



Institute
and Faculty
of Actuaries

Disaster Risk Financing
& Insurance Program



Government
Actuary's
Department

Financial Protection Against Disasters

The role of actuaries in shaping and implementing better financial protection against disasters in developing countries

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20 October 2017

Disaster Risk Finance Around the Globe



From Ex-Post Borrower to Ex-Ante Risk Manager

Proactively manage residual risk by planning ahead and setting resources aside to finance disaster response activities before disasters happen

POST- DISASTER

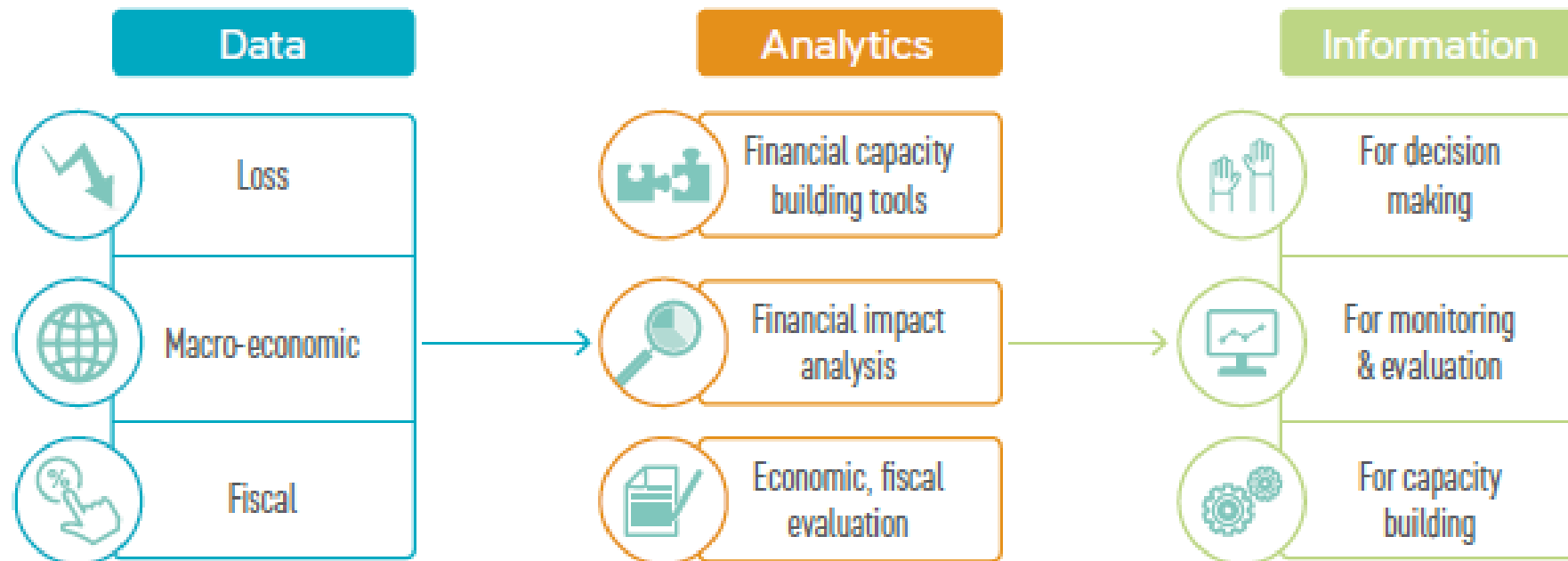
- International assistance
- Budget reallocations
- Debt issuance
- Post-disaster financing

PRE-PLANNED FINANCING

- Contingency/reserve funds
- Contingent financing
- Market-based risk transfer solutions
- Catastrophe risk pools

Disaster Risk Finance Analytics – World Bank Function

- **Strengthen developing countries financial management of disaster risk** by providing **quantitative financial and economic information** and tools for decision making
- Resourced through actuaries, economists, financial engineers, risk modelers, public finance specialists



Disaster Risk Financing and Insurance Program

- Objective is to **increase financial resilience** of countries through **minimizing the cost and optimizing the timing of meeting post-disaster needs**.
- DRFIP provides countries with **Analytical & Advisory Services, Financial Services and Convening Services**.



Actuaries supporting financial protection decisions



Philippines
Budget Protection

Actuaries supporting financial protection decisions

Kenya Agriculture Insurance

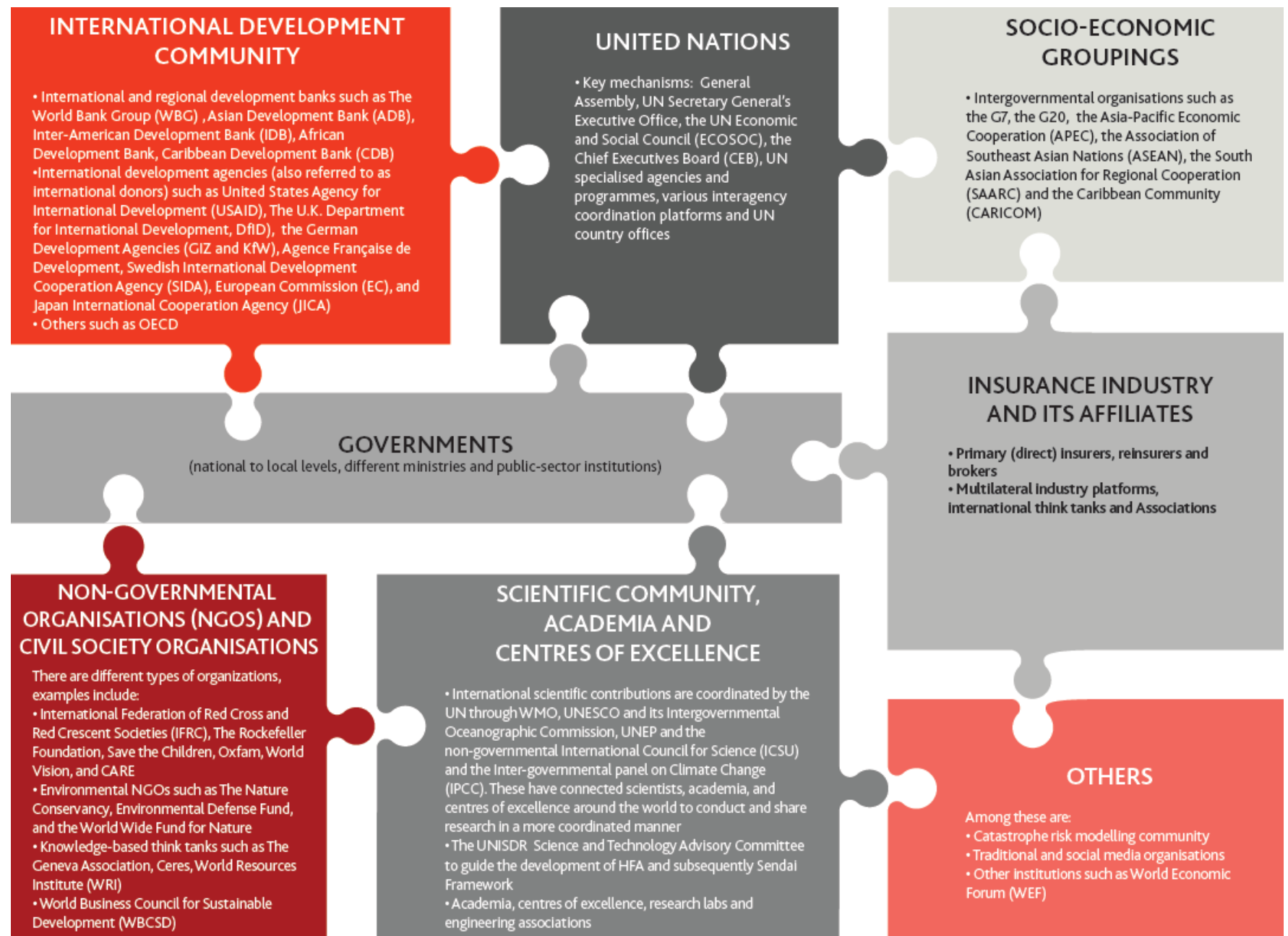


Actuaries supporting financial protection decisions



Uganda
Social Protection

There is a large, growing stakeholder landscape in disaster risk finance for developing countries



Developing and implementing solutions typically requires a range of experts and stakeholders

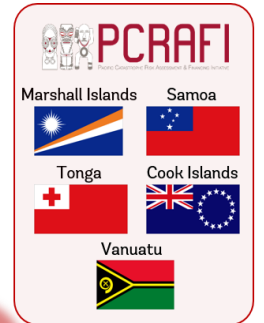
	Scientists	Implementers	Financial specialists	Senior officials
Plan	What potential shocks could be planned for?	What will response be: 1. Logistics 2. Targeting 3. Communication, etc.	Planning for how financial resources will flow (financial management)	Who to protect? Against what? How will protection be implemented?
Decision process	Can early warning data be used to trigger financing, or early action?	What should the decision process for implementation be?	What should the decision process for financing be?	Who will decide what, when?
Financing on standby	What is the likelihood of different potential events?	How much would response cost in different scenarios?	How will response expenditures be financed?	Who will pay and how?

Government-owned risk pools have been developed to get the most out of partnerships...

Existing sovereign catastrophe risk pools have been designed to:

- Strengthen regional/sub-regional cooperation and policy dialogue
- Take a collective and standard approach to quantitative analysis and modelling
- Improve information sharing
- Strengthen disaster response

- Use capital and reinsurance markets to transfer portfolio risks and reduce capital costs



Sovereign catastrophe risk pools around the world

3

pools

\$46m

annual premium

31

countries

\$745m

annual coverage

30+

international reinsurers

\$107m

insurance payouts



Perils:



Earthquake Tropical cyclone Rain

Countries: 26 eligible, 17 participants

Payouts to Date: US\$70 million



Perils:



Drought Tropical cyclone Flood

Countries: 32 eligible, 8 participants

Payouts to Date: US\$34 million



Perils:



Earthquake Tropical cyclone Rain

Countries: 15 eligible, 6 participants

Payouts to Date: US\$3.2 million

The UK Government has just announced a new partnership – the Centre for Global Disaster Protection

Objective: to reduce the social and economic impacts of disasters, through

- Getting assistance to the people that need it more quickly and effectively in an emergency;
- Earlier action; and
- Speeding recovery

Three parts of this:

- Pre-disaster planning and systems;
 - Pre-agreed finance; and
 - Pre-agreed triggers and processes for action.
-

Centre for Global Disaster Protection

Activities:

- Providing **training, risk analysis and financial analytics** to help developing countries' better understand and make informed decisions about how to manage risks
- investing in **data, science and research** needed to design systems and plans that work for the poorest
- bringing together experts from finance and humanitarian communities to provide **neutral advice**
- Catalysing innovation in design of new, **innovative financial tools** – including insurance – that are right for disaster planning and deliver the most benefit for the poorest when disaster strikes.

Partnerships:

- UK Government (including DFID and GAD), World Bank, researchers, insurance industry, developing country governments, regional risk pools, etc.

Is there any interest in setting up an IFOA Working Party on Disaster Risk Finance

Areas for Potential IFOA Research

Feasibility Study

Concept paper on a global risk pooling facility

Evaluation Guidelines

Approach paper on how actuarial analysis could help governments to choose between different sovereign insurance instruments

Index Development

Development of an index to assess the relative financial resilience of governments

Questions

Comments

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