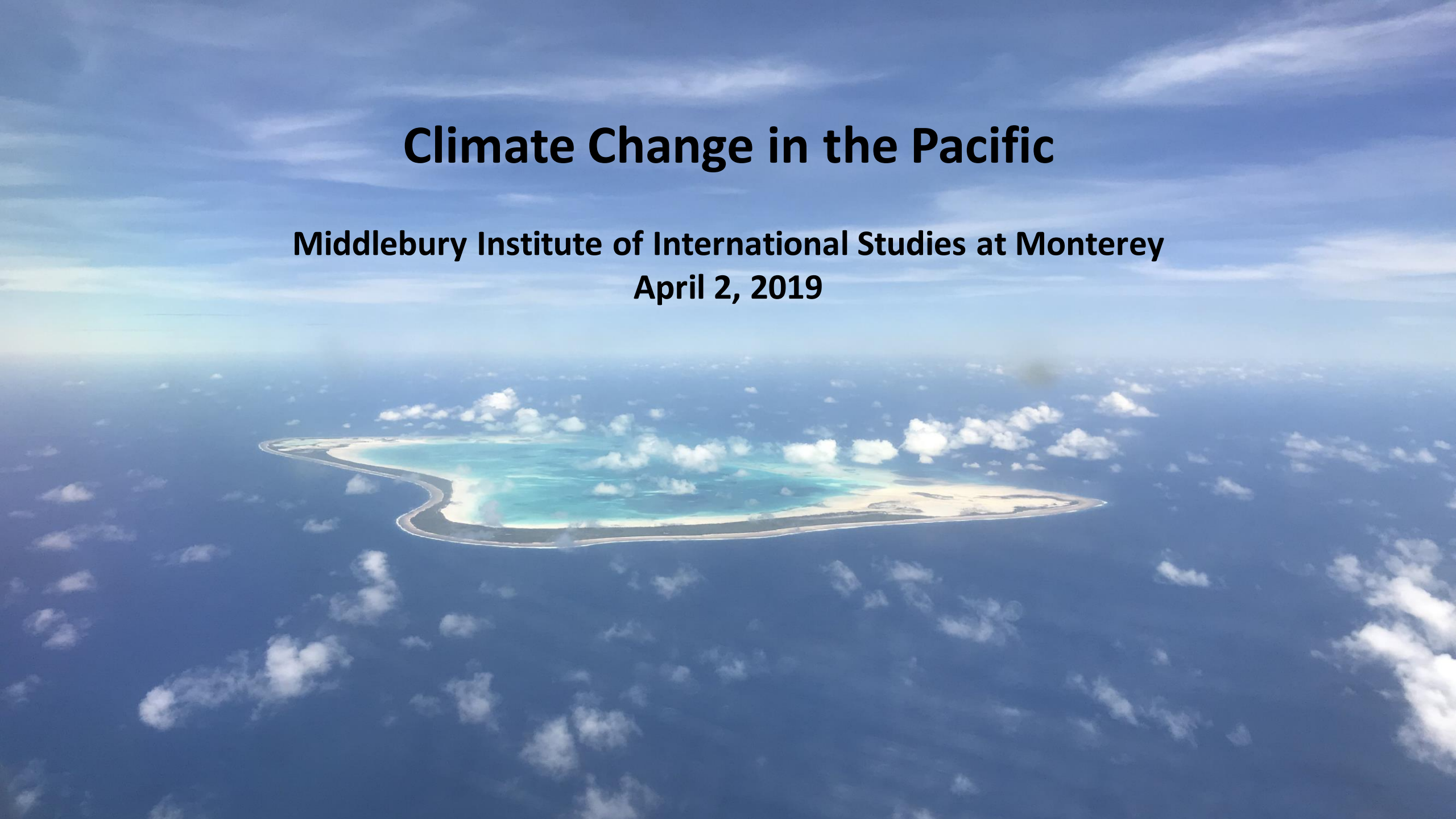
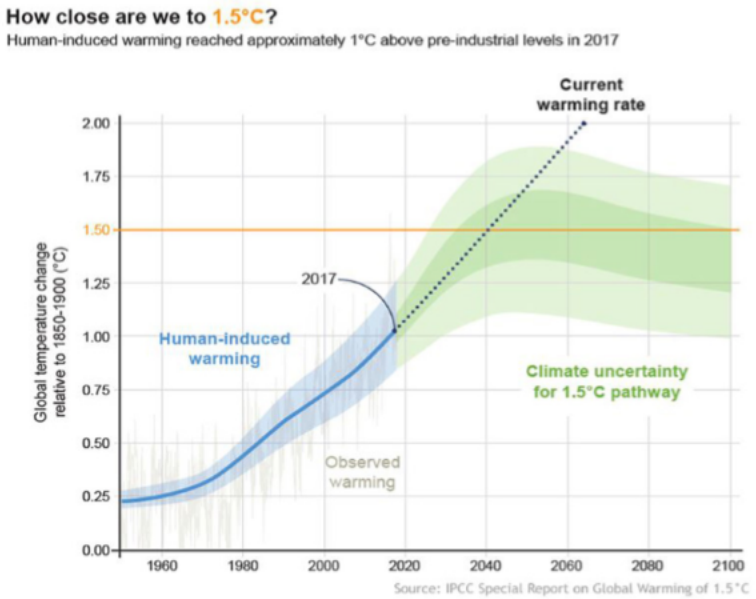
Climate Change in the Pacific

Middlebury Institute of International Studies at Monterey
April 2, 2019



Science Speaks 2018 – Need for Urgent Action on Long Term Issues



2018 Science Speaks

IPCC report, US climate assessment, UN Gap report, Global Carbon Project

- ✓ Negative impacts of climate change already felt; current path less sustainable than we thought; window to avoid severe negative effects closing rapidly and significant low-carbon transformation is required.
- ✓ Global carbon emissions reached an all-time high in 2018, rising 2.7% after an increase of 1.6% in 2017.
- ✓ Earth's oceans have warmed more than previously thought, with impacts on sea levels and storm intensity.

Impacts of climate and natural disasters continued in 2018

- ✓ Economic cost of natural disasters was $320 b in 2017 and $225 b in 2018
- ✓ Wildfires (California, Greece), Floods (Kerala India, Nigeria, Japan, N. Korea), Heatwaves (Pakistan, Spain, Armenia, Japan. Oman), Drought (Horn of Africa, East/Southern Africa) Hurricanes/Typhoons (US, Philippines)

Climate change and natural resource degradation will have a negative impact on poverty, jobs and economic growth

Over next 10 years:

- ✓ 10% reduction in GDP from loss of biodiversity and ecosystem services
- ✓ Loss of 72 m full time jobs due to heat stress
- ✓ 100 m more people in poverty from climate related impacts
- ✓ Loss of 3% of GDP per year from air pollution in India
- ✓ Loss of productivity caused by a hotter world is estimated to cost the global economy 2 trillion dollars

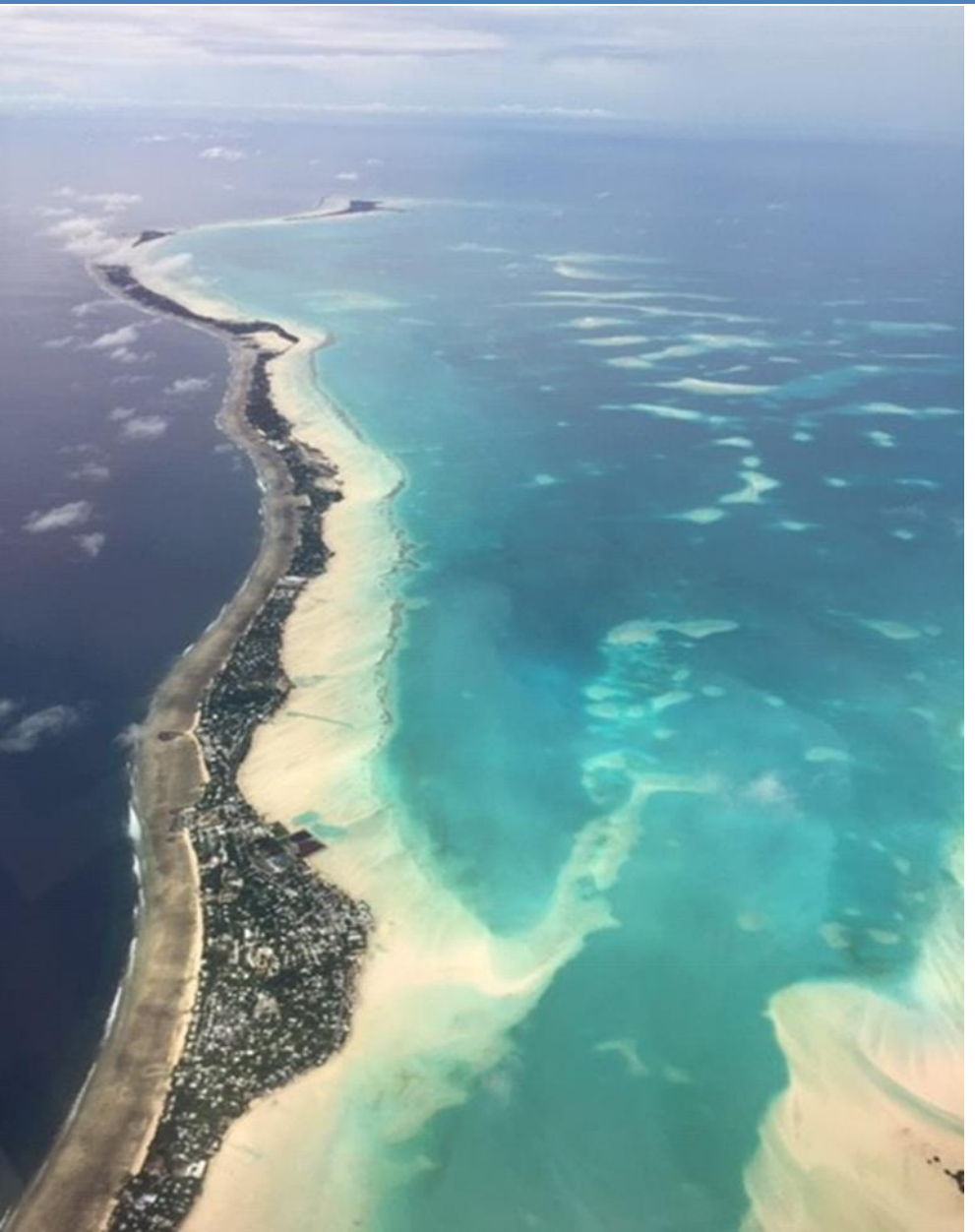
Over next 30 years:

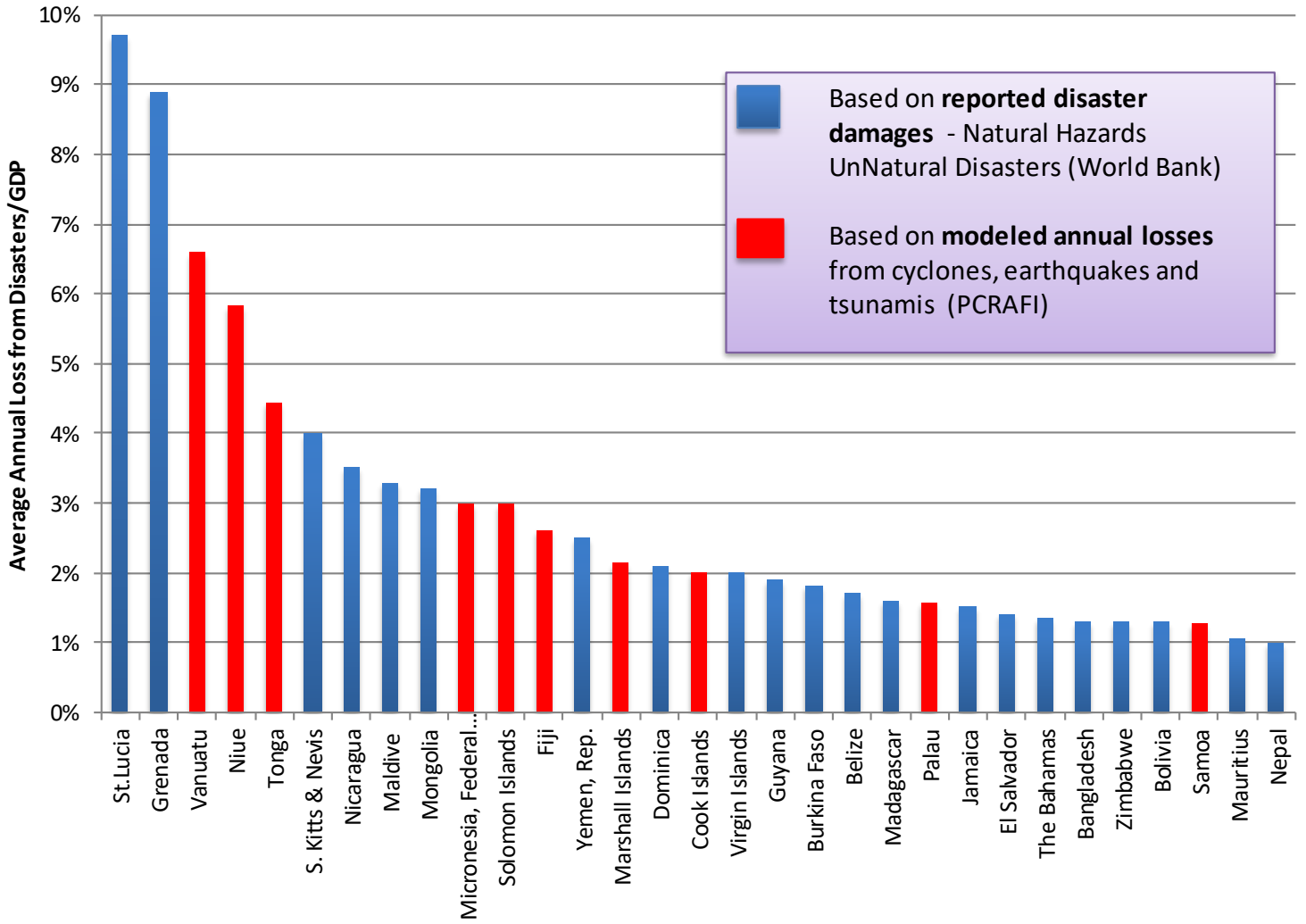
- ✓ 140 m people forced to move to less vulnerable places (climate migrants)

The Pacific is one of world's most vulnerable regions to natural disasters and climate change

Pacific Island Countries face extreme risks

Building resilience is essential for poverty alleviation and prosperity



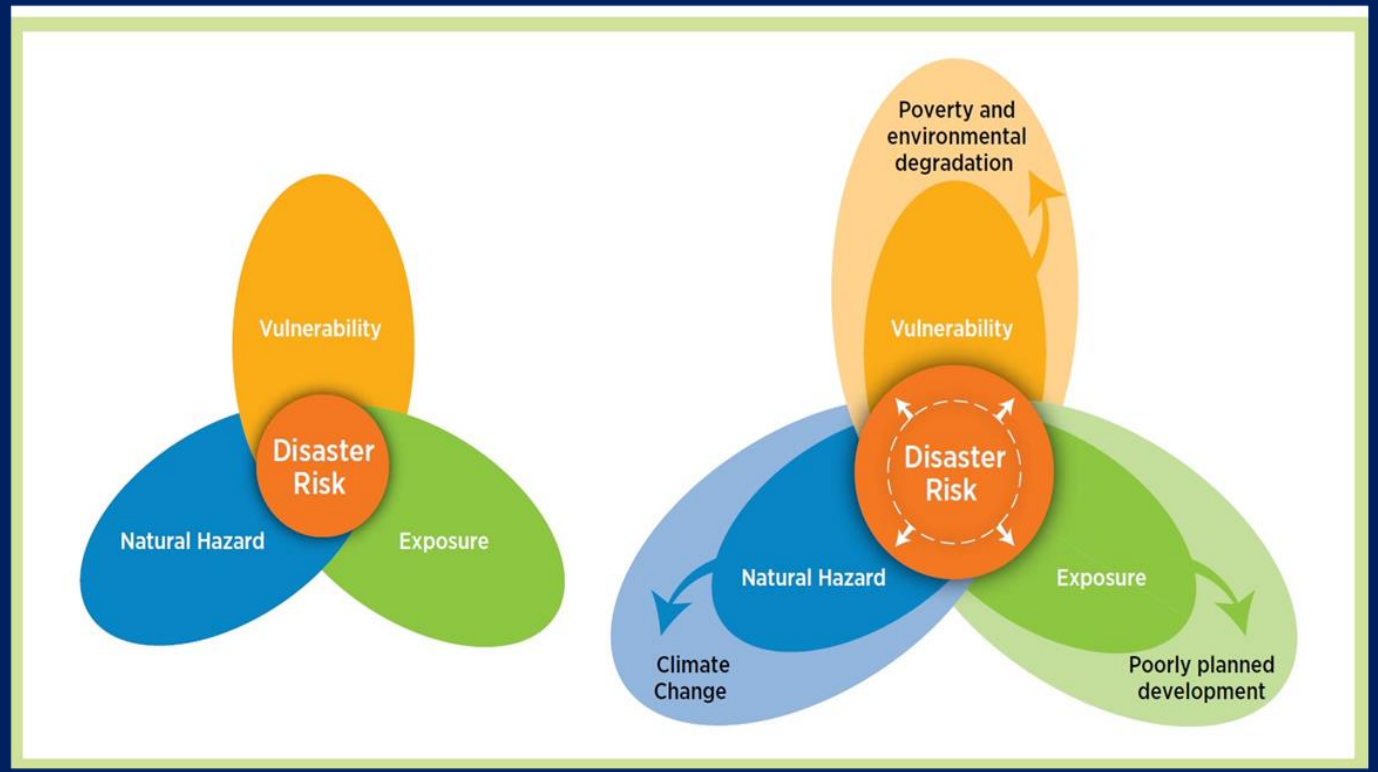


Key Challenges

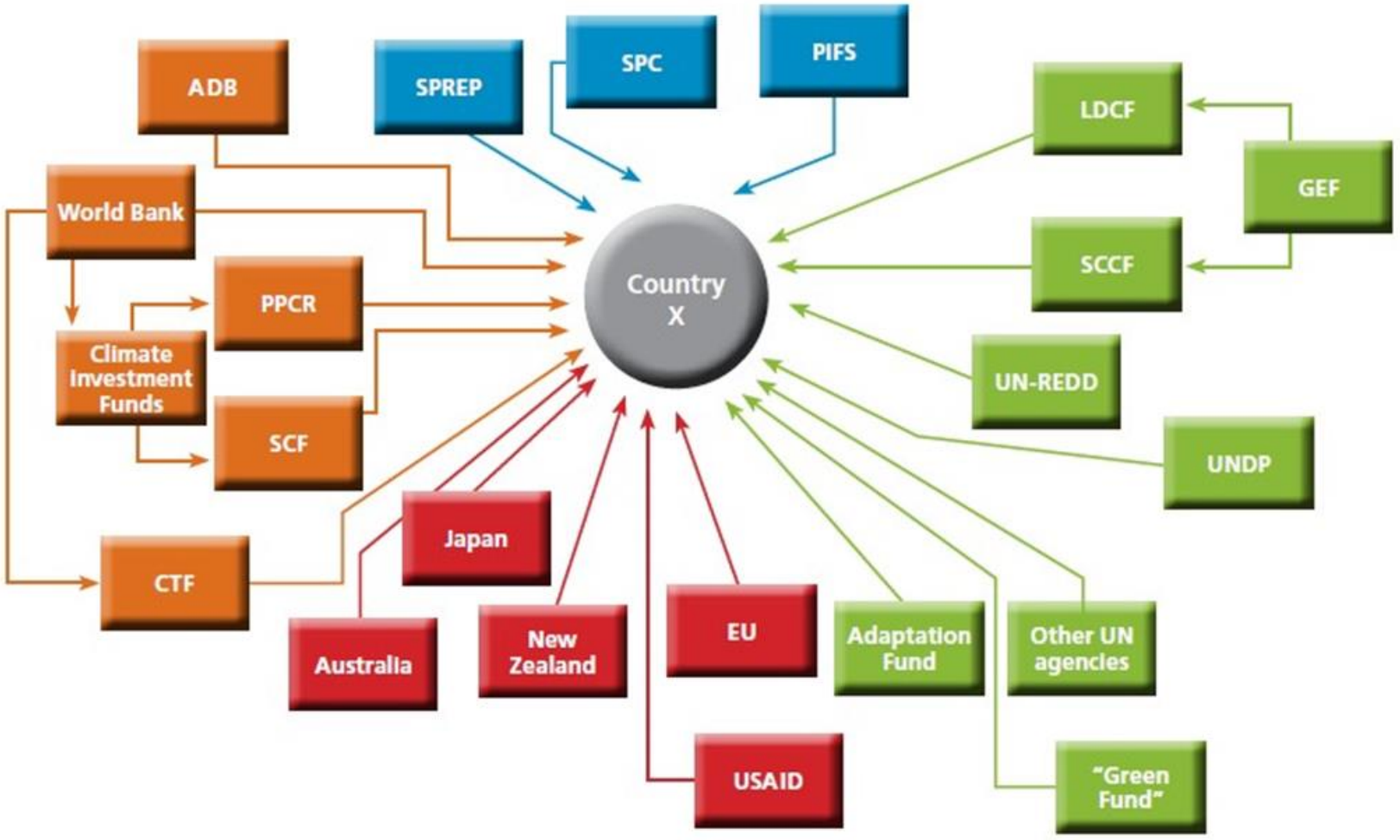
A high exposure to natural disasters….

Compounded by development trends….

And exacerbated by climate change…



Hidden Challenges



Meeting IBRD and IDA Commitments: Stepping up Climate Action

WBG announced a major set of new targets for 2021-2025, and launched its Action Plan on Climate Change Adaptation and Resilience

An ambitious set of targets for 2025

COP24 KATOWICE

- ✓ Doubling 5-year investments to **$200 billion, $100 billion direct finance from the World Bank** (IBRD/IDA), and $100bn of combined direct finance from IFC & MIGA and private capital
- ✓ **Increasing systemic impact in countries with support for their NDCs**

IBRD/IDA

- ✓ **Elevating climate actions for mitigation in key sectors,** supporting:
  - Generation, integration, and enabling infrastructure for 36 GW of renewable energy;
  - 1.5 million GWh-equivalent of energy savings through efficiency improvement;
  - 100 cities to achieve low-carbon and resilient urban planning & transit-oriented development;
  - Integrated landscape management in up to 50 countries, covering up to 120m hectares of forests.
  - Risk screening: 100% of projects screened for climate risks
  - **Carbon Pricing:** Applying a carbon price to projects in high emitting sectors.
  - **Greenhouse Gas Disclosure:** Disclosing GHGs emissions

IFC:

- **Offshore Wind** : Convening a working group to offer advisory services to governments on structuring first tenders
- **Battery Storage**: Doing upstream work to reduce regulatory uncertainty
- **Task Force on Climate-related Financial Disclosures:** Disclosing climate risk using TCFD guidelines

MIGA

- Committing to use Derisking products in support of the WBG climate target
- Supporting new guarantees for Climate Change Adaptation and Mitigation: 60% of Projects in FY18 supported climate activities of which 75% supported renewables

No upstream oil and gas after 2019
- WBG @ One Planet Summit, 2018

Action Plan on Climate Change Adaptation and Resilience

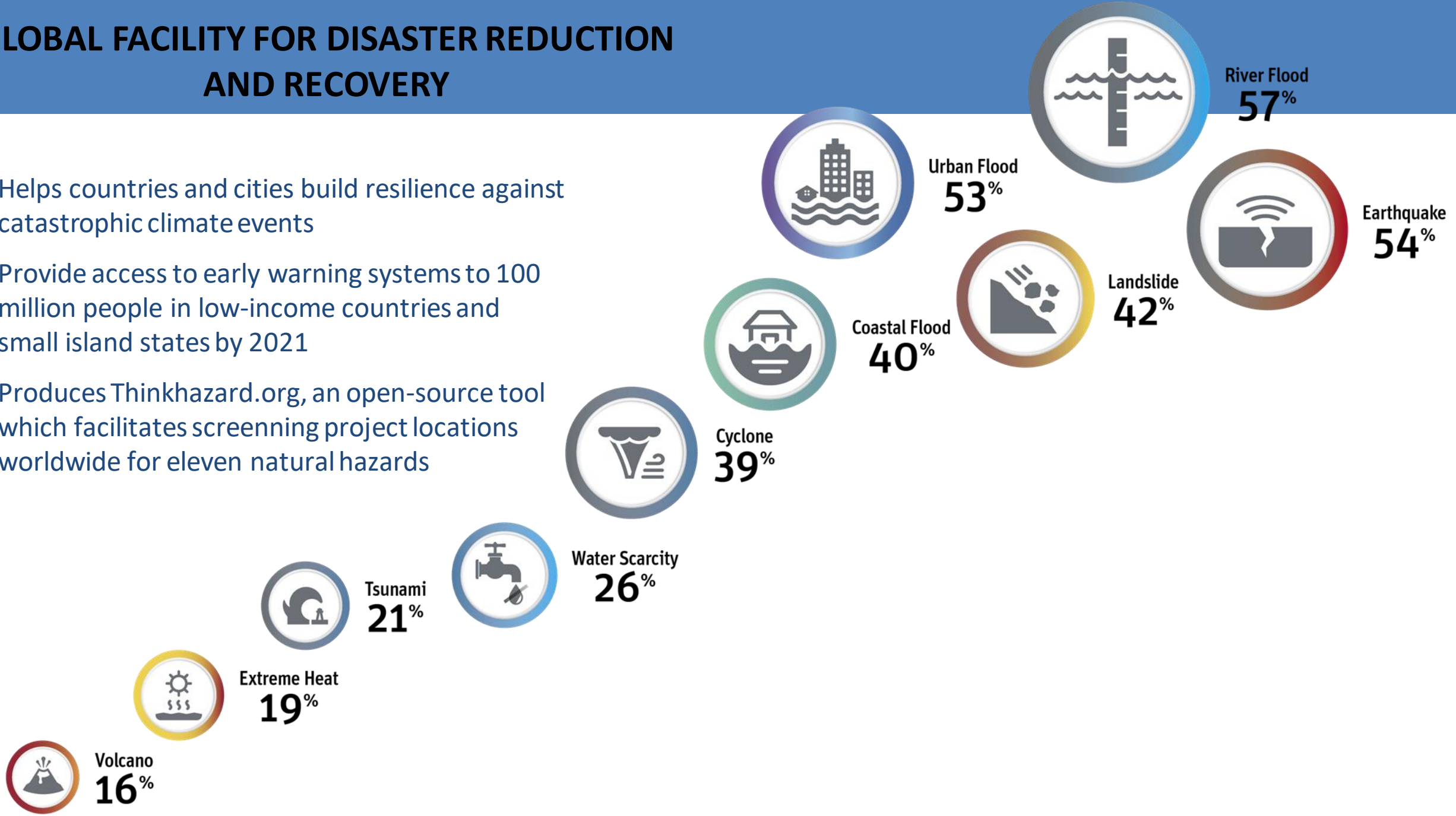
- ✓ **Direct adaptation climate finance to reach $50 billion over FY21–25, double what was achieved during FY15-18**
- ✓ Provide early warning systems and hydrometeorological data to **prepare 250m people in at least 30 countries for climate risks**;
- ✓ **Support 100 river basins** with climate-informed management
- ✓ Build **more climate-responsive social protection systems**;
- ✓ Support **20 countries to respond early** to climate and disaster shocks.
- ✓ Incorporate adaptation and climate risks in IFC's Anticipated Impact Measurement and Monitoring System

The Plan will also support countries to **mainstream approaches to systematically manage climate risks** at every phase of policy planning, project design, investments, and implementation.

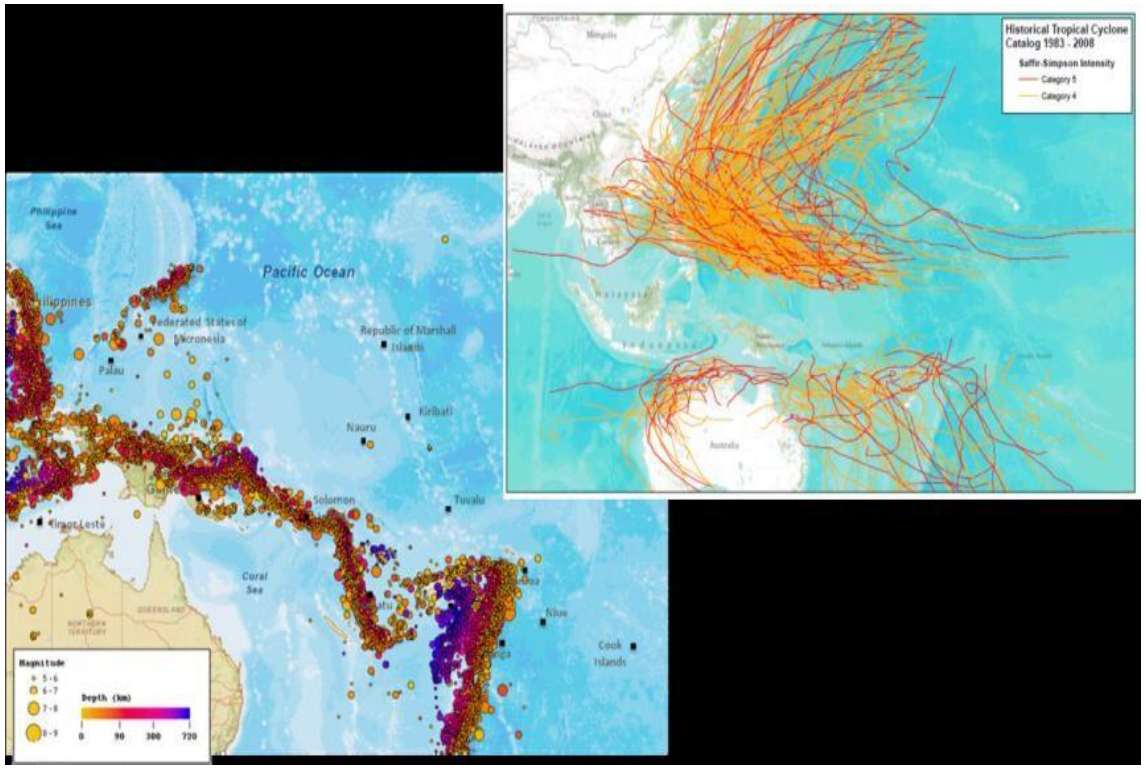
GWh :Gigawatt Hour
MIGA: Multilateral Investment Guarantee Agency
NDC: Nationally Determined Contributions
TCFD: Task Force on Climate-Related Financial Disclosures

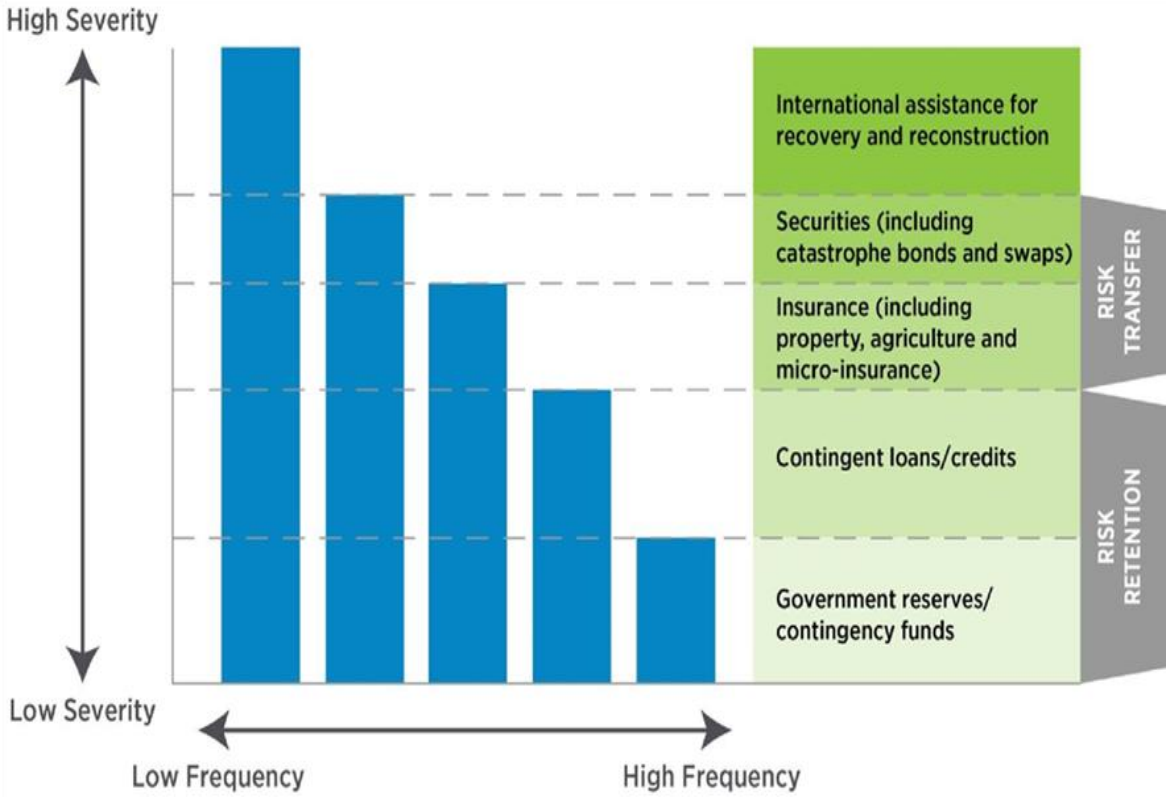
GLOBAL FACILITY FOR DISASTER REDUCTION AND RECOVERY

- Helps countries and cities build resilience against catastrophic climate events
- Provide access to early warning systems to 100 million people in low-income countries and small island states by 2021
- Produces Thinkhazard.org, an open-source tool which facilitates screenning project locations worldwide for eleven natural hazards



Assessing and Managing Residual Risk





Disaster Risk Financing and Insurance

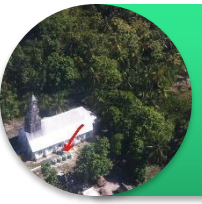
Pacific Catastrophe Risk Assessment and Financing Initiative

Pacific Island Countries Nationally Determined Contributions

Mitigation Priorities	Adaptation Priorities	Cross-Cutting Priorities
EE (Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Palau, PNG, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu)	**Coastal & Marine Resilience** (Cook Islands, Fiji, Kiribati, Nauru, Solomon Islands, Tonga, Vanuatu)	**Forests & LUCF** (Cook Islands, Kiribati, Nauru, PNG, Solomon Islands, Tonga, Vanuatu)
RE (Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Palau, PNG, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu)	**Water** (Cook Islands, Kiribati, Nauru, Solomon Islands, Vanuatu)	**Agriculture** (Cook Islands, Kiribati, Nauru, Solomon Islands, Tonga, Tuvalu, Vanuatu)
Energy, general (Cook Islands, Kiribati, Marshall Islands, Micronesia, Nauru, Palau, PNG, Solomon Islands, Tonga)	**Infrastructure Resilience** (Fiji, Kiribati, Nauru, Solomon Islands, Tonga)	**Budgeting** (Fiji)
Sea transport and shipping (Marshall Islands)	**Area- and Community-Based Adaptation** (Kiribati, Solomon Islands, Vanuatu)	**Climate Information** (Fiji, Kiribati, Nauru, Vanuatu)
Waste (Cook Islands, Marshall Islands, Palau, Solomon Islands, Tonga, Tuvalu)		**Climate Policy** (Fiji, Kiribati, Nauru, PNG, Tuvalu)
Transport (Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Palau, PNG, Solomon Islands, Tonga, Tuvalu, Vanuatu)		**Capacity Building** (Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, PNG, Solomon Islands, Vanuatu)

KIRIBATI ADAPTATION PROGRAM (2011-2018)

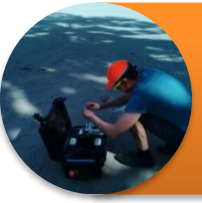
Robust coastal and risk modelling to design and implement 50-year protection of key infrastructure assets serving Tarawa



Using local governance structures to support communities in 14 islands to install rainwater harvesting tanks and plant 35,500 mangrove saplings on 9 islands

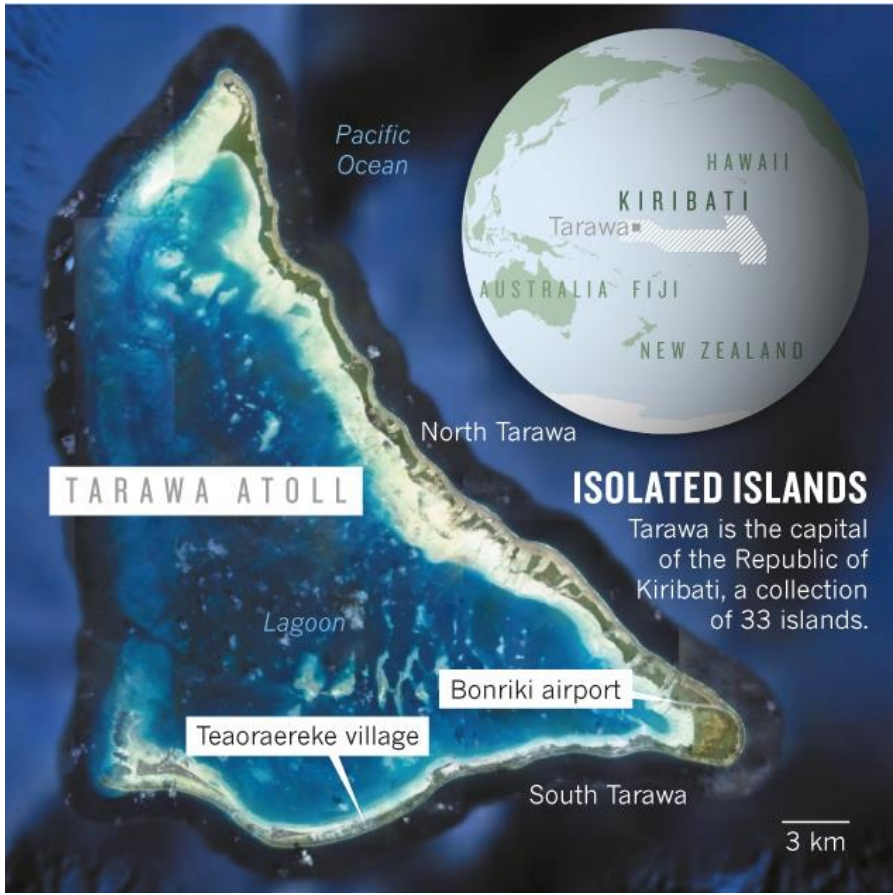
Community engagement with 54 customary land owners for groundwater infiltration galleries ('horizontal wells') with 200-year design life

Delivering pressurized 24/7 clean water supply in three zones in Tarawa; used geocoordinates-based app to provide addresses for 500 households for billing and repairs



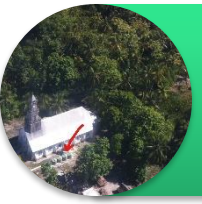
UAVs used for topographical survey to design new water network

Kiribati. One of the most vulnerable countries in the world to climate change and its impacts: sea-level rise, storm surge, coastal erosion and inundation, salinization of groundwater.



MARSHALL ISLANDS RESILIENCE PROGRAM (2017-2022)

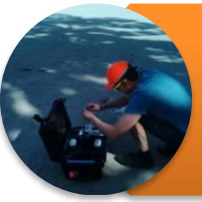
Strengthen early warning systems and climate resilient investments in shoreline protection to provide immediate and effective response to an crises



Timely and actionable hazard forecast and warning messages

Strengthened institutional capacity of National Disaster Management Office to respond to disasters

Coastal vulnerability assessment for Ebeye and Majuro, strengthen coastal risk management and coastal protection including major coastal resilience investment in Ebeye



Strengthen community involvement in the planning, implementation and evaluation of early warning and shoreline protection

Republic of the Marshall Islands. Most of the 1,000 Islands, spread out over 29 narrow coral atolls in the South Pacific, are less than six feet above sea level — and few are more than a mile wide making the country extremely vulnerable to the impacts of climate change.


Thank You