

PACIFIC REGIONAL DISASTER RISK FINANCE SYMPOSIUM

# DISASTER RISK FINANCING IN THE PACIFIC

## Session 1: Introduction and Overview

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# DISTINCT YET RELATED

**Climate Finance – financing for interventions that aim to reduce vulnerability to disasters and climate change impacts (human, economic, environmental) and/or fund climate mitigation activities.**

**Risk Finance – is the term applied to any financial instrument that helps an individual, community, company or government to fund and mobilize a response to a pending or experienced threat or event. These instruments and products are designed to reduce the financial burden of a disruptive event or limit the financial implications associated a hazard event on the recipient.**

**Examples of different risk financing modalities:**

- Insurance (personal, asset based, sovereign...etc)
- Grants that are pre-arranged and dispersed when a disaster occurs(contingent finance)
- National Disaster Funds (budget reserves)
- Personal savings accounts (provided funds are kept for a specific purpose)
- Special bonds that make a payout if a specific event occurs (catastrophe bonds)
- Funds that are dispersed prior to an event to fund preventative actions (forecast-based finance)

Policy area	Climate Finance	Risk Finance
Energy	A New Solar Array is Funded. The concessional finance arrangements offer incentives to the recipient if comprehensive insurance for the investment is taken out	Asset Insurance is secured to cover cyclone damage, reducing the interest on the concessional loan and protecting the investment.
Infrastructure	Climate Finance is used to retrofit a public building to withstand high wind speeds	Flood insurance is taken out to cover potential damage to the building's ground floor
Private Property and Public Safety	Government invests in climate adaptation measures to reduce community vulnerability. Climate finance continues to fund critical development projects.	1) The community as a group invests in low-cost insurance to cover losses from extreme events. 2)The government joins a sovereign risk pool to increase liquidity required to manage national responses, increasing financial capacity to support communities.
Food Security	Farmers invest in drought resistant crops and adjust growing methodology through technical assistance provided by an international NGO	Recognizing that extreme droughts could occur, farmers take out index-based crop insurance to insure their investment and reduce risk of major losses due to a 1 in 10 year drought event.
Private Sector	A business owner receives training to improve the preparedness of her staff and increase the business's capacity to withstand disaster events. The risk assessments conducted and training identify that the business is highly exposed to losses from flooding.	The business owner takes out flood protection insurance. The premium rate is reduced due to the fact that a comprehensive flood risk management plan is in place.
Localised Risk	A particular community is at risk of coastal inundation during a specific time of year. Climate finance has been used to help the community to improve the resilience of physical structures and increase coastal protection. However, it is clear that in ten years time this particular piece of land will not be habitable. In the meantime the community is not willing or prepared to move.	Government designs a costed evacuation protocol which is triggered and funded following a particular forecast-based trigger. This ensures there is a speedy pre-emptive measure for fundamentally preventing the risk of a loss of life due to an inundation event.

# CLIMATE AND DISASTER RISKS IN THE PACIFIC

## WHAT WE KNOW

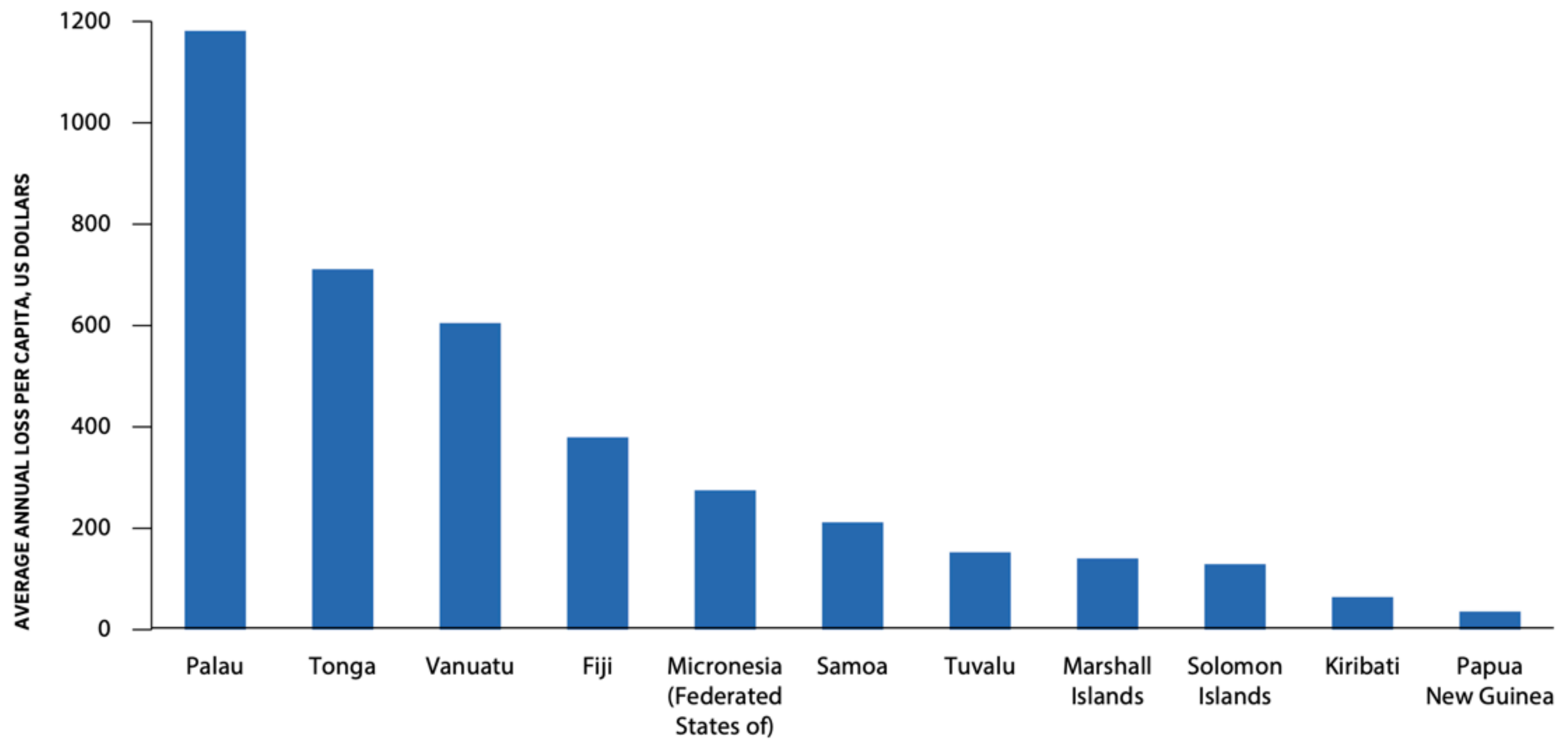
- \* **The IPCC 6th Assessment Report: The window for limiting global average temperature rise to below 1.5c may have closed. Global emissions need to be reduced by 43% over the next 8 years to have any potential to keep 1.5c in reach.**
- \* **Climate change will remain a current and future threat to human wellbeing, economic stability , and environmental integrity in the Pacific.**
- \* **Climate change impacts such as changing rainfall patterns, sea level rise, and intensified hydrometeorological events will continue to exacerbate existing challenges in the Pacific raising the cost of development.**

## WHAT WE KNOW AS A RESULT

- \* **Investments and activities designed to build long-term resilience need to be complemented by additional and dedicated financing needed to offset and reduce burden on individuals, communities, businesses, and Governments.**
- \* **Risk/Crisis financing strategies are needed to manage the immediate and potential impacts of climate change and disaster events**

**SINCE LATE 1990S TROPICAL CYCLONES AND EARTHQUAKES ALONE HAVE CAUSED OVER US\$3 BILLION IN ESTIMATED DAMAGE AND LOSSES IN PACIFIC ISLAND COUNTRIES**

**AVERAGE ANNUAL LOSS PER CAPITA IN THE PACIFIC IS HIGH AND RISING**





# A WIDENING PROTECTION GAP

**Globally - insured losses have risen five-fold in the past 30 years**

**The 'Protection gap' refers to the difference between the economic losses inflicted by a disaster and the amount of those losses covered by insurance or another type of risk financing instrument.**

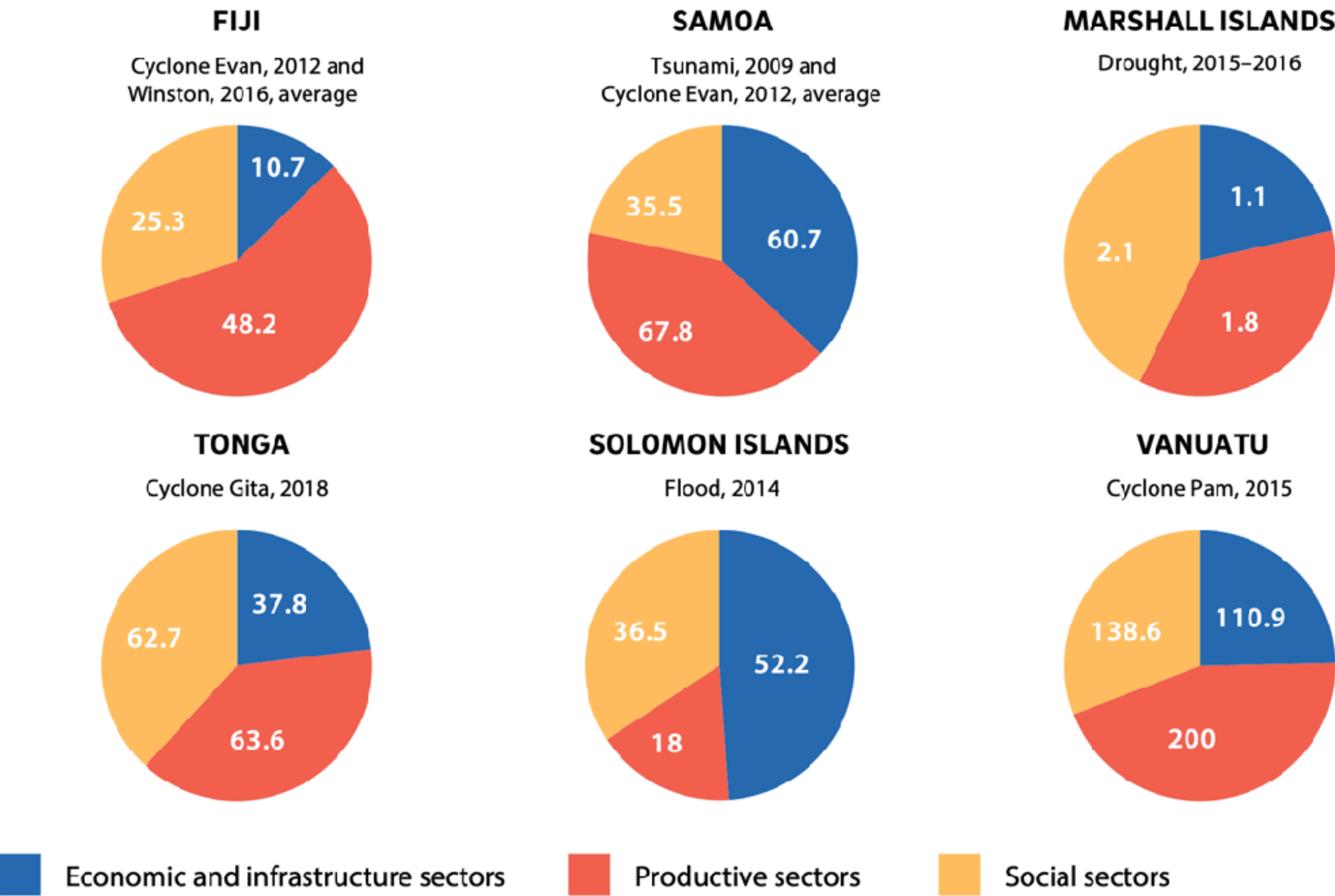
**The protection gap in the Pacific is widening as annual losses due to climate and disaster events increase.**

**In most cases the increase in risk and experienced losses has not been met by a proportional increase in financing.**

- Economic Damage and Loss in Fiji following TC Winston in 2016 was approximately 1.96bn FJD. Of that \$274.1m FJD was covered by insurance.
- The Tonga Hunga-Tonga-Hunga-Ha'apai volcanic eruption, tsunami and ashfall dealt an estimated US\$90.4M in damages. The loss was equivalent to approximately 18.5% of Tonga's GDP.
- Many national reserve funds set up to help support disaster response in Pacific nations are poorly resourced and due to existing financial constraints cannot be relied upon as

# PRODUCTIVE AND SOCIAL SECTORS ARE SUFFERING

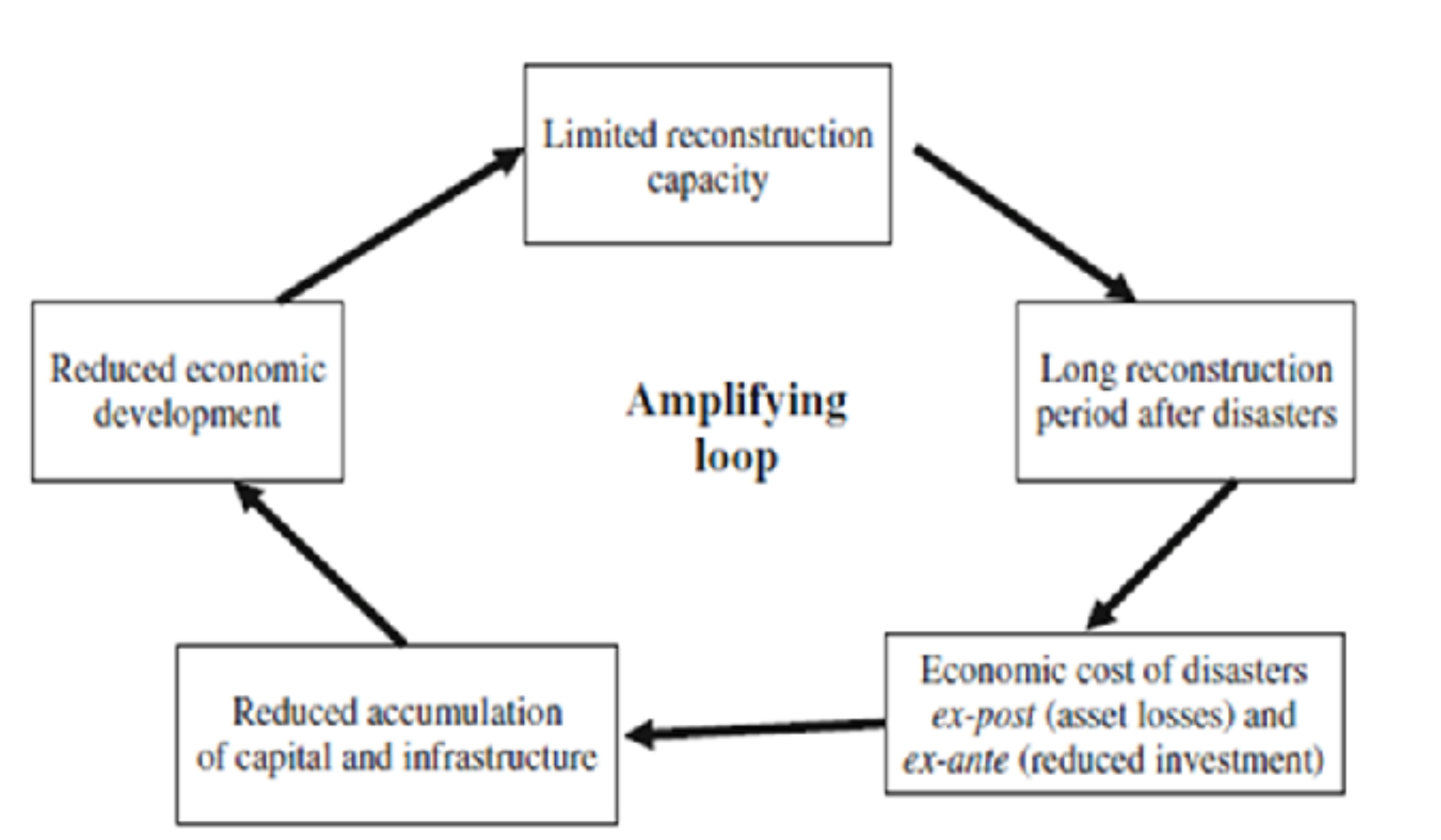
Recent major disasters over the last 10 years (millions USD)



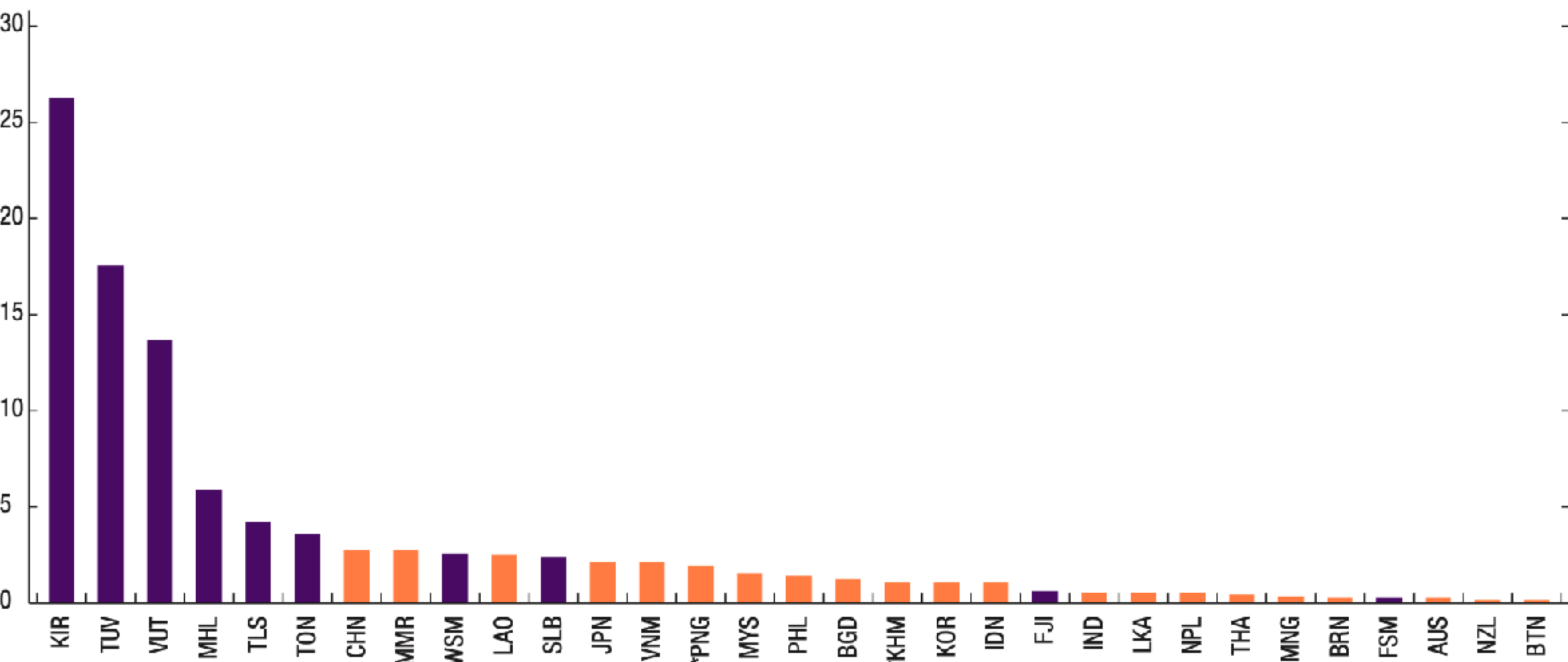
Source: ESCAP, based on Global Facility for Disaster Risk Reduction, 11 Post Disaster Needs Assessment reports available for last 10 years in the Pacific.

# INADEQUATE CLIMATE FINANCING COMPOUNDS THE PROBLEM

- 1. To meet adaptation needs, PSIDS collectively need a further estimated \$1 billion USD annually.
- 2. This climate financing gap has slowed and curtailed resilience-building efforts increasing the scale of finance needed to manage disaster events.



**Figure 4. Estimated Annual Public Climate Adaptation Costs**  
(Percent of GDP)  
Based on Pre COVID GDP

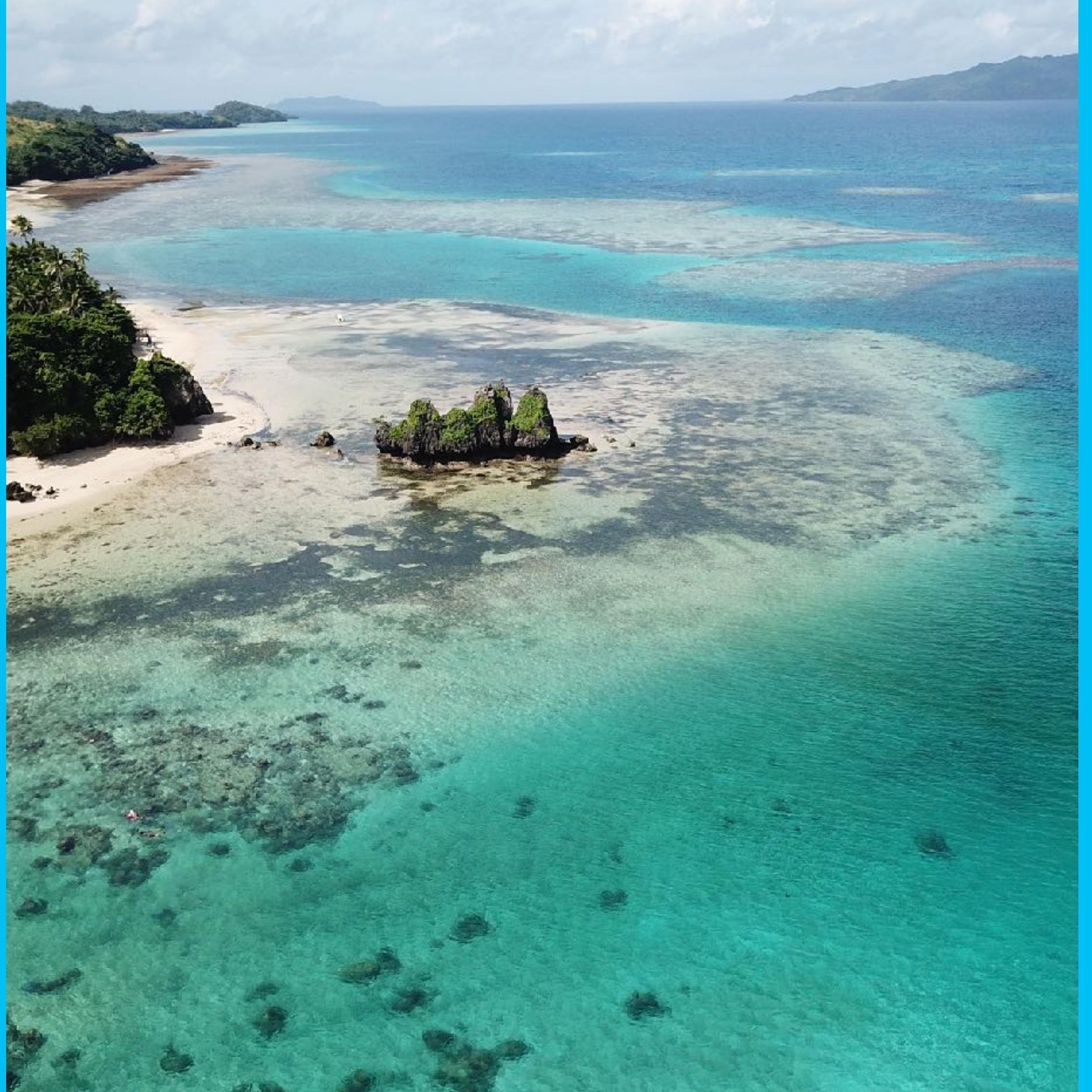


Source: IMF (2021a).  
Note: The purple bars represent PIC, and the orange bars represent all other Asia-Pacific countries. Bars correspond to the sum of upgrading and retrofitting costs in the public sector and coastal protection costs. The level of protection being costed corresponds to the protection that keeps average annual losses below 0.01 percent of local GDP for protected areas. Data labels in the figure use International Organization for Standardization (ISO) country codes.  
\*Missing values in the risk intolerance case for Cambodia and for the private sector for Papua New Guinea.



# TRENDS

- Insurance penetration remains low across Pacific Island Countries
- High dependance on ‘reactive’ financial support organised post disaster
- Contingent financing arrangements pre-agreed with ADB and the World Bank are the most common type of pre-emptive financing secured and used in the Pacific to date
- Under-developed and under-resourced social protection systems





# RISK FINANCING TYPOLOGIES





# TYPE 1: RISK REDUCTION AND PREPAREDNESS

- Financial instruments that are pre-arranged and are triggered/come into effect BEFORE a disaster event occurs
- Forecast Based / Anticipatory Financing instruments involved pre-arranged logistics or activities that help to fundamentally reduce risk and increase preparedness.
- For example - an evacuation protocol for an exposed and remote island community which is activated and financed when windspeed exceed a specific threshold
- While forecast-based presumptive risk financing instruments are not currently part of existing strategies in place in the Pacific, Pacific island countries continue to invest preparedness and risk reduction more broadly.

# TYPE 2: RISK RETENTION INSTRUMENTS

Pre-arranged strategies for increasing national capacity to absorb the financial implications of a disaster event

- National Reserve Policy
- National Contingency / Reserve Fund
- Contingent Financing Arrangement - (i.e. World Bank CAT-DDO, ADB Policy-based contingent financing)
- Concessional Loans
- These instruments are used throughout Pacific Island Countries and most countries have used one or more of these instruments in the past 10 years.



# TYPE 3: RISK TRANSFER INSTRUMENTS

- Insurance Instruments
  - indemnity triggers (depend on actual losses)
- Catastrophe Bonds
  - index triggers (triggered by an estimated industry loss “index”)
- Parametric Insurance
  - parametric triggers (based on well-defined parameters of an event)
- Index-based insurance
  - modelled triggers (based on parameters input into exposure models)
- Indemnity based insurance
  - hybrid triggers (combinations of the above triggers)
- Re-insurance
- Limited options but increased emphasis on developing risk transfer opportunities over the last 5 years as awareness and rationale increases

# TYPE 4: EX-POST POLICY OPTIONS

Actions taken by Government to help offset and fund disaster response

- Budget Reallocations
- Tax Increases
- Capital Budget Realignment Exercises
- Avoided as an approach in most cases, however, budget reallocations of some kind following a disaster event common

# TYPE 5: INTERNATIONAL EMERGENCY FINANCING

- International Aid
- Emergency Credit or Debt Relief (i.e. - IMF Catastrophe Containment and Relief Trust)
- International emergency funding facilities (i.e. - UN Central Emergency Response Fund, ADB Asia Pacific Disaster Response Fund, World Bank Crisis Response Window, IFRC Disaster Relief Emergency Fund)
- Reactive support provided in solidarity
- Cannot be planned for or relied upon
- These arrangements account for the largest quantum of finance allocated to manage disaster risks in the Pacific

# RISK LAYERING

- No single financial instrument can address all risks
- Need to combine *Prevention, Retention, and Transfer*

Risk Type		Household, Private Sector	Government
Highest Risk	Very low frequency very high severity	Government Assistance and humanitarian aid, Insurance, Forecast-based Actions	Bi-Lateral and Multi-Lateral assistance, Contingent Finance, Emergency Liquidity (budget reserves), Sovereign Risk Transfer, Catastrophe Bonds, Regional risk pools
High Risk	Low frequency moderate to high severity	Insurance (property, agricultural, hazard-based), Forecast-based Actions	Sovereign Risk Transfer, Contingent Finance
Medium risk	Medium frequency, moderate severity	Insurance (property, agricultural, hazard-based)	Budget reallocations, Emergency reserves
Low	High frequency low severity	Remittances, Family support, informal risk sharing	Emergency reserves



# KEY CONCEPTS

- 1) **Timeliness of Funding**: Speed matters but not all resources are needed at once
- 2) **Cost / Affordability**: Consideration of sustainability, opportunity costs (weigh up benefits of alternative ways that money spent on premiums could be used)
- 3) **Disbursal Mechanisms**: How money reaches beneficiaries is as important as where it comes from.  
  
Must be effective, transparent, and efficient to create trust and accountability.
- 4) **Analytics and Data**: To make sound financial decisions you need to have the right information.  
  
What are the risks? Exposure level and vulnerability of different groups?
- 5) **Risk Responsibility**: Who should pay? What are contingent liabilities ? What is our risk-bearing capacity?

# KEY MESSAGES

- Increased public and private sector awareness and participation in risk prevention is required to drive the market for inclusive, accessible, and affordable insurance products.
- Reducing data deficits, improving data availability and experience/data sharing is required to increase financial preparedness and risk foresight. Priorities must be established through an evidence based approach.
- Finance options must be reliable, sustainable, and affordable and developed based on long-term risk scenarios.
- Insurance instruments must be focused and well-defined to ensure they are effective. To protect the most vulnerable premiums must be affordable. Micro-insurance products for rural families, outer island communities, and small holder farmers are an important means for supporting remote communities who have lesser access and proximity to government services.
- The geographical spread of Pacific populations needs to be leveraged to support the economies of scale needed to pool risk effectively.
- **Incentivising risk reduction must remain the priority**