



# Geoscience, Energy and Maritime Division (GEM)

## Pacific Community(SPC)

SWPHC 22

Koror, Palau 2025

SPC Hydrographic related activities in 2024

Salesh Kumar, Team Leader, Technical Assessment Unit

[saleshk@spc.int](mailto:saleshk@spc.int)



## SPC's 27 Member Countries and Territories



[SPC Member Map](#)





## SPC WORK AREAS



Climate Change and  
Environmental Sustainability



Educational Quality and  
Assessment



Fisheries, Aquaculture & Marine  
Ecosystems



Geoscience, Energy and  
Maritime



Human Rights and Social  
Development



Land Resources



Public Health



Statistics for Development



Integrated Programmes



# Climate and Oceans Support Program in the Pacific (COSPPac) Phase Three

[COSPPac : Home](#)

COSPPac works with Pacific Islands partners to develop tools and information about climate, oceans and tides.

## Pacific Ocean Portal

Tourism



Ocean Monitoring



Coral Reefs



Sea Level



Fisheries



Shipping



Library



Pacific Tides App



About Us







# Climate and Oceans Support Program in the Pacific (COSPPac) Phase Three

The screenshot shows the 'Pacific Tides' app interface on a smartphone. The app displays tide predictions for Suva, including a graph of the tide cycle, the next low tide (0.93 m at 6:51 pm), the next high tide (1.58 m at 12:44 am), sunrise (5:21 am), and sunset (6:31 pm). The local time is 04:10:15 pm. The app is available on the App Store and Google Play.

## Pacific Tides

A simple way to get access to unlimited Tidal, Moon, Sun phase predicted information. 100% offline with wide range of built in features which makes usability at ease.

Download on the App Store | Get it on Google play

Countries Supported:

Developed & Funded by:

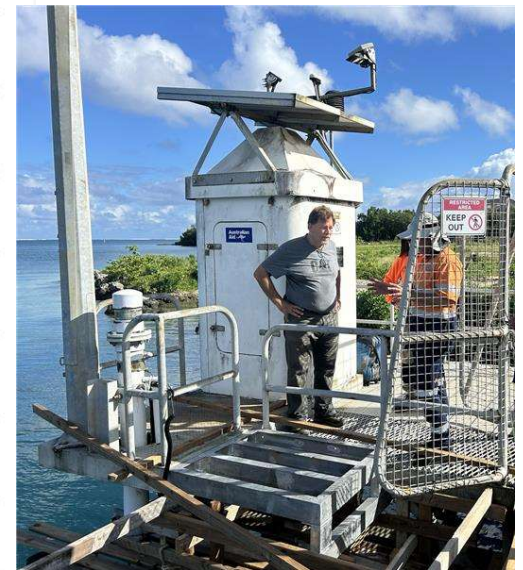
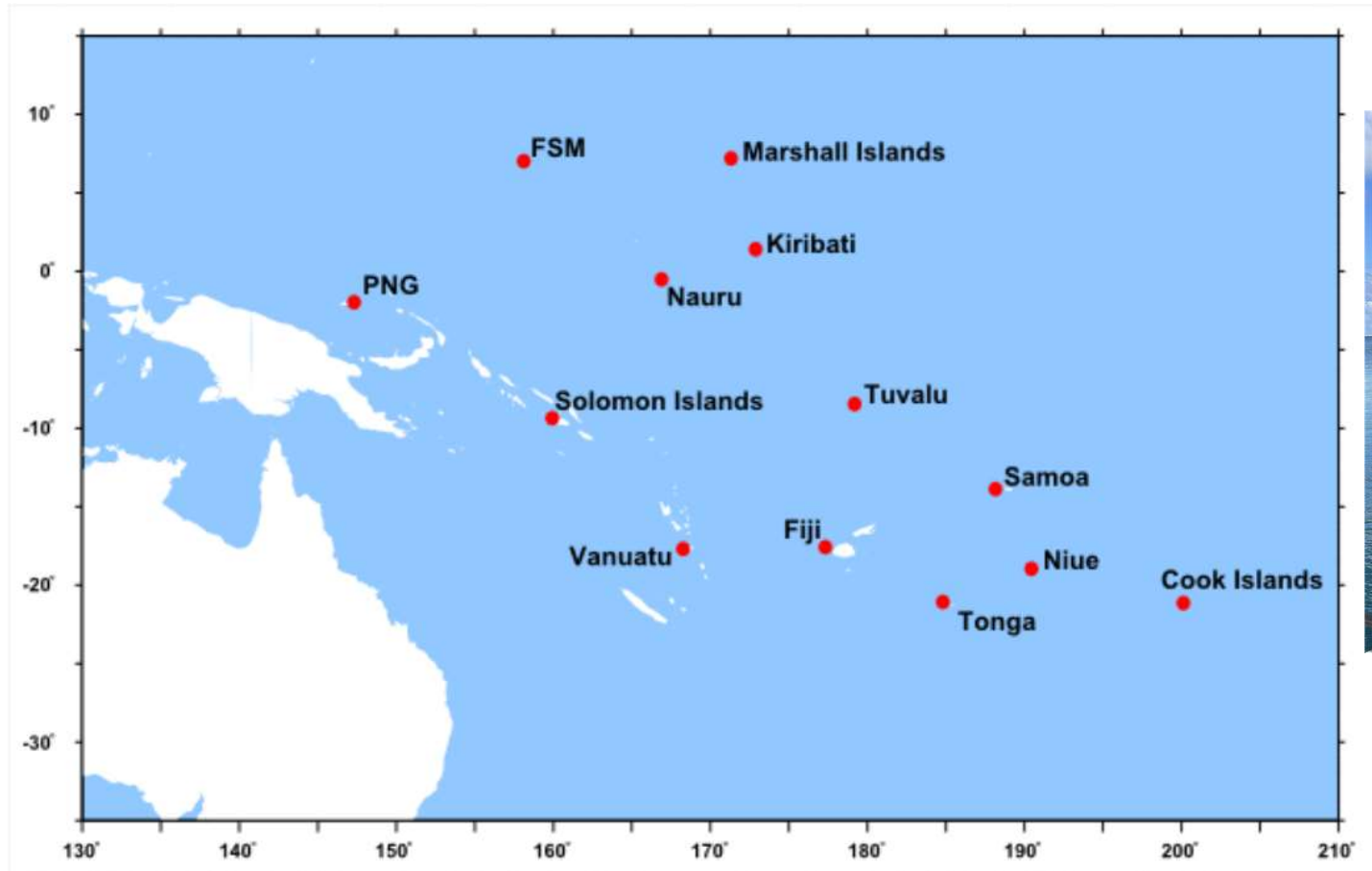
The logos of the supporting organizations are displayed at the bottom: Climate and Oceans Support Program in the Pacific, Australian Government Bureau of Meteorology, Pacific Community Communauté du Pacifique, and Australian Aid.

Contact us: [cosppac@spc.int](mailto:cosppac@spc.int)



# Climate and Oceans Support Program in the Pacific (COSPPac) Phase Three

## Pacific Sea Level and Geodetic Monitoring Project (PSLGM)





**COSPPac**

Climate and Oceans Support Program in the Pacific

## Pacific Geospatial & Surveying Council with Geodetic Updates

SWPHC22 – Koror, Palau  
March 2025



**Vaipo Mataora**  
Chair (Cook Islands)



**Meizyanne Hicks**  
Vice Chair (Fiji)

Supported by: SPC Partnership Desk

Email: [pgsc\\_desk@spc.int](mailto:pgsc_desk@spc.int)

<http://pgsc.gem.spc.int/>



**PGSC  
Coordinator**



**Geodetic  
Officer**



**Geodetic  
Surveyor**

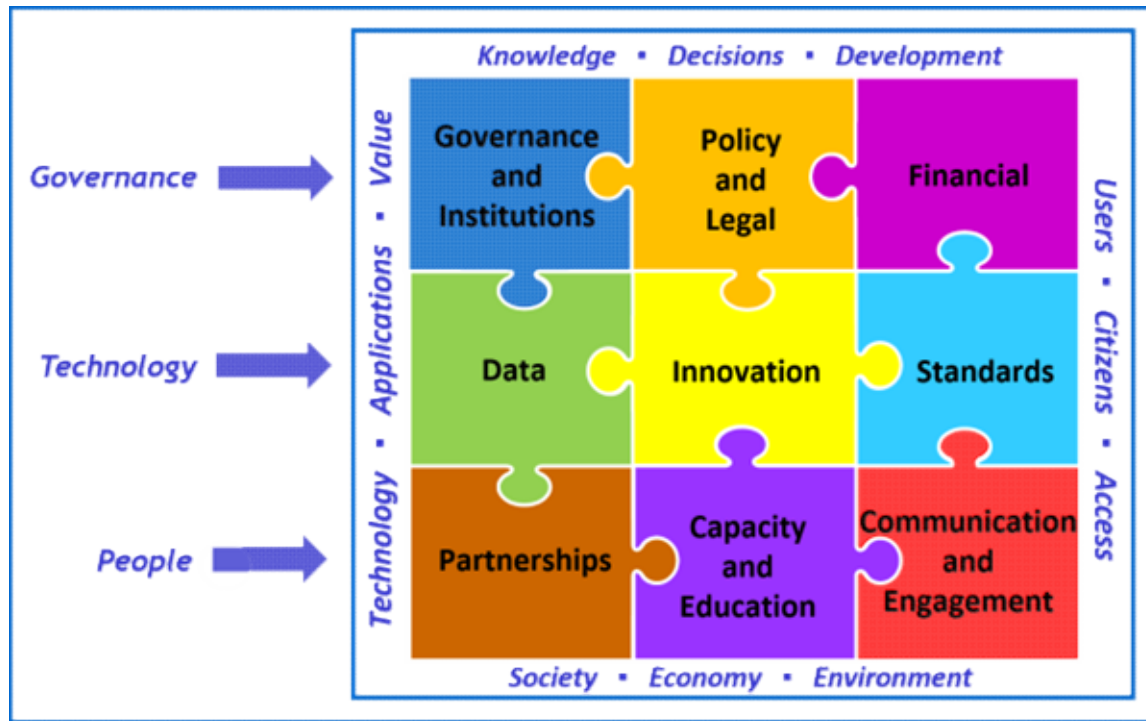
**Geodetic Team**  
**Oceans & Maritime Programme**  
**Geoscience Energy & Maritime Division**



# Pacific Geospatial and Surveying Council



## 1. UN-IGIF Country Level Action Plan



- ❖ **Alignment of geospatial strategies and development of country-level IGIF Action Plans**
- ❖ **Technical guidance, awareness & build institutional capacity**
- ❖ **Regional coordination and partnerships**



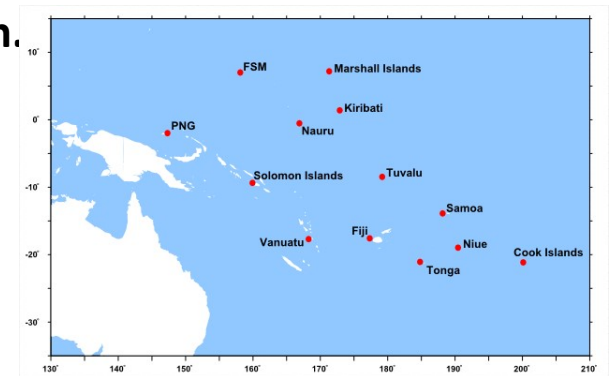
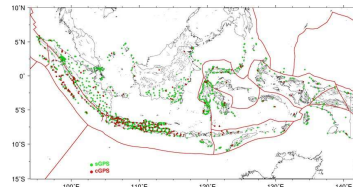
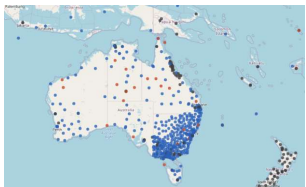
# Pacific Geospatial and Surveying Council



## 2. Geodetic Infrastructure - GNSS & Tide Gauges



- ❖ Infrastructure development & support
- ❖ Funding and technical guidance for the installation
- ❖ Collaboration with regional partners to ensure sustainability.
- ❖ Site identification and logistical support for station installation.
- ❖ Data sharing



# Pacific Geospatial and Surveying Council



## 3. Regional and National Knowledge Capacity



- ❖ **Technical guidance, awareness & build institutional capacity**
- ❖ **Training curricular tailored to the Pacific context.**
- ❖ **Establishment of train-the-trainer programs to ensure long-term sustainability.**
- ❖ **Hands-on training on GNSS CORS**
- ❖ **e-learning platforms**



# Regional Collaborations



Pacific  
Community  
Communauté  
du Pacifique



# Global & Regional Collaborations





## Land - Sea Integration in the Pacific

*"Lessons and good practices"*

Forum on the Integration of Terrestrial, Maritime, and Cadastral Domains

United Nations Conference Room 4, New York.  
6<sup>th</sup> August 2024



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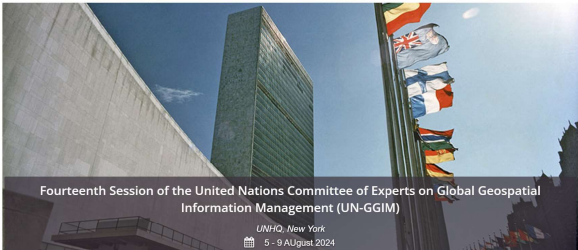
**Andrick Lal** [andrickl@spc.int](mailto:andrickl@spc.int)





TOPICS ▾ DATA ▾ METHODOLOGY ▾ EVENTS ▾ PUBLICATIONS ▾ ABOUT ▾

Meetings > Fourteenth Session



Fourteenth Session of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM)

UNHQ, New York  
5 - 9 August 2024

Side event presentation materials

Note: Please click the date/s below to display the presentation materials

Monday, 5 August 2024

Tuesday, 6 August 2024

Forum on the Integration of Terrestrial, Maritime and Cadastral Domains, 10:00-11:15am, CR-4

Presentations

- Singapore
- Pacific case

Annual sessions

- Fifteenth session
- Fourteenth session
- Thirteenth session
- Twelfth session
- Eleventh session
- Past sessions

Overview

- Mandates
- Aims and Objectives
- Bureau
- Regional Committees
- Functional Groups
- Thematic Networks

Quick links

- UN-GGIM Events
- Past Events
- UN-IGIF
- UNGGN
- UN-GGCE
- UN-GGKIC

Posts from @UNGGIM





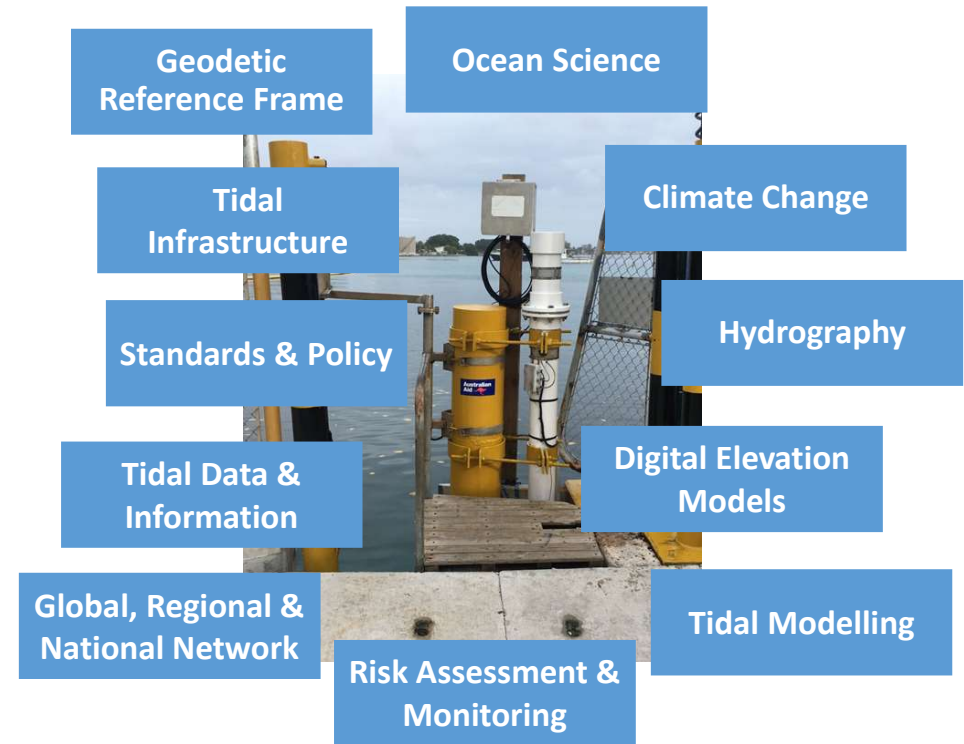
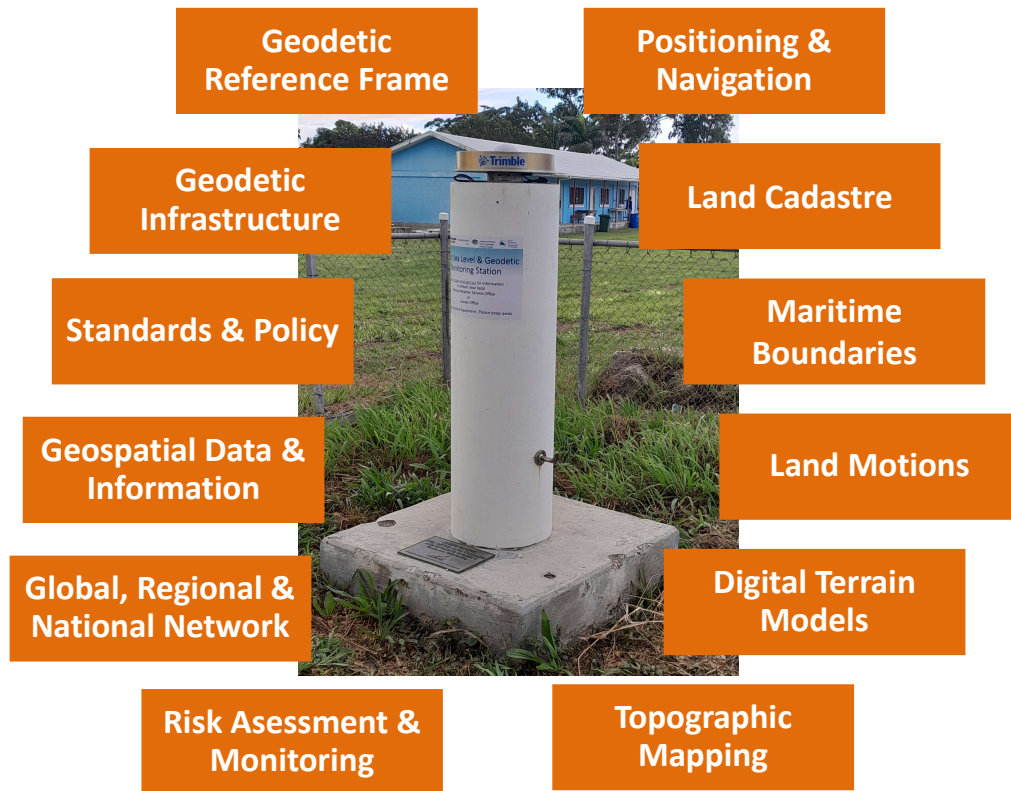
Expert Consultation and Meeting on Enhancing Geospatial Information Management Arrangements and Accelerating the Implementation of the Sustainable Development Goals together with the Sub Regional Workshop on United Nations Integrated Geospatial Information Framework for the Pacific Island Countries and Territories and the 2024 Annual Meeting of the Pacific Geospatial and Surveying Council  
11 - 15 November 2024 | Suva, Fiji







## Global & Regional Collaborations UN-GGCE International Workshop "Joining Land and Sea"



## Regional Framework & Capacity

# Pacific Maritime Boundaries Project

[malakaiv@spc.int](mailto:malakaiv@spc.int)

Maritime Boundaries Advisor



# Highlights

Republic of Marshall Islands passing  
of *Maritime Zones Declaration*  
(Amendment) Act 2025.

- **Introduction of Sea Level Rise  
stability clause** via the MZ  
Declaration (Amendment) Act 2025



Republic of the Marshall Islands  
*Jepilpilin Ke Ejukaan*

## REPUBLIC OF THE MARSHALL ISLANDS MARITIME ZONES DECLARATION (AMENDMENT) ACT, 2025

Introduced by:

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MINISTER TONY MULLER

Received by:

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SPEAKER BRENSON S. WASE

SIGNATURE

*NB No. 29*

# Highlights

- Deposit of list of Geographical coordinates of points concerning baselines, archipelagic baselines, outer limits of the territorial sea, contiguous zone and EEZ for PNG – 3<sup>rd</sup> September 2024.

## PAPUA NEW GUINEA

Page last updated: 16/10/2024

### SUBMISSION IN COMPLIANCE WITH THE DEPOSIT OBLIGATIONS PURSUANT TO THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA (UNCLOS)

■ M.Z.N.164.2024.LOS of 3 September 2024:: Deposit of lists of geographical coordinates of points, concerning its baselines, including archipelagic baselines, and outer limits of the territorial sea, contiguous zone and exclusive economic zone, regarding the Principal Archipelago of Papua New Guinea, Nukumanu Islands, Pocklington Island and Tauu Islands, as contained in the Maritime Zones Act 2015 (No. 47 of 2015), accompanied by illustrative maps..

- ◆ List of geographical coordinates of points
- ◆ Illustrative map

Relevant article of UNCLOS: 16(2), 47(9), 75(2)  
Law of the Sea Bulletin No. 116

# Highlights...cont

- UNCLOS 101 Capacity Building for Government of Nauru



## Supporting the 2021 Leaders' Declaration



- Conclusion of RBBP research project in June 2024
- Tuvalu's updated constitution
- FSM – Amended Maritime Boundary Regulation, Observation to UNDOALOS and BBNJ Ratification
- Fiji/Solomon Islands – exchange of letters at time of signing boundary treaty
- Fiji's Climate Change Act
- Cook Island's Observation to UNDOALOS



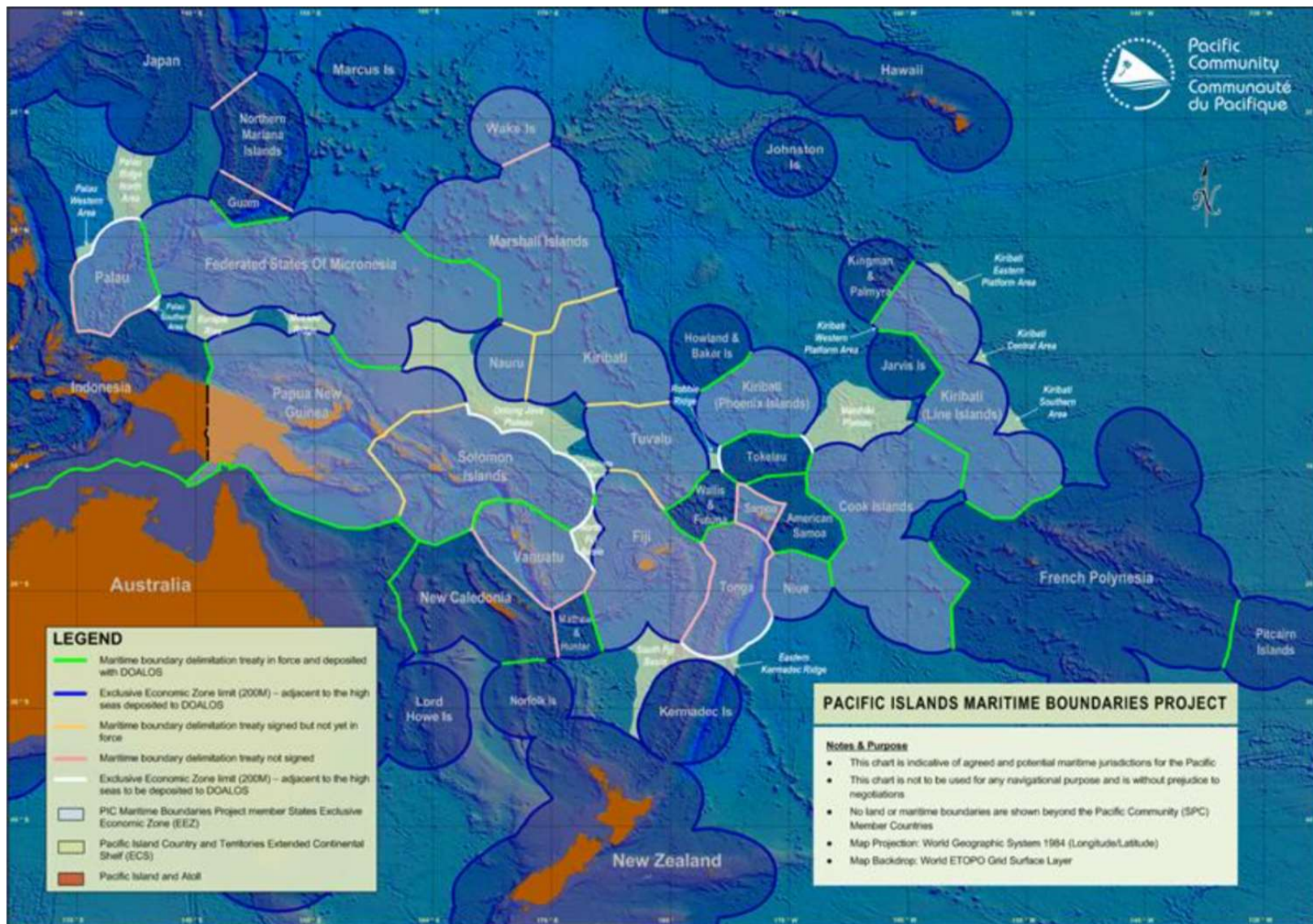
# Extended Continental Shelf Project

- UK Government - 3 years funding - £2.4 million (FJ\$5.4 million) funding for Integrated Ocean Management and Maritime Governance

## New UK-Pacific partnership to boost maritime security and ocean management

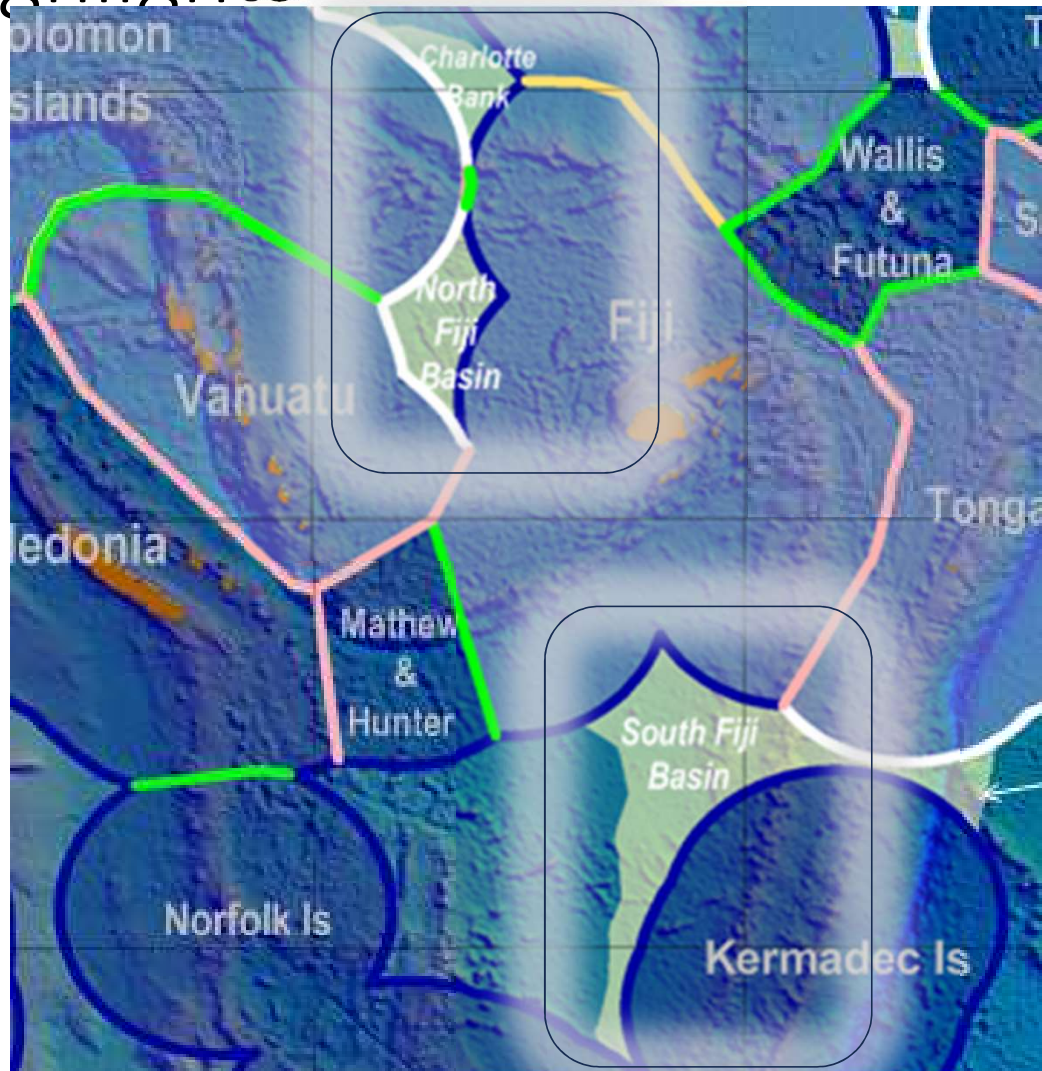
Suva | 6 June 2024







# Highlights



ECS Area	Countries	Status
South Fiji Basin	FJ	Cabinet approval given. To submit to CLCS.
North Fiji Basin	FJ/VU/SB	Final NFB submission drafted Cabinet approval complete To submit to CLCS
Melanesian Borderland Plateau	FJ & SB	Final submission drafted. Cabinet approval complete. To submit to CLCS

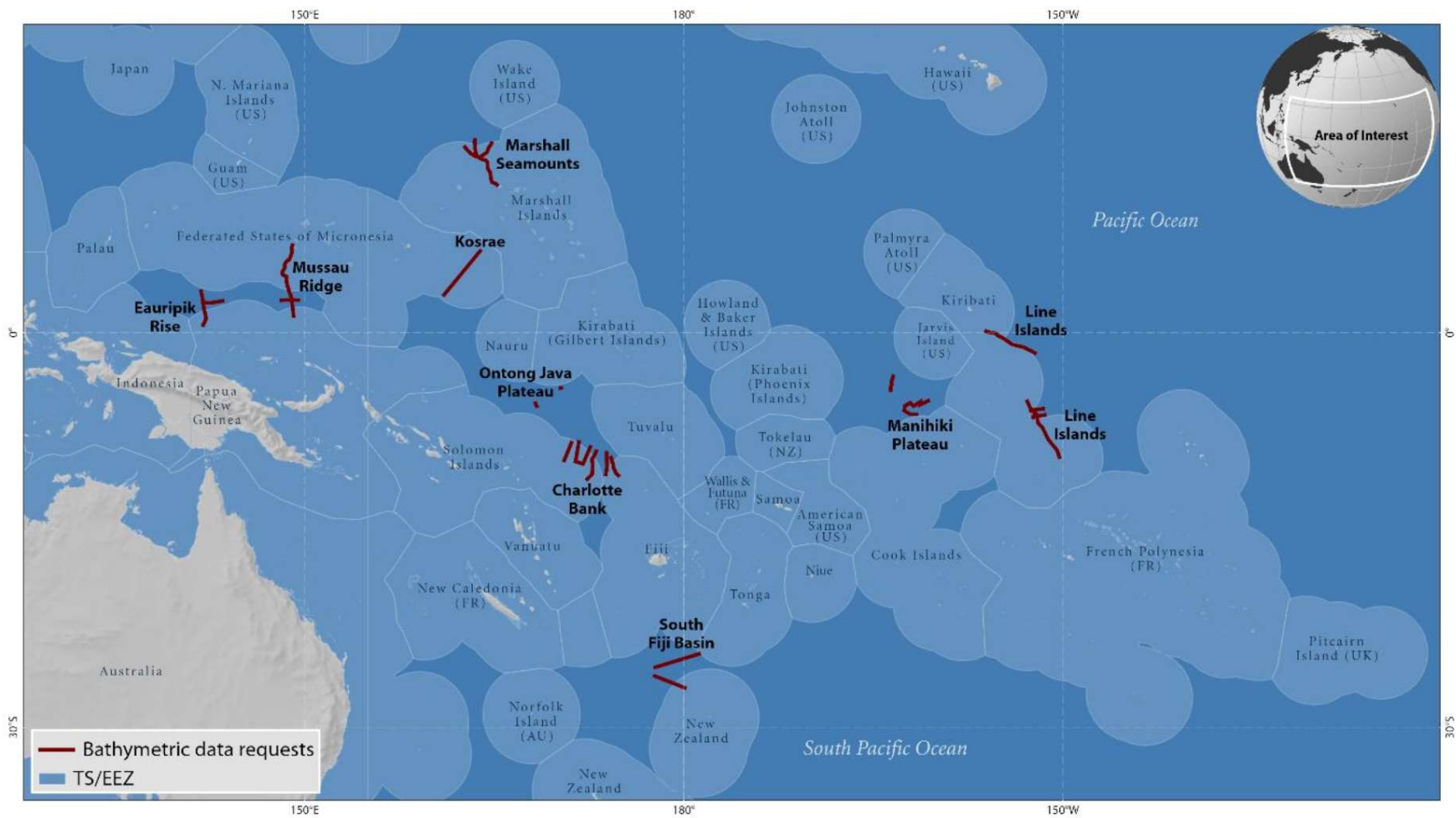


Figure 1: Map of multibeam bathymetric data requests (thick red lines) for Pacific Island countries.

# Pacific Geospatial Women Network



[Pacific Geospatial Women Network – PGSC](#)



# Pacific Geospatial Women Network

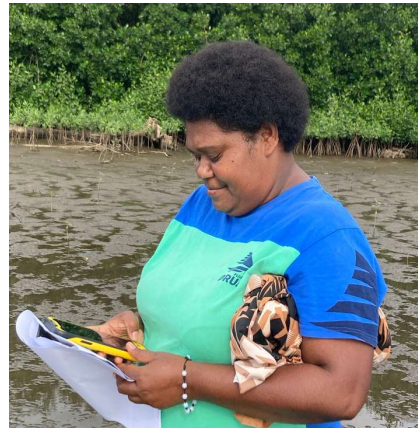
Capacity Building –  
Early Carrier



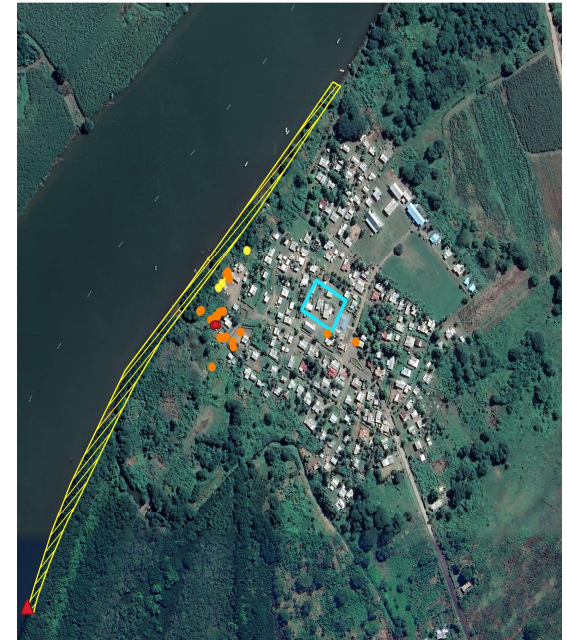
Stakeholder  
Engagement



Capacity Building  
Rural Women



Resource Mapping



# THE PACIFIC RESEARCH VESSEL PROJECT

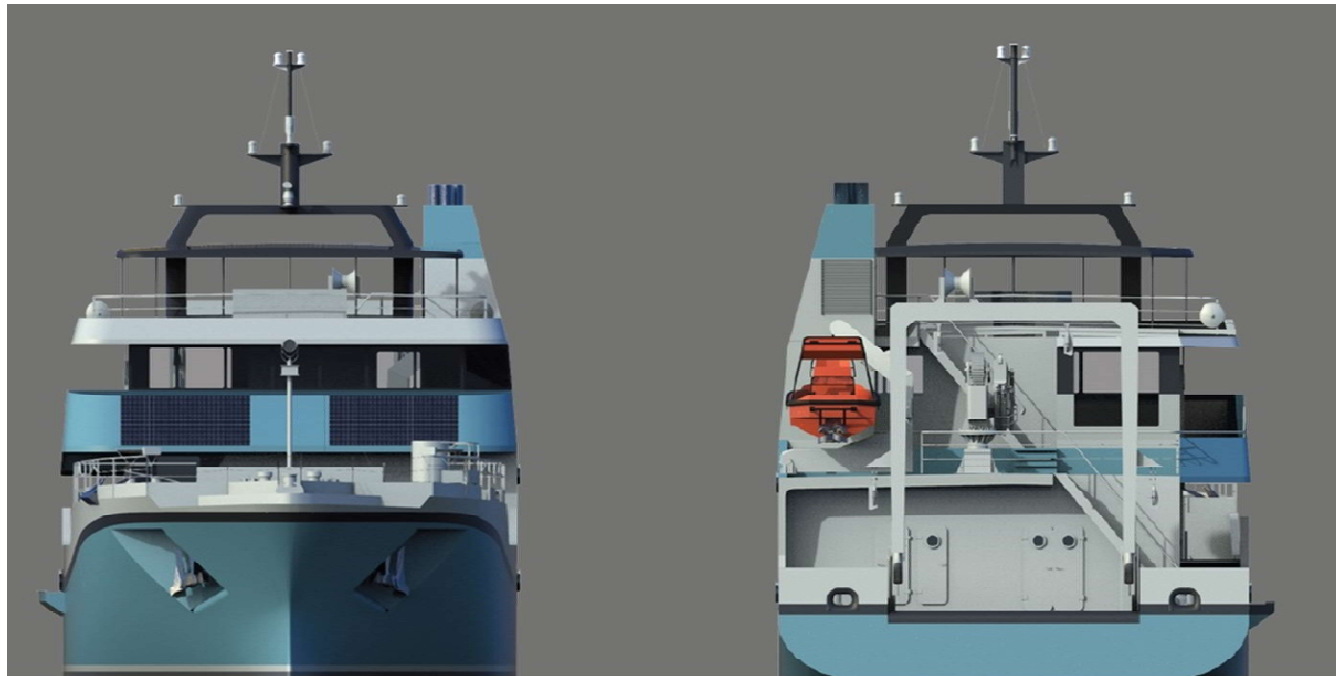


A research vessel to support Pacific tuna  
fisheries management and ecosystem  
monitoring

# FUNDING



- Through the Pacific Blue Partner agreement, Australia, New Zealand and USA have committed funds to support the vessel construction (Current budget US\$ 25 M).



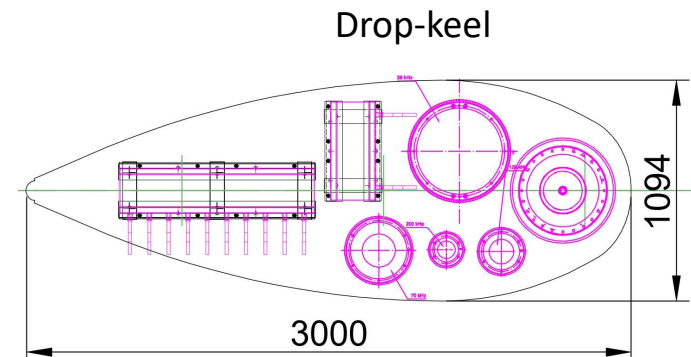


# VESSEL CAPACITY DETAILS



- **Acoustic**

- **Bathymetry** multibeam echo-sounder (**EM712**, 1x 2°)
- **Fishing** echo-sounder (**EK 80**, 38,70 12, 200)
- **Acoustic Doppler Current Profilers** (75 & 600 Khz)
- Single beam echo sounders
- Tuna fishing **sonar** (Furuno CSH8LMK2)
- Fishery trawl and net monitoring device (Marport)



➤ Vessel classified to improve acoustic performances

( **BV COMF-VIB 2**, **BV COMF-NOISE 2**, **DNV-Silent F** )

# Environmental impact



- Vessel design to be 30 to 50% more energy efficient than a conventional vessel of this size.

## Options:

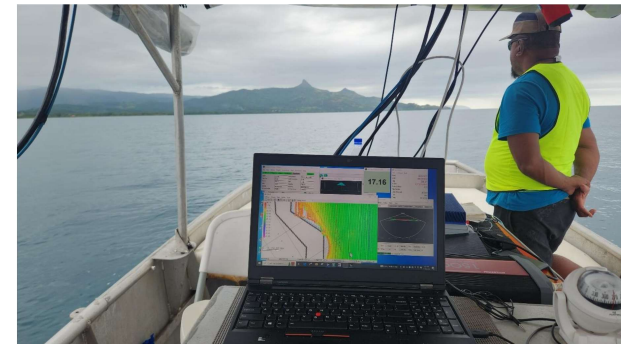
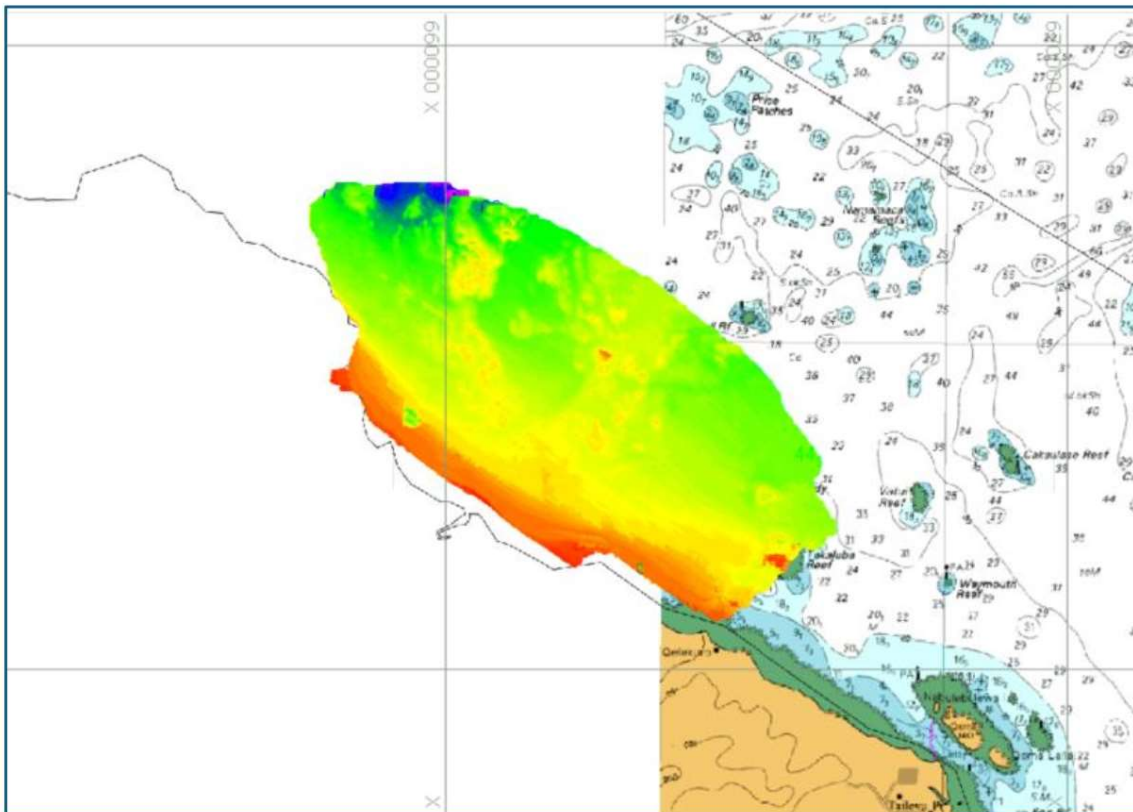
- Diesel-electric propulsion with Tiers3 generators
- Large battery park capacity- Upgrade possible
- Hull- propeller optimisation
- General economy for energy consumption (thermal insulation)
- Energy recovery (heat exchangers, solar panels, kite...)





# DEP programme

[Digital Earth Pacific](#) | [The Pacific Community](#)





# Hydrographic surveying capacity and capability

## Equipment

- R2Sonic 2024 shallow water (400m) MBES
- RESON 8160 deep water (2000m) MBES
- SBES (200kHz and 10KHz)
- CTD and SVP
- Precision GPS GNSS equipment ( R10, R12, R14)
- Tide gauges( Valeport)
- Pressor sensors (RBRs)
- Side scan sonar (Cmax EDF dual frequency)

## Vessel

- Dedicated survey platform (5.7m flat bottom with 150Hp motor) for inshore waters

## Staff

- CAT B surveyor and Technicians
- Geodetic surveyors
- Oceanographers

## Note

- For request of equipment for SPC member countries and territories*
  - *An official letter of request from FA to SPC Director*







## Hydrographic related Activities in 2025

### [Upcoming Events | The Pacific Community](#)

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1. Port Vila Harbour seafloor(MBES) investigation survey ( UK funding)
  - Training opportunities/capacity building ( FHS and Vanuatu)
2. Nauru MBES port survey, to produce new charts ( UK funding)
  - Training opportunities/capacity building ( FHS and Vanuatu)
3. Potential of SDB- MBES survey work in 2 PICs- DEP phase 2 project)
  - Potential for capacity building for PICs
4. Temporary tide gauge deployment in Palau ( COSPPac3 project)
5. COSPPac National Science to Service Workshop – Palau ( May?)
6. GNSS Technology workshop ( September 2025) PGSC
7. Geodesy Capacity Development workshop – TBC
8. Water quality instrument and wave buoy deployments – Niue ( CisPac 5 project)
9. Wave buoys and temporary tide gauges ( IMOS and WRP projects)
10. The GNSS enhancement to Tsunami Early Warning Systems (GeTEWS) – TBC
11. LiDAR surveys
  - RMI (MFAT funding “Addressing Loss and Damage Project)
  - Tonga (GCF Coastal Resilience Project)

### [Procurement | The Pacific Community](#)



## [Resource Centre | The Pacific Community](#)

### Resource Centre



Have you visited the new Pacific Data Hub? This resource provides links to over 1300 datasets from SPC and other Pacific based organisations. More data is constantly being added. Discover more by clicking the image above or going to: [pacificdata.org](https://pacificdata.org)

### Other Pacific Databases and Specialist Resources





# Vinaka

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