PARTneR-2

Pacific Risk Tool for Resilience project, Phase 2

25th November 2021

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Goal

PICs are more resilient to the impacts of climate change through risk-informed decision-making

Approach

-**Integrate risk assessment tools** into in-country processes

-**Enhance collaboration and coordination** throughout the decision-making process

-**Formalise governance arrangements** for data and analysis

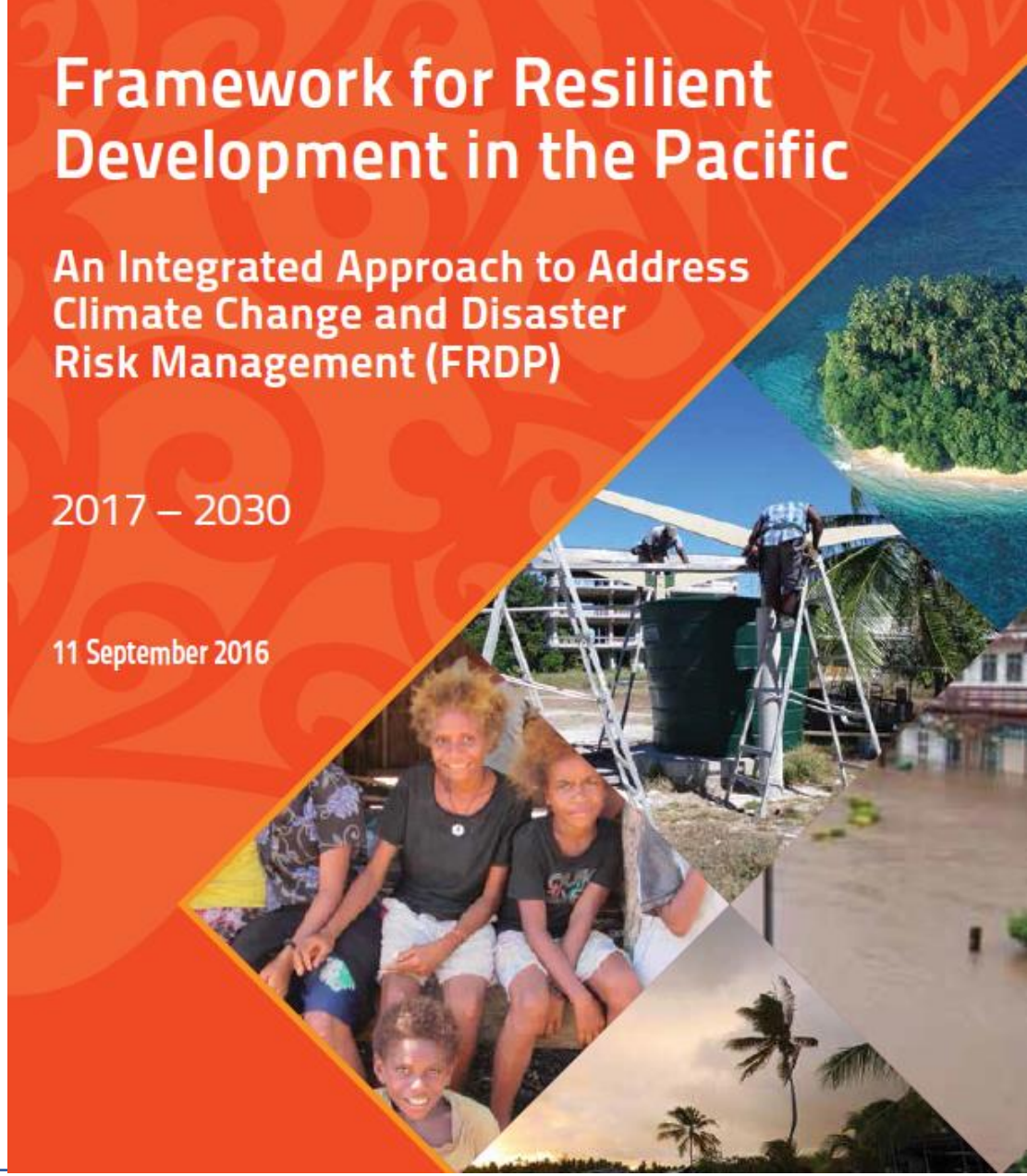
-Develop **fit-for-purpose information products**

-Training on use of **risk assessment software (RiskScape)**

-**Capacity building** across all levels of decision-makers

Background

- The Pacific is one of the most vulnerable regions to natural hazards globally
  - lack of low-cost and easily applied tools available for risk-related decision-making in the region
- This need is in line with the FRDP
  - places a strong emphasis on managing disaster and climate change risks
- PARTneR-2 builds off the pilot PARTneR project (2016-2019)



PARTneR-2 Project Overview

MFAT funded, $5.9 million

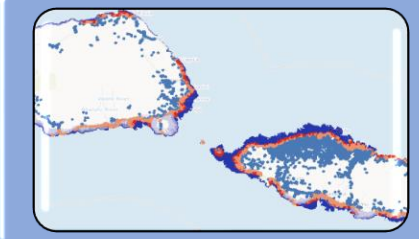
Jointly implemented

(SPC and NIWA)

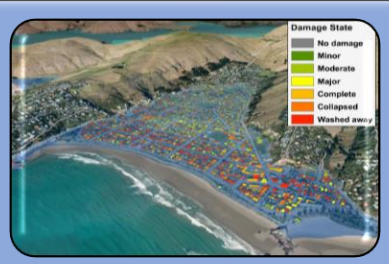
3 years (2021-2024)

6 PICs (Samoa, Vanuatu, Tonga, Cook Islands, Tuvalu and RMI)

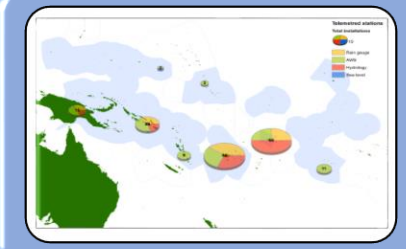
Success



Risk information is being produced to support effective decision-making and reporting in PICs



PICs have the skills and knowledge to utilise climate risk information in their decision-making and reporting processes



Regional and peer-to-peer support is available and coordinated across PICs

Country-led case study methodology

ALL — **National climate risk models**

Drought focus

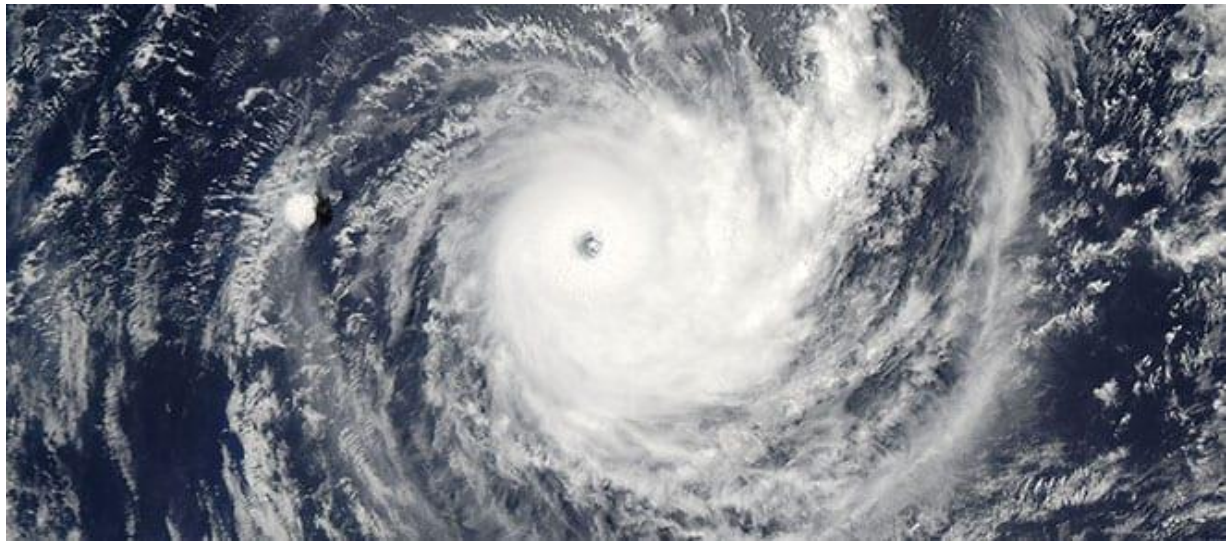
Build upon pilot project case-studies

Introduce climate risk modelling/ RiskScape

Output 1: National risk models and training

- Design and implement national risk models for 6 PICs
  - Developing data access and input plugins for the models
  - Displaying risk model outputs through web portals and dashboards
  - Trainings on RiskScape for SPC and the countries

Output 2: Producing and applying risk data



- Set up in-country cross-government steering groups
- Develop risk models that contribute to decision-making:
  - National Tropical Cyclone related risk assessments for all 6 PICs
  - Climate risk case studies for 4 PICs
  - Drought risk case studies for 2 PICs

Output 3: Risk database and data collection

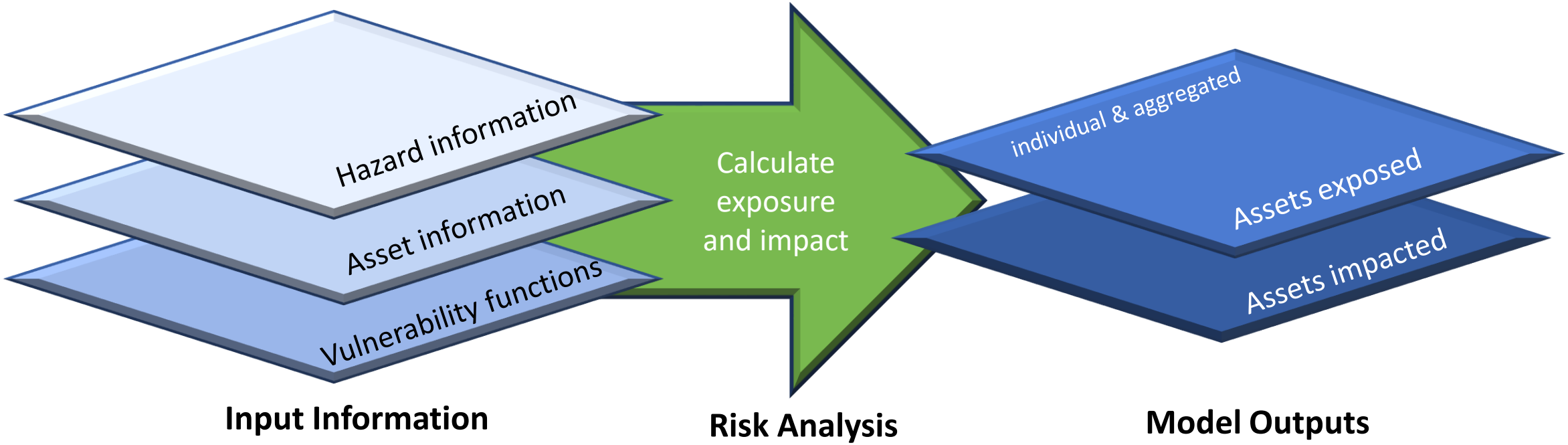
- Design and set-up a regional/ national risk database
- Update the building/ asset footprints for 6 PICs
- Collect damage data and information after a significant cyclone event

Output 4: Communities-of-practice and training

- Set-up peer-to-peer CoPs
  - At both the decision-maker and technical level
  - In collaboration with other projects: PREP, PCRAFI, Gov4Res
- Develop and deliver training:
  - On Risk Tools and Analysis for CoPs
  - Provide the *USP Certificate IV Disaster Risk Management training* for all 6 PICs (in collaboration with PREP)

What is RiskScape?

- Multi-hazard assessment tool developed by NIWA and GNS Science that estimates the nature, severity and extent of hazard damage.



RiskScape in PARTneR-2

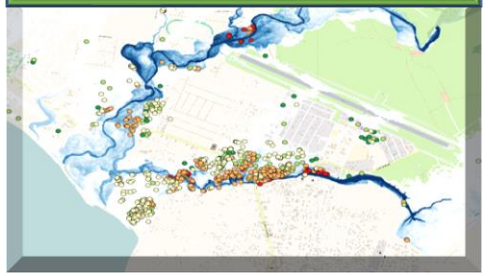
Hazard layers + Asset layers + Vulnerability functions = Exposure and impact

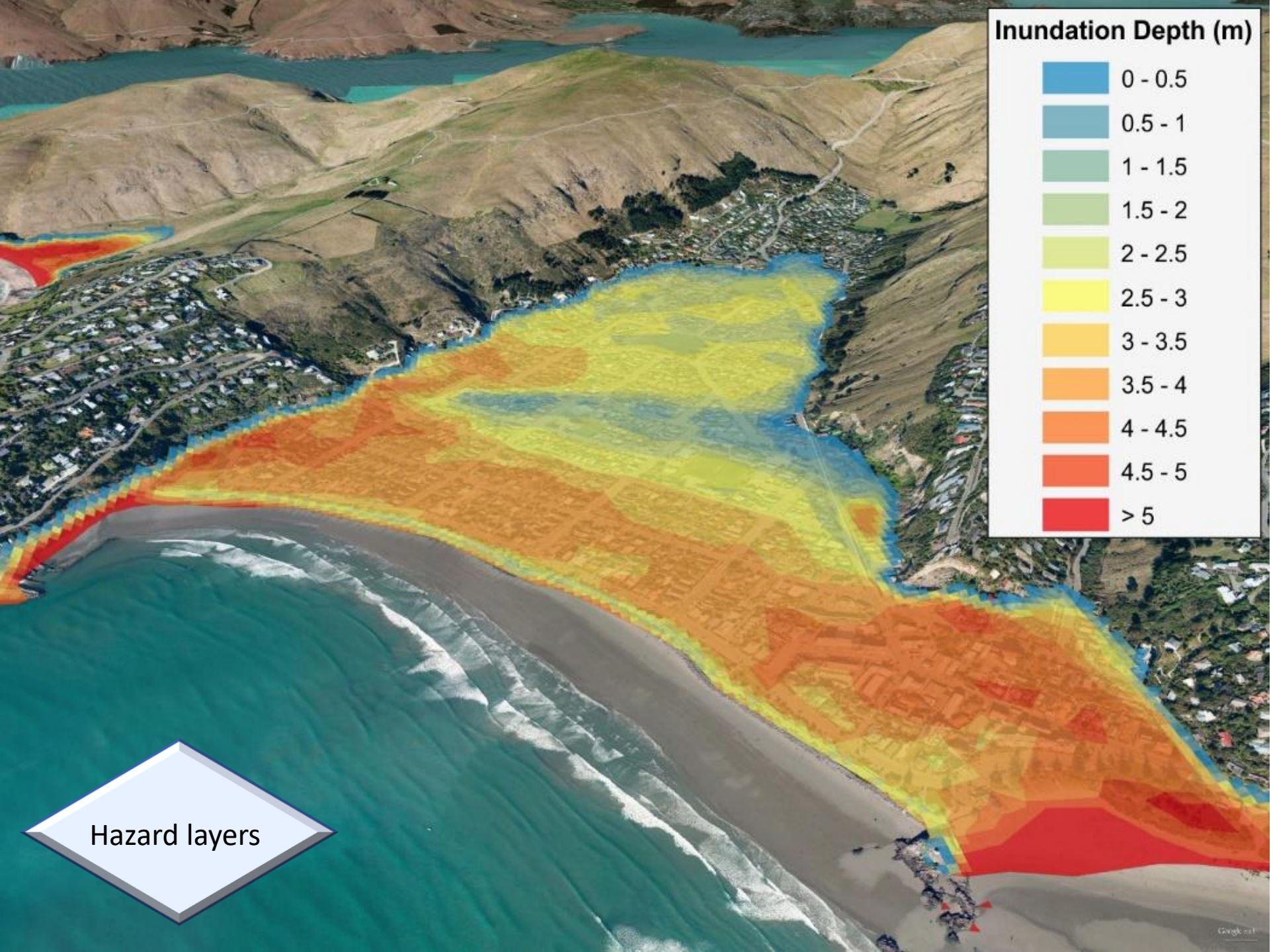
Tropical cyclone (floods, wind, coastal inundation + SLR); drought

Buildings, people, infrastructure, socioeconomic data

Calculations on how the hazards affect the assets

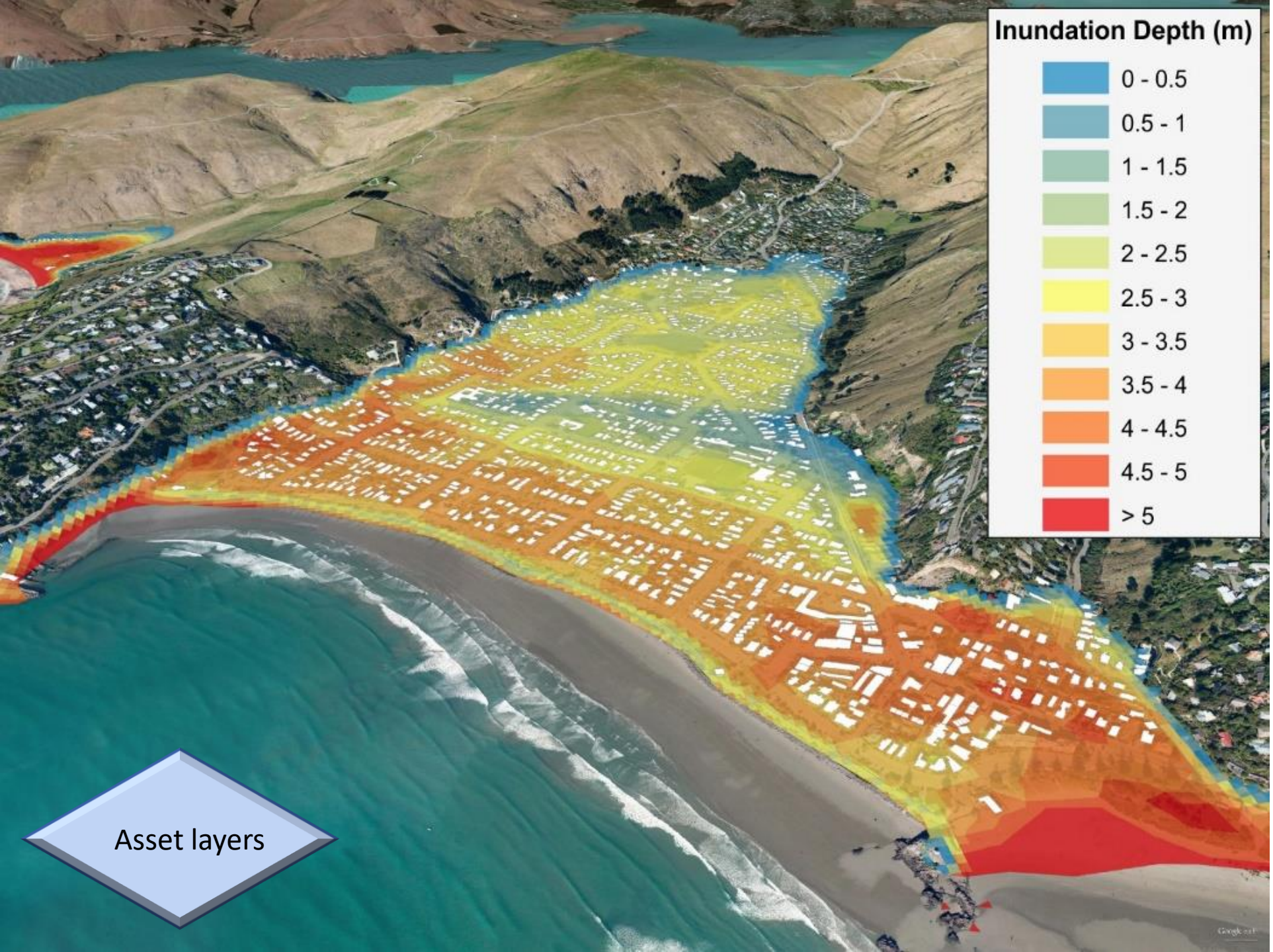
Tailored maps, tables, reports, dashboards





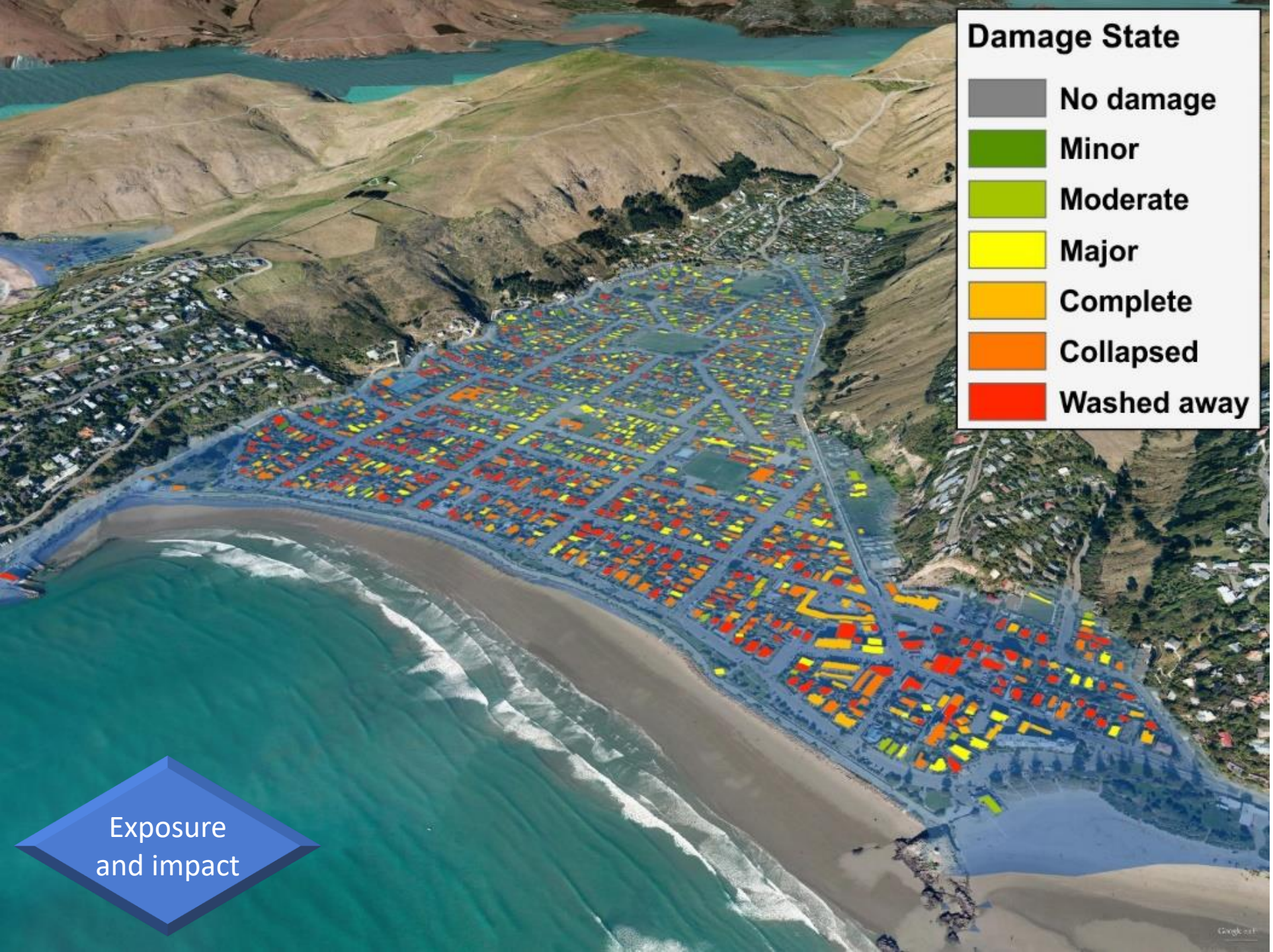
Hazards

- **Up-to-date weather and climate information- may be imported from climate databases (CliDE/ CliDEsc)**
  - For example for TCs
    - forecasted rainfall and wind data can be imported into RiskScape



Assets

- **Will be derived from existing Pacific databases:**
  - Geospatial datasets (PCRAFI/PacRIS/ Nexus)
  - Census databases (PopGIS)
  - Lidar and satellite imagery (for building footprints and attributes)
  - Open source information (Open Street Map)



Impacts

Impacts from TCs may include:

- # buildings exposed/ impacted
- # people of injured/ mortality
- Monetary loss/ rebuilding cost
- Roads and infrastructure damaged
  - escape routes blocked
- Adaptation planning- where to:
  - raise floor heights
  - strengthen buildings
  - rebuild for CC scenarios

Pilot Project 2016-2019

PARTneR

Pacific Risk Tool for Resilience

Outputs

Pacific risk mapping and decision support tool developed

Data collation and management system developed

Risk tool training developed and applied

Sustainable partnership model developed and rolled-out

Risk mapping was framed around 7 case studies

Tsunami- Samoa

Ashfall- Vanuatu

Landslide- Samoa

Drought- Vanuatu, RMI, Tuvalu

Flood-Vanuatu, Samoa

PARTneR-2 had incorporated the pilot project lessons learned

The need to:

- Link **climate information (CliDE/CLiDEsc)** with **risk/ impact information (RiskScape)**
- Embed knowledge and ownership in both **regional (SPC) and national agencies (MoF and CC)**
- Include both **high-level decision-makers and technical staff** in communities-of-practice
  - Project staff to be coordinators across both
- **Collaborate with related projects/programmes** from the beginning for all outputs

Thank you, vinaka vakalevu

Any questions?