



Regional Workshop on Strengthening Multihazard Risk Assessment and Early  
Warning System with the Application of Space and GIS in PICS

26 – 27 April 2018

TONGA

# Opportunities for Partnerships and Collaboration

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PREP - SPC



Pacific  
Community  
Communauté  
du Pacifique

# Organisational Background

SPC - Pacific Community

Support sustainable development in the Pacific through science, knowledge and innovation

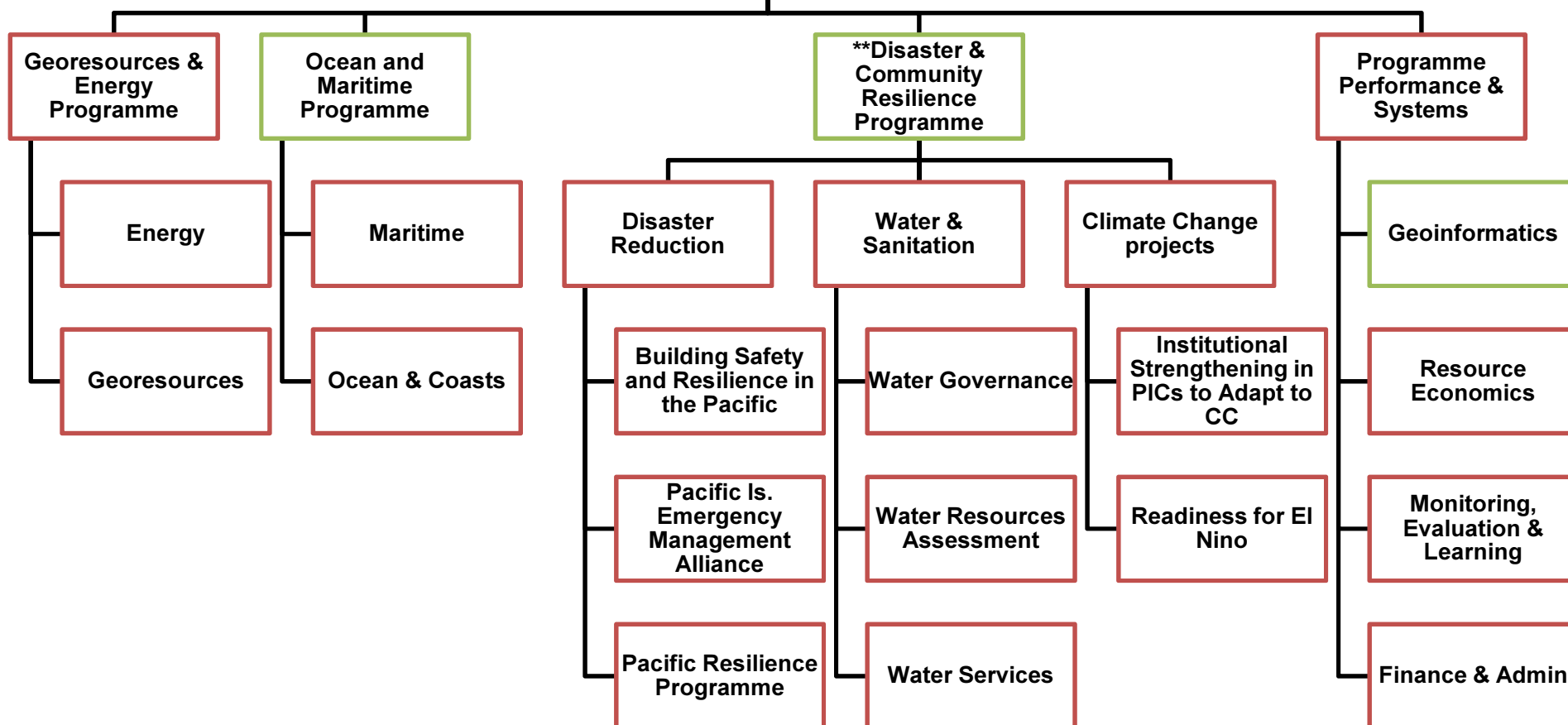
Serve 26 member countries and territories

**Geoscience, Energy and Maritime Division (GEM)** - provide geoscientific services in work areas such as Ocean and Coastal Geoscience, Disaster Risk Reduction, Climate Change, Water and Sanitation, Natural Resource Economics, Energy, Geological Resources, Surveys, and GeoInformatic Services.

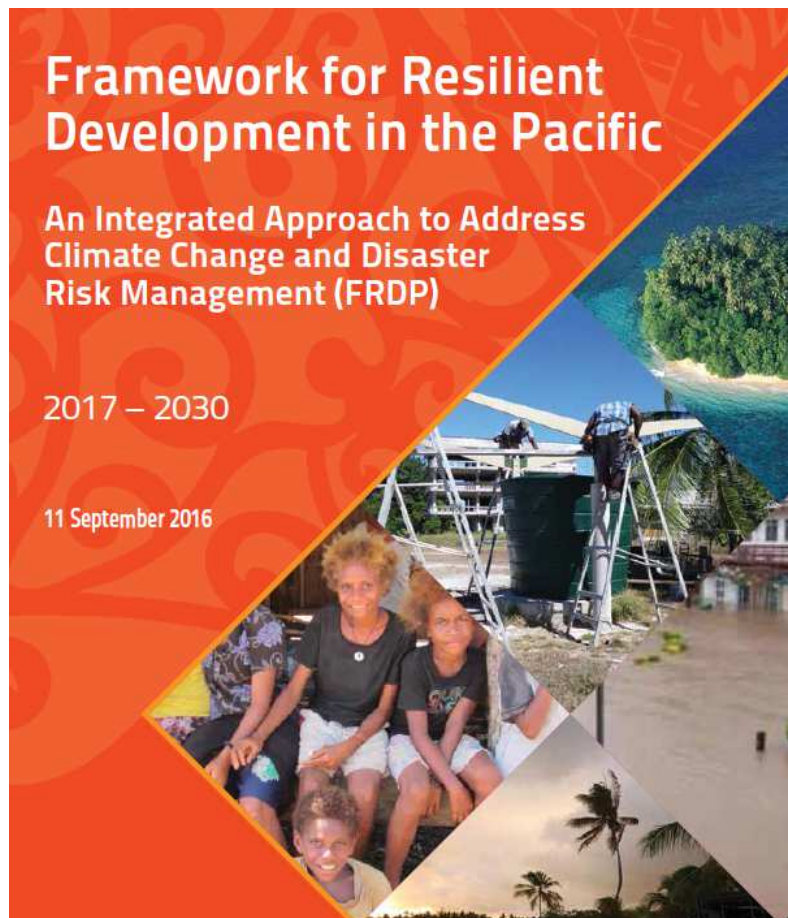


# Geoscience, Energy and Maritime Division - GEM

Geoscience,  
Energy and  
Maritime Division



# Framework for Resilient Development in the Pacific



1. Strengthened integrated adaption and risk reduction to enhance resilience
2. Low carbon development
3. Strengthened Disaster Preparedness, Response and Recovery

National Development Strategies | National DRR & CC Plans and Policies  
Sustainable Development Goals | Sendai Framework for Action

# PACIFIC RESILIENCE PROGRAMME

Strengthened early warning, resilient investments and financial protection of participating countries

Strengthening  
Early Warning  
and  
Preparedness

Risk  
Reduction  
and  
Resilient  
Investments

Disaster Risk  
Financing

Project and  
Programme  
Management

SAMOA

TONGA

MARSHALL ISLANDS

VANUATU

PACIFIC ISLANDS FORUM SECRETARIAT

PACIFIC COMMUNITY

# Collaboration with Partners and Countries



Ongoing projects and initiatives where decision support tools are being developed and tested including for impact forecasting

## *“Evidence based decision making”*

- **PaRTner: Pacific Risk Tool for Resilience & PacSAFE – InaSAFE**
  - Design and develop a natural hazards impact mapping and modelling tool for the Pacific
  - Integrated disaster risk data management systems
  - Sustainable targeted and tailored training and skills development

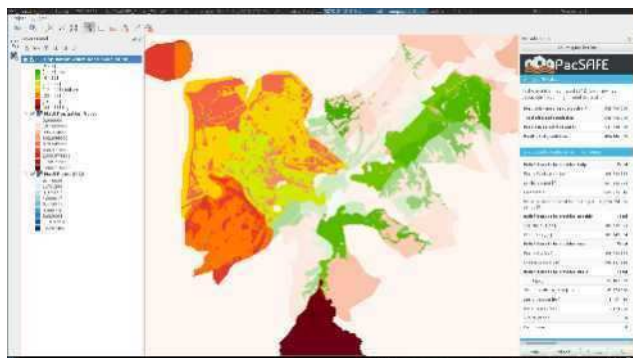
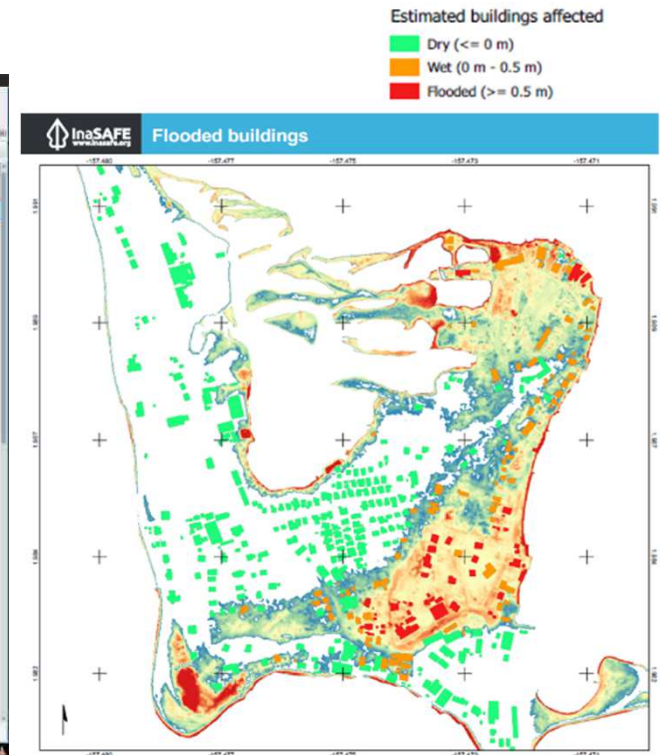


- **Coastal Inundation Forecasting Demonstration Project - Fiji: Fiji Met., WMO**
- **UAV4Resilience**



# PacSafe: part of a suite of tools

<http://services.gsd.spc.int/pacsafe>





## PacSAFE



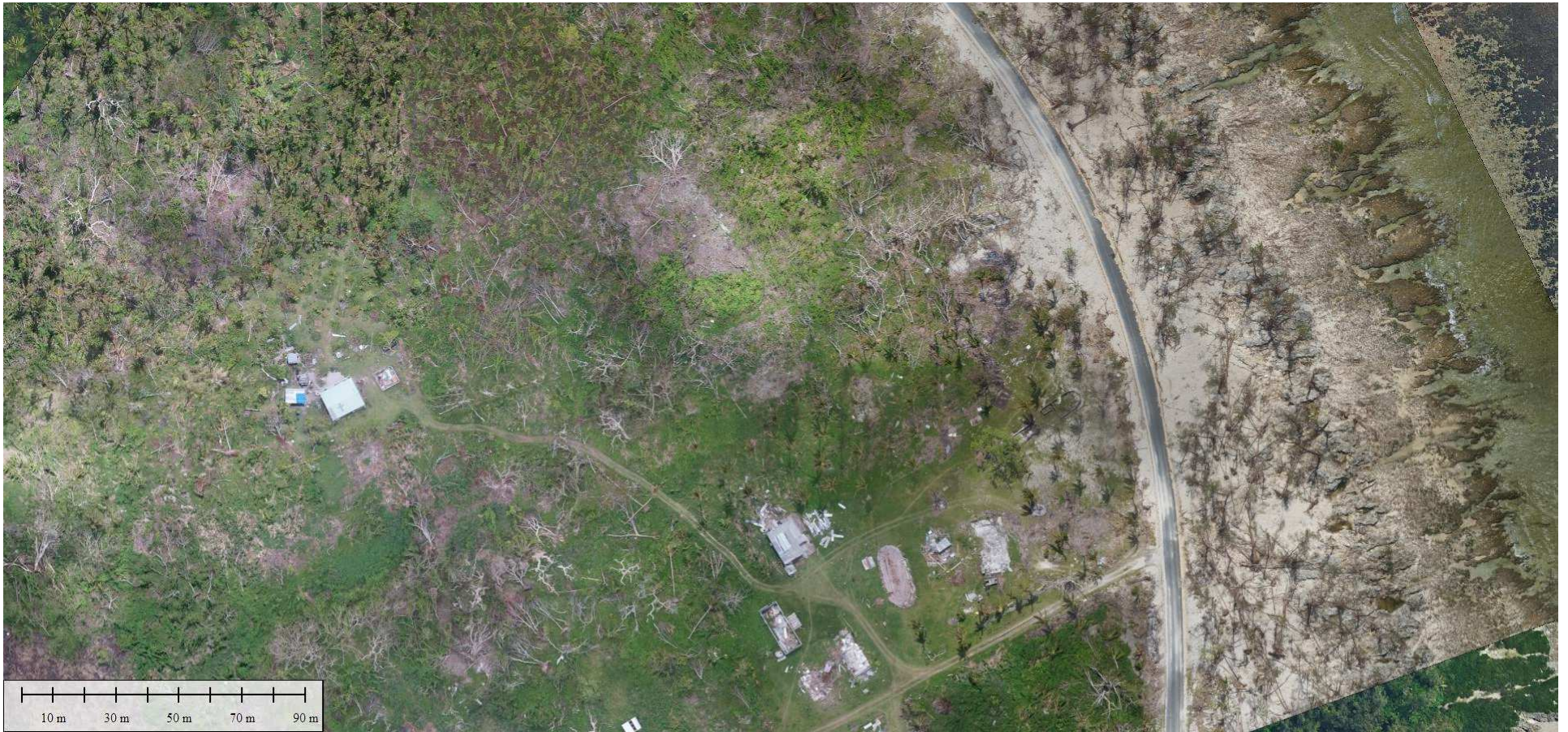
**SPC**  
Secretariat  
of the Pacific  
Community

PacSAFE has initially been developed to enable hazard data and asset data, such as the Pacific Catastrophic Risk and Financing Initiative (PCRAFI) asset database, to be used to generate impact information to assist planning, preparedness and response activities for Pacific Island Countries. It is based on InaSAFE and QGIS.



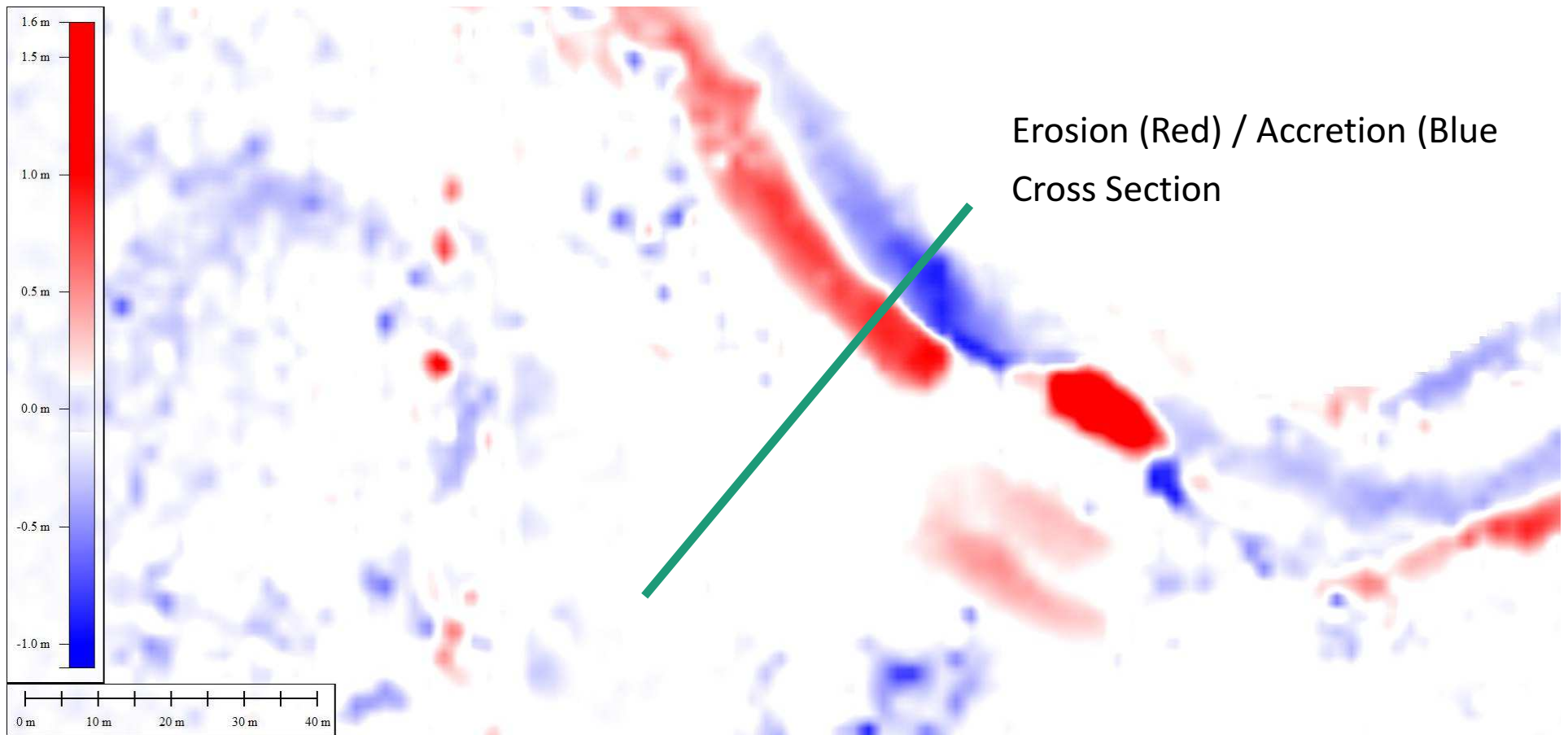
# TC PAM : Before / After

comparing Aerial photograph taken during LiDAR campaign (2012) with  
UAV orthomosaic



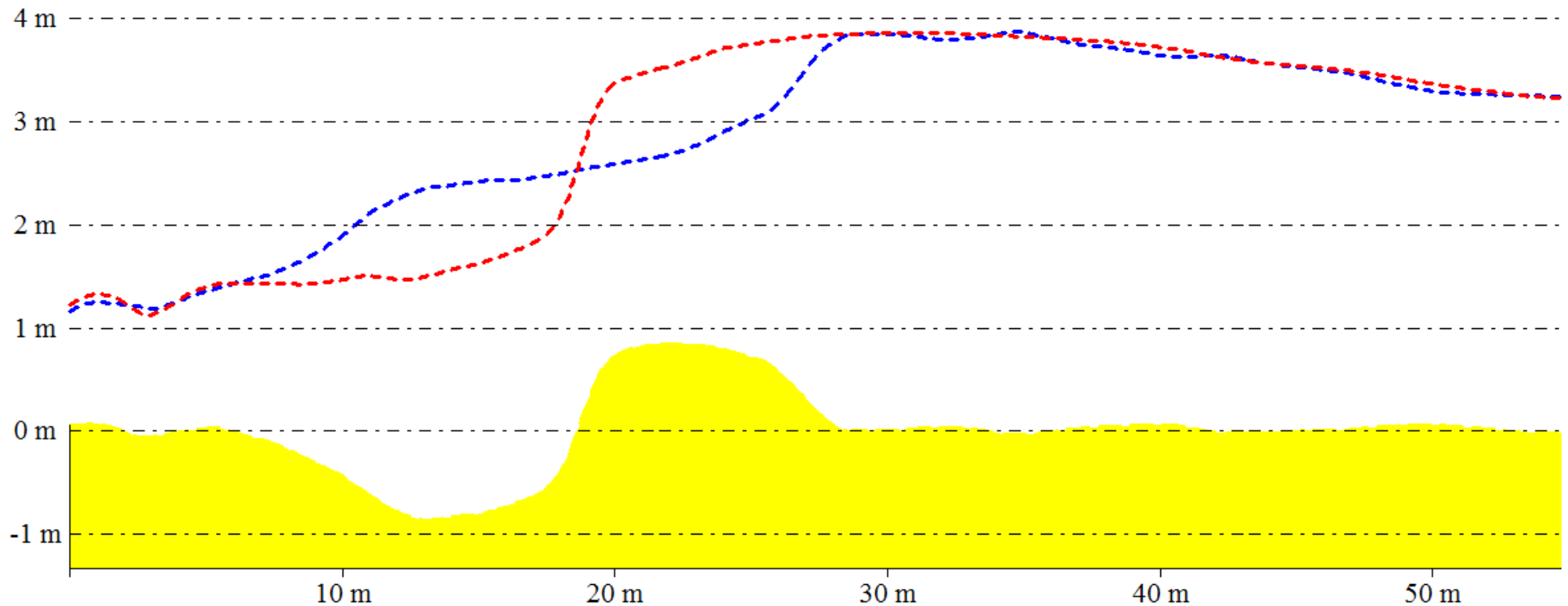


# Example: Takara Village, NE Efate



# Example: Takara Village, NE Efate

From Pos: 17° 32' 08.1867" S, 168° 26' 59.0776" E



Beach Profile Prior Cyclone PAM – Lidar data (Red)

Beach Profile After Cyclone PAM – UAV data (Blue)

Before – After ( Yellow)

# **MHEWS and Risk Assessments provides Opportunities for Partnerships and Collaboration**

NEED FOR: NMHSs and observatories, NDMOs to work in partnership with other government agencies and stakeholders

**The use of tools and technologies need to be routine and part of a decision making process/work flow**

Partners involved in the projects are part of this collaboration

- Data sharing between agencies and departments is vital (observation data, demographic, GIS and mapping, economic)

- Capacity development - workflows

- Platforms for knowledge sharing and transfer

**Pacific Meteorological Council panels**

**Pacific Resilience Partnership**

**Pacific Geospatial and Surveying Council**

**Pacific GIS&RS Council**