, the Turkish Catastrophe Insurance Pool relies on the domestic insurance market for the distribution and settlement of claims. MiCRO's coverage in Haiti is bundled with loans from Fonkoze, the country's largest microfinance institution. A collective voluntary insurance scheme against earthquakes in Manigales, Colombia uses the property tax system to collect insurance premiums</td>
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</table>
### Example

Distribution of insurance policies in the Moroccan multi-peril crop insurance program takes place either by linkage to loans made by Crédit Agricole or by direct marketing of MAMDA, the sole provider of agriculture insurance in the country, structured as a mutual.

The national crop insurance program in India uses GPS-enabled mobile phones and video recording technology to improve crop-cutting experiments and the accuracy of claims assessments, which also reduces fraudulent claims. Claims settlement takes place through direct payment to bank accounts.
**Example**

HARITA, (since renamed to R4), was launched in Ethiopia in 2007 as a pilot program to address the needs of small-scale farmers through drought insurance, credit, and risk reduction, allowing farmers to pay for insurance through labor, an idea based on “food-for-work” programs.
Example

Mexico’s natural disaster fund FONDEN has evolved to include financial accounts to finance investment in risk reduction. It promotes informed decision by requiring state governments to complete a risk assessment (including development of a risk atlas) before becoming eligible for risk reduction project financing.
Example

After setting up the TCIP, the government of Turkey legally abolished its obligation to fund the reconstruction of residential dwellings following earthquakes. It also strengthened building construction codes and ensured they were adhered to.
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**Example**

Indian farmers’ agricultural insurance premiums are now based on their individual risk profile after the national crop insurance program moved to a risk-based “actuarial regime”. This allows farmers to see the riskiness of planting different crops and choose appropriately.
### Example

Members of PSNP households must participate in productive activities to build more resilient livelihoods, such as rehabilitating land and water resources and developing community infrastructure, such as rehabilitating rural road and building schools and clinics.