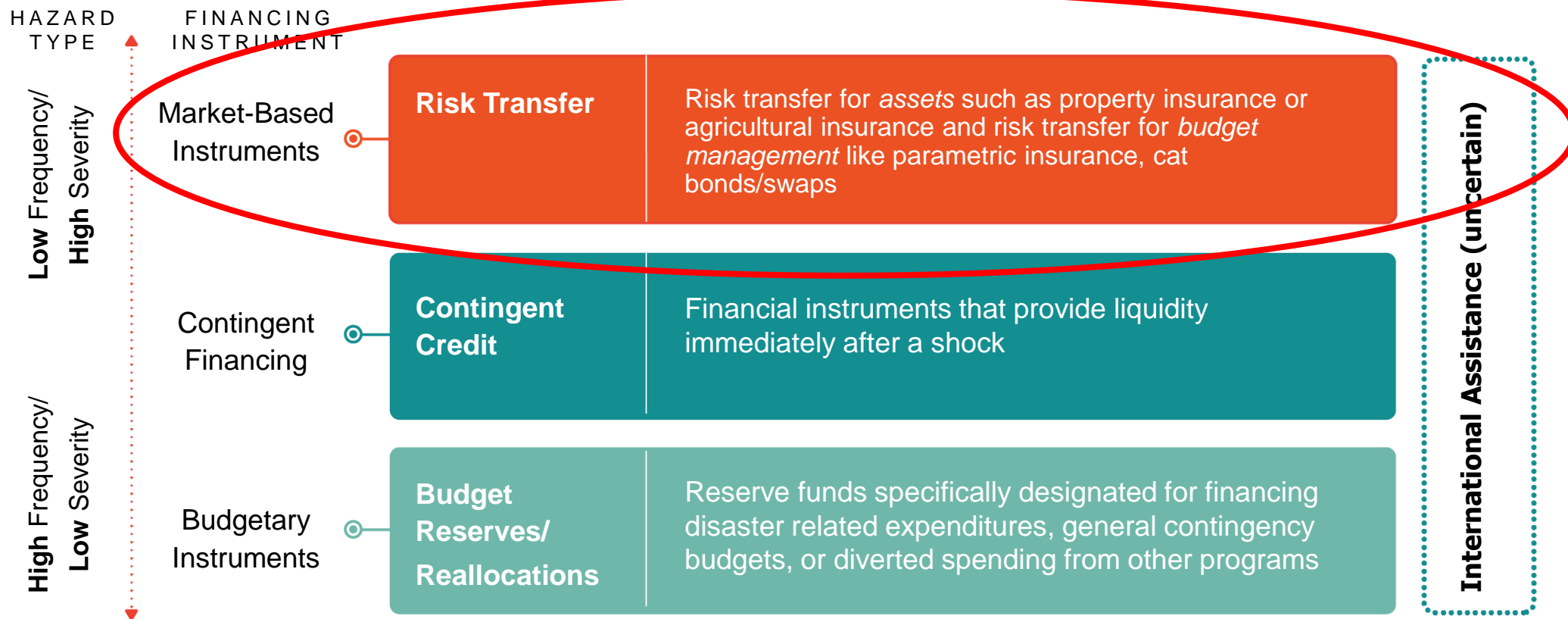




Parametric insurance and risk pools

Richard Poulter, Senior DRF Consultant, World Bank Group
18th July 2018

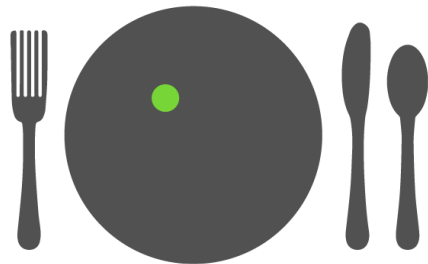
Parametric insurance may be one component of a DRF strategy



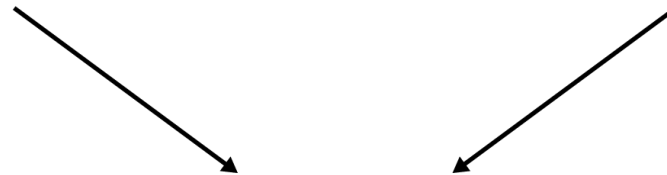
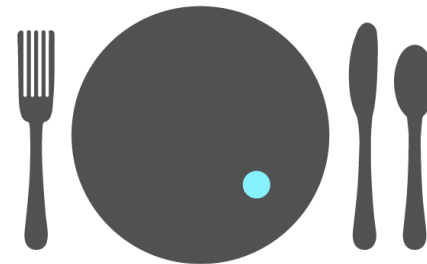
	Traditional insurance	Parametric insurance
<i>Trigger for payout</i>	Actual loss incurred	Natural hazard event exceeding a defined threshold (e.g windspeed or earthquake magnitude)
<i>Risk of payout not covering losses</i>	No risk as payout is based on loss	Risk that the index used is not well-correlated with the actual losses sustained (basis risk)
<i>Speed of payout</i>	Can be very slow	Usually within 2 weeks
<i>Use of payout</i>	Intended to cover only the loss sustained	No restrictions on use
<i>Loss adjustment and claims process</i>	Loss adjustment process can be lengthy and complicated	No loss adjustment process
<i>Pricing flexibility</i>	Few policy options	Very flexible structure – premium can be determined by policyholder

Sovereign catastrophe risk pools

Individual country risk

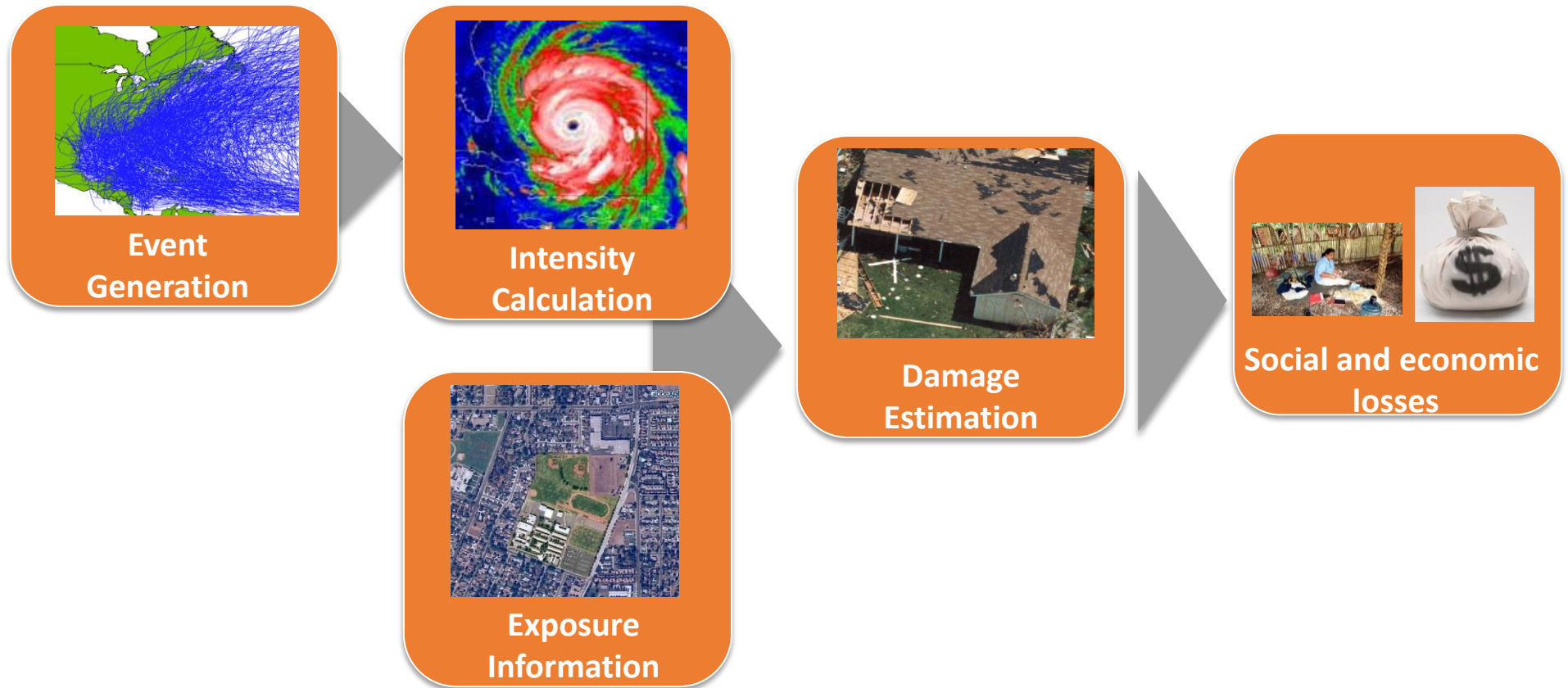


Individual country risk

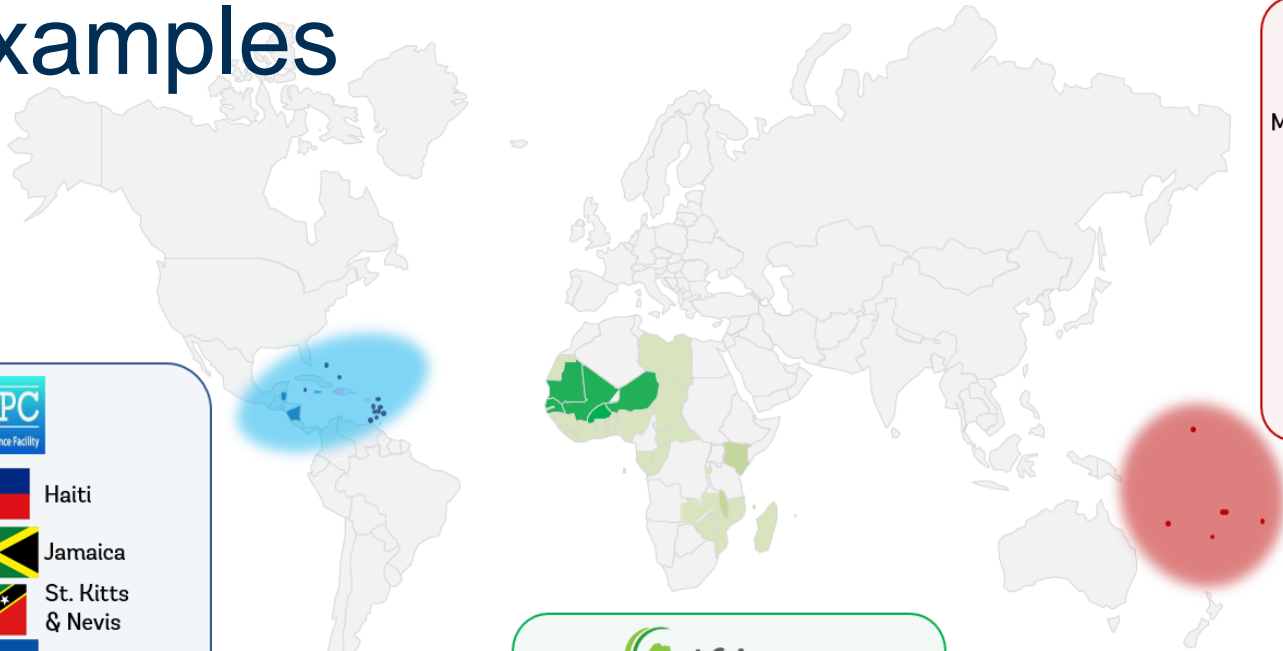


Pooled risk

Risk assessment – a general framework








Global examples



CCRIF SPC
The Caribbean Catastrophe Risk Insurance Facility

 Anguilla	 Haiti
 Antigua & Barbuda	 Jamaica
 Barbados	 St. Kitts & Nevis
 Belize	 Saint Lucia
 Cayman Islands	 St. Vincent & the Grenadines
 Dominica	 Trinidad & Tobago
 Grenada	 Turks & Caicos Islands
 Nicaragua	

PCRAFI
Pacific Catastrophe Risk Assessment & Financing Facility

 Marshall Islands	 Samoa
 Tonga	 Cook Islands
 Vanuatu	

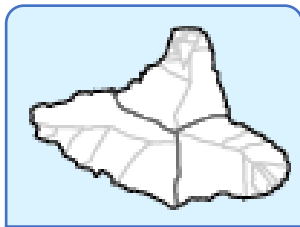
African Risk Capacity
Sovereign Disaster Risk Solutions

 Burkina Faso	 Mali	 Mauritania
 Niger	 Senegal	 The Gambia

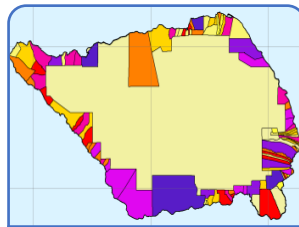
Example: The Pacific Risk Information System (PacRIS)



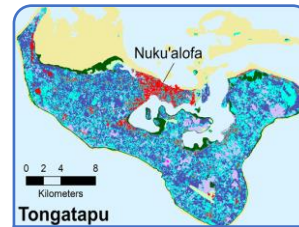
Satellite imagery



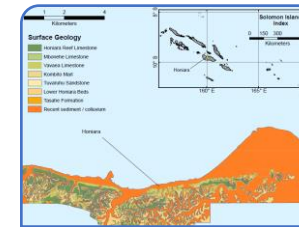
Administrative Boundaries



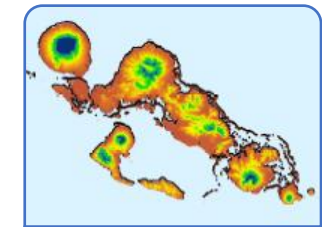
Population Census



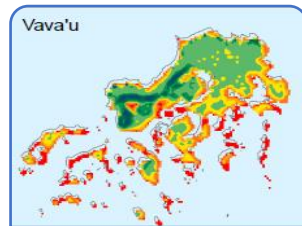
Agriculture



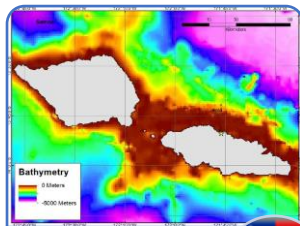
Surface Geology



Topographic maps



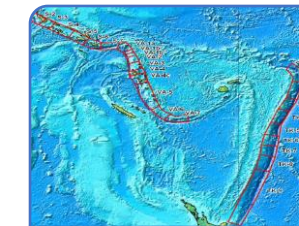
Surface soil



Bathymetry



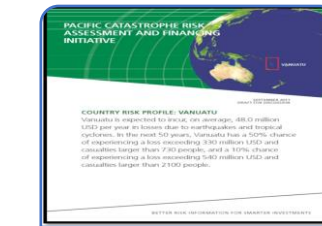
Damage & Loss Assessments



Geodetic and Fault Data



Infrastructure



Documents



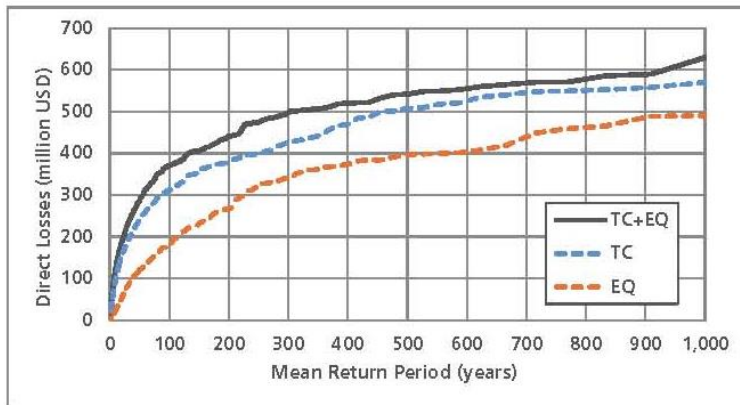
Pacific Community
Communauté du Pacifique



PCRAFI
PROGRAM

A key output: country risk profiles

Mean Return Period (years)	AAL	50	100	250
Risk Profile: Tropical Cyclone				
Direct Losses				
(Million USD)	36.8	241.0	312.0	399.0
(% GDP)	5.0%	33.1%	42.8%	54.7%
Emergency Losses				
(Million USD)	8.5	55.3	71.7	91.7
(% of total government expenditures)	4.7%	30.9%	40.1%	51.3%
Casualties	41	260	333	415



The collage shows a series of reports titled "PACIFIC CATASTROPHE RISK ASSESSMENT AND FINANCING INITIATIVE" and "COUNTRY RISK PROFILE: VANUATU". The cover page includes a map of Vanuatu and the text: "SEPTEMBER 2011 DRAFT FOR DISCUSSION". The main text on the cover page states: "Vanuatu is expected to incur, on average, 48.0 million USD per year in losses due to earthquakes and tropical cyclones. In the next 50 years, Vanuatu has a 50% chance of experiencing a loss exceeding 330 million USD and casualties larger than 730 people, and a 10% chance of experiencing a loss exceeding 540 million USD and casualties larger than 2100 people." The reports also feature various maps of Vanuatu and data tables. The bottom of the cover page has the slogan "BETTER RISK INFORMATION FOR SMARTER INVESTMENTS".



Pacific Community
Communauté du Pacifique



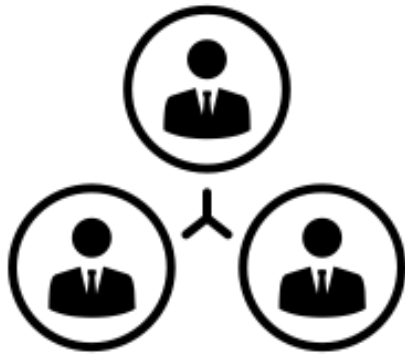
PCRAFI
PROGRAM

Analytics using PacRIS has supported:

- Informing disaster risk finance **policy decisions**
- Assessing the **diversification benefit** from pooling risk
- Selection of **insurance coverage** for countries
- **Transferring risk** to the international insurance market
- Calculating the **initial capital requirements** of the PCRAFI Insurance Company

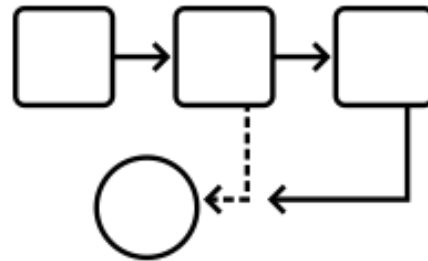


Founding principles



Political Commitment

Political commitment is both a pre-condition for successful catastrophe risk pools and a by-product of collaboration



Operational Design

Sound operational design minimizes operating costs, and generates public goods



Financial Sustainability

Financial sustainability allows catastrophe risk pools to provide access to cost-effective insurance as part of a strategic approach to financial protection

Lessons learned:

1. *Pools can only succeed with **strong political commitment** at the national and international level*
2. *The pools developed to date have relied on **strong support** from donors and international organisations for financial and technical assistance*
3. *Participation in a pool can strengthen a country's **disaster preparedness** through:*
 - *Fostering policy dialogue on risk management*
 - *Development and standardisation of contingency plans*

Lessons learned:

4. Pools can create **public goods** such as:
 - Risk information systems for planning
 - Real-time tracking of disaster events
5. Pools can offer risk diversification between countries, resulting in **significant savings** in risk transfer solutions such as insurance
6. Pools can offer financial products to countries that would otherwise not be available, helping countries develop **comprehensive disaster risk financing strategies**



**UNIVERSITY OF
CAMBRIDGE**
INSTITUTE FOR
SUSTAINABILITY LEADERSHIP

**Disaster Risk Financing
& Insurance Program**



CENTRE FOR
GLOBAL
DISASTER
PROTECTION



GFDRR
Global Facility for Disaster Reduction and Recovery

