



Pacific
Community
Communauté
du Pacifique

Geoscience, Energy and Maritime Division (GEM) Pacific Community(SPC)

SWPHC 20

Hydrographic related activities in 2022

Oceans and Maritime Program

Salesh Kumar, Hydrographic and Aids to Navigation Officer

saleshk@spc.int



GEM Oceans & Maritime Program
Geoscience, Energy and Maritime Division



SPC's 27 Member Countries and Territories



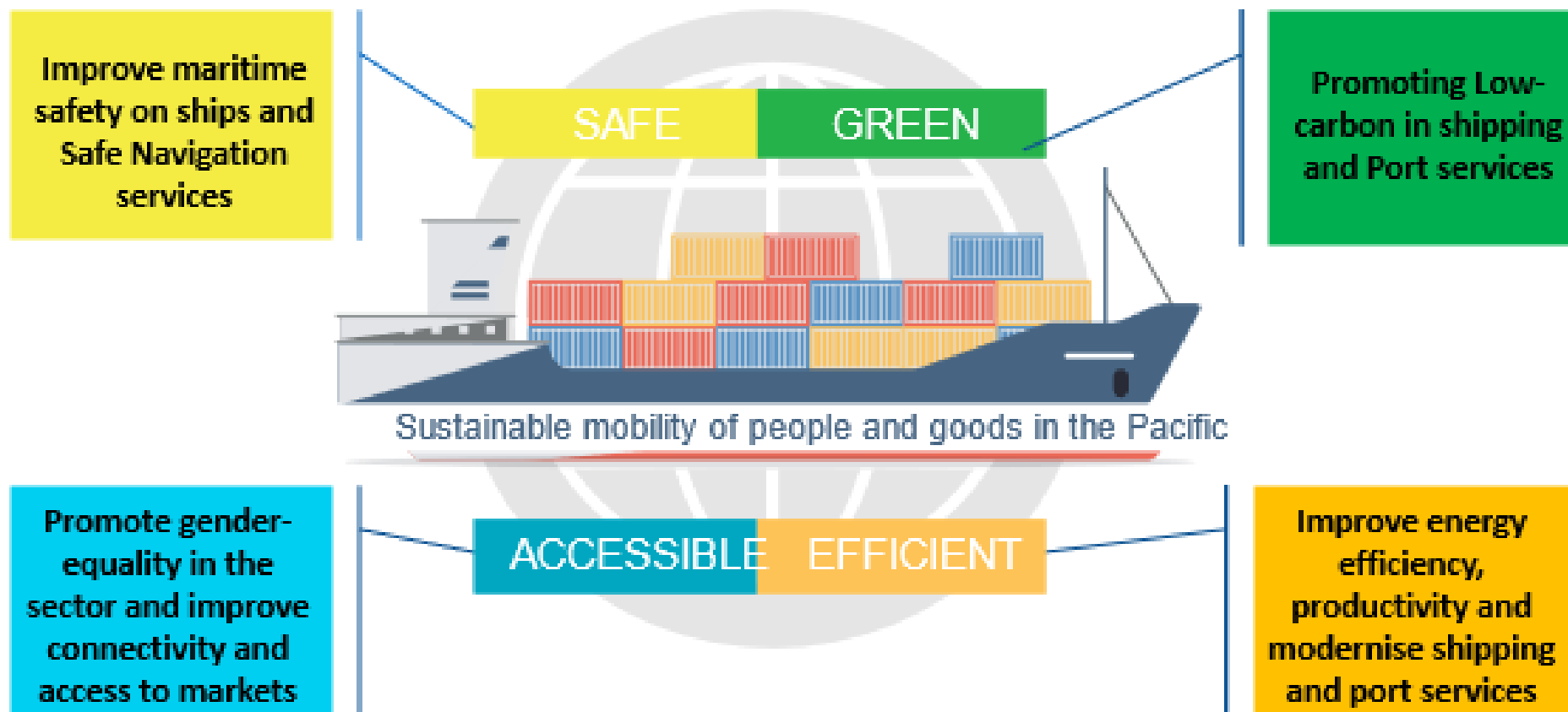
[Home](#) | [The Pacific Community \(spc.int\)](#)

<https://youtu.be/berQErg1h3A>



SPC Maritime Integrated Programme

Community-centred approach to safety-for-all at sea





Pacific Safety of Navigation project



Result 1 “Governance”: PICTs governance systems to deliver effective and efficient Aids to Navigation services are strengthened both nationally and regionally.

Result 2 “Capacity building”: PICTs capacity to provide effective and efficient Aids to Navigation services in line with international maritime instruments is strengthened.

Result 3 “Infrastructure”: PICTs Aids to Navigation infrastructures and services are adequate to cater for the volume of traffic and the degree of risk identified.



Result 1: Governance

- Samoa, Vanuatu (AtoN regulations and policy)

Result 2: Capacity building

- IALA AtoN level 1 manager course
- MSI awareness workshops in country and online
- AtoN maintenance workshops

Result 3: Infrastructure

- Solomon Islands
- Vanuatu
- Kiribati





IALA level 1 manager course 2022

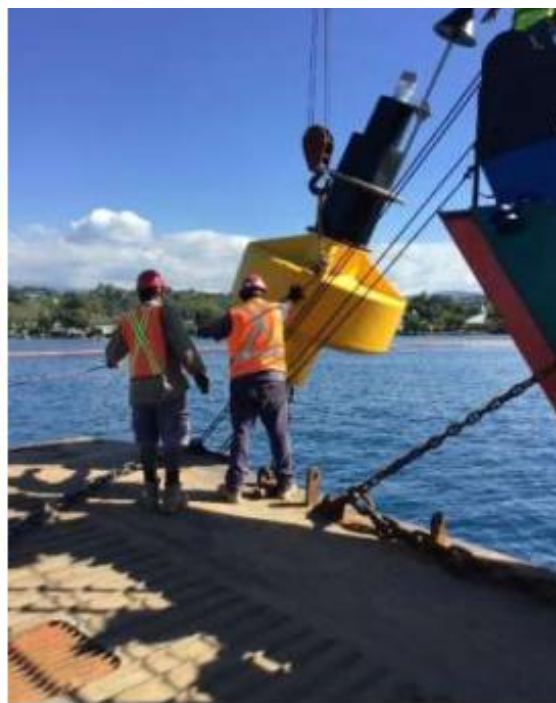


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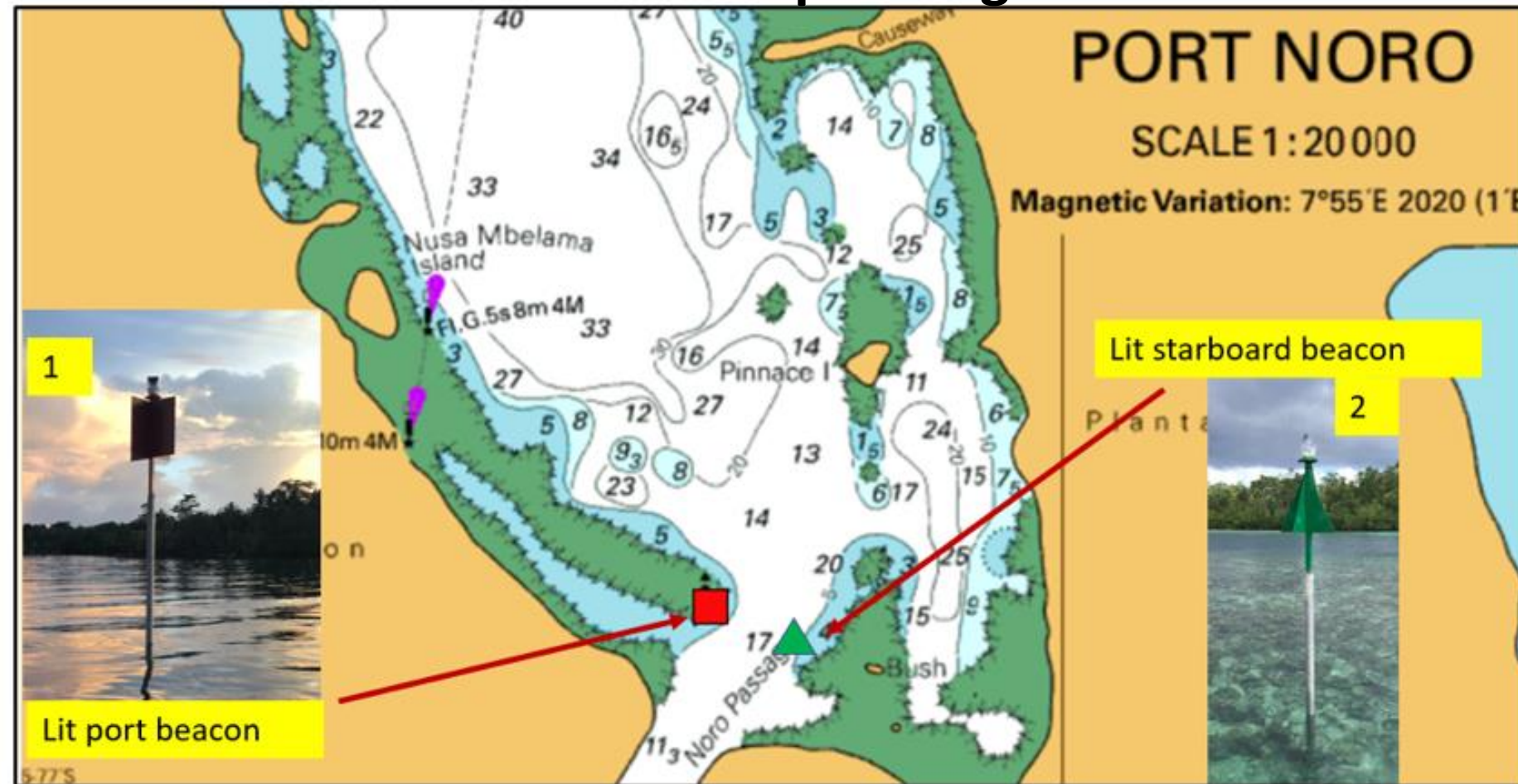


Capacity building





note:
MSI was promulgated





Infrastructure, Solomon Islands



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SAFE AND SUSTAINABLE MARITIME TRANSPORT



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1 VATU
SPENT ON HYDROGRAPHY
RETURNS
91 VATU

The cost benefit of complying with international maritime regulations saves money, reduces risk and increases economic opportunities for Pacific countries.

Strengthening navigation services saves money and reduces risk to communities.

SCAN ME



10 Marine risk assessments in the Pacific found the investment of:

€5.9 MILLION

IN SAFETY AND MARITIME
GOVERNANCE, SAVES

€390 MILLION

IN MARITIME INCIDENTS.

Investment in meeting international regulations for shipping routes improves safety and increases economic benefits.



SCAN ME



Multibeam image of SS President Coolidge an American luxury ocean liner that served as a troopship from December 1941 until October 1942, when she was sunk by mines in Espiritu, Santo in Vanuatu. She is now a popular tourist attraction and dive site.



Transitioning away from fossil fuel in maritime transport saves money and protects our environment.

In Vanuatu, the Tiwi Trader Solar-PV system reduced operating costs at anchor by 32% per year and reduced emissions by 226 tonnes.

This saved the operator:

4.7 MILLION
VATU PER YEAR.

EQUIVALENT TO

€38 THOUSAND

SCAN ME



SPC Geodetic Unit

Andrick Lal, Marika Kalouniviti, Rusiate Turuva, Veenil Rattan



GEM Oceans & Maritime Program
Geoscience, Energy and Maritime Division



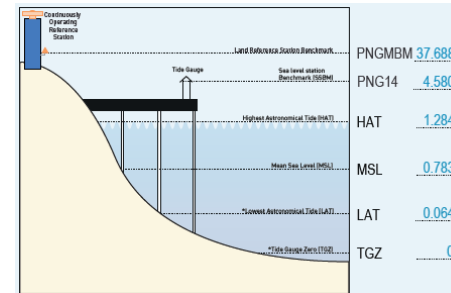
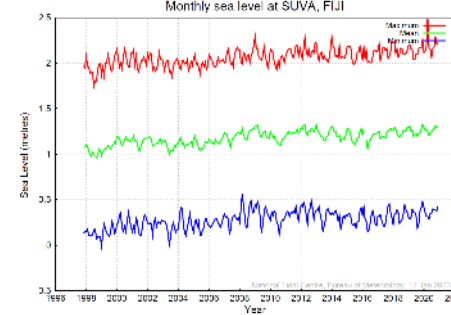
Pacific Sea Level & Geodetic Monitoring Stations

Tide Gauge Station

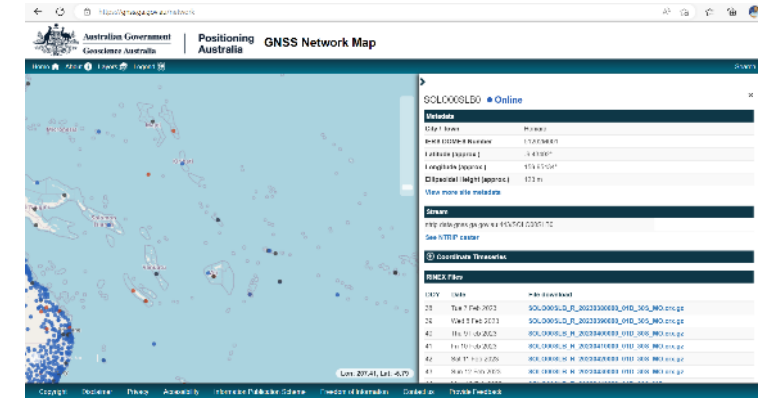
GNSS COR Station



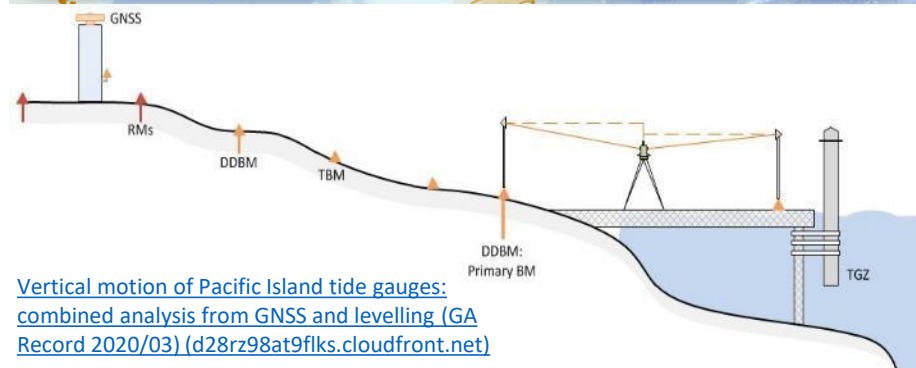
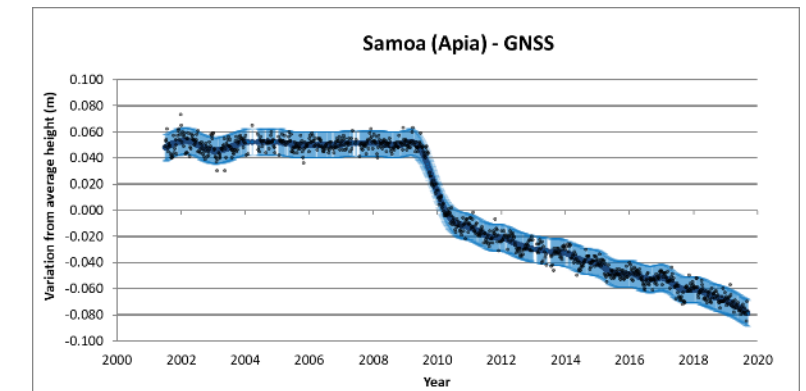
Pacific Sea Level Monitoring Project (bom.gov.au)



<https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/146976>



[GNSS Network Portal \(ga.gov.au\)](https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/146976)



Vertical motion of Pacific Island tide gauges:
[combined analysis from GNSS and levelling \(GA Record 2020/03\)](https://d28rz98at9flks.cloudfront.net/Record%202020%2003) (d28rz98at9flks.cloudfront.net)

Pacific Sea Level and Geodetic Monitoring
Project: Levelling & GNSS Monitoring
Survey Report

Tamara, Kiribati, December 2019

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Bureau of Meteorology

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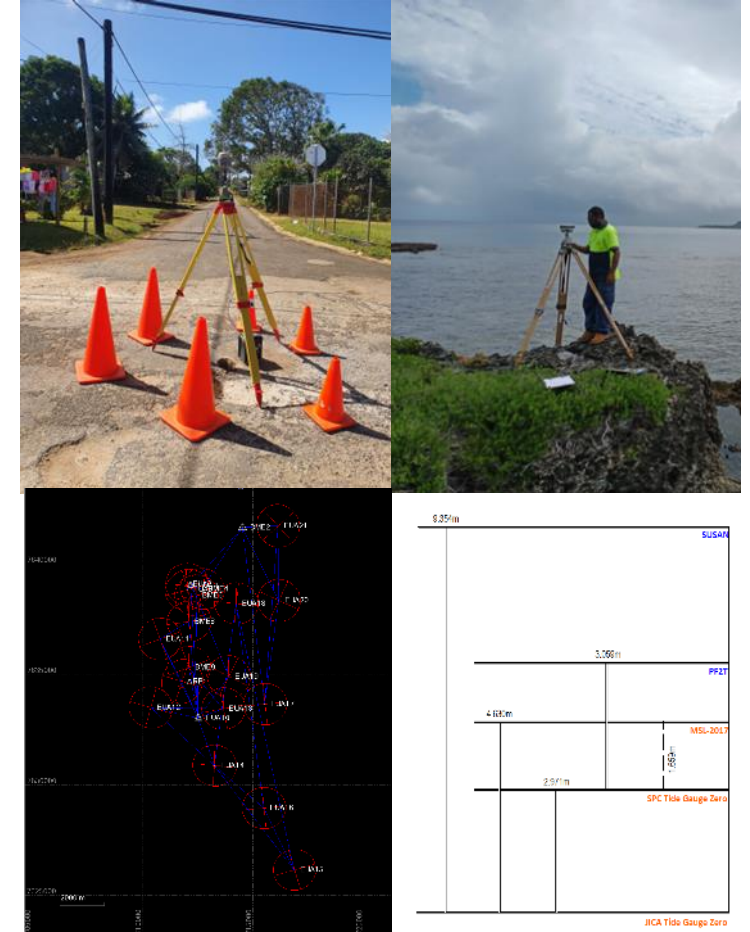
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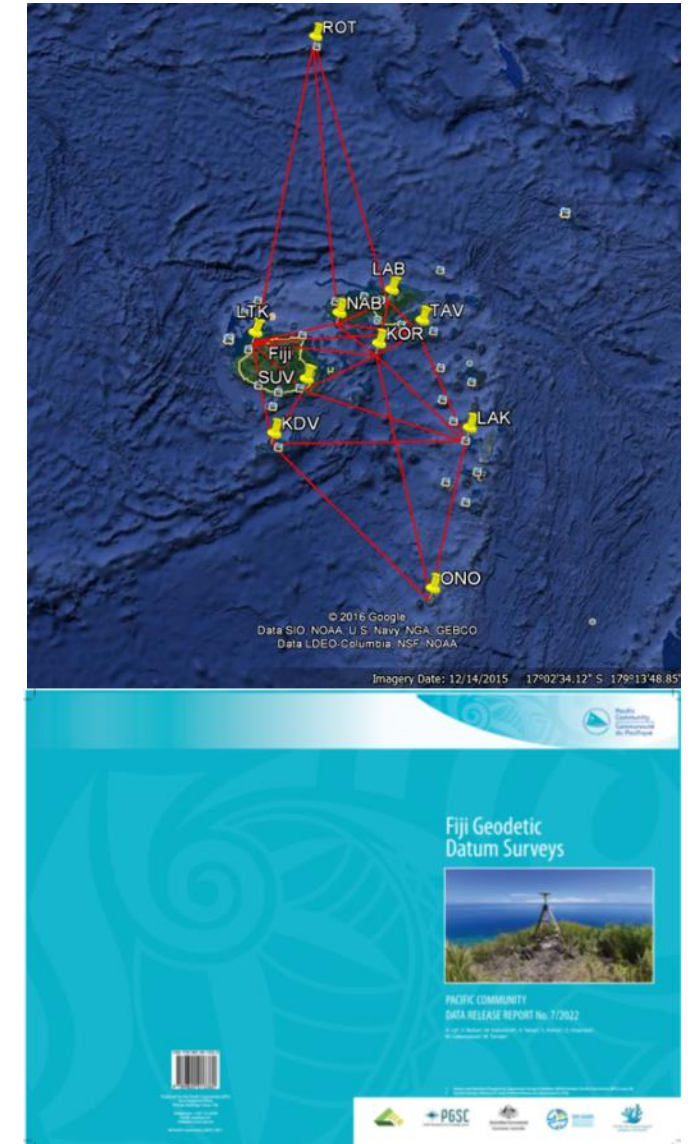
LiDAR Projects – Tonga and Vanuatu

- Geodetic Surveys
 - Tonga ('Eua, Niuatoputapu and Vava'u)
 - Vanuatu (Efate, Malekula and Tanna)
- Geodetic Data Processing & Analysis
- Vertical Reference Frame
- Ground Truthing for LiDAR Surveys (Topo)



Plenary Session June 2022

- Mid term Review of PGSC Strategy (2017 – 2027)
- Pacific Geospatial Women Network
- PGSC Working Groups (Positioning/Geospatial Policy& Data management/Capacity Building)
- PGSC Support and the Partnership Desk
- UN-GGIM Integrated Geospatial Information Framework Country Action Plan
 - Fiji and Tonga
- Memberships; New Caledonia and French Polynesia



Communications & Community



Pacific Geospatial and Surveying Council

Public group · 1.3K members

<https://www.facebook.com/groups/3998884766792177/>

Meizyanne Hicks shared a post.
November 16 at 9:31 PM · 🌐
Promoting World GIS Day and the Geospatial field on Fiji TV this morning!



Ministry of Lands and Mineral Resources

November 9 at 8:15 AM · 🌐

Leading up to the 2022 GIS Day on 16th November, the Geospatial Information Management team attended the breakfast show that aired live this morning. The theme ... See more

View insights

850 post reach

👍 Like Celine Becker, Jeff Aquilina and 42 others

2 Shares

👤 Write a public comment...



Home · Updates from SPC · Web Stories

Mapping our Pacific Geospatial Future

Suva · 21 June 2022



Imagine a world without maps. It's hard to do. Humans are born map-makers, instinctively looking for landmarks, making sense of patterns, and forming connections when we venture beyond our known environment.

For this reason, geospatial science may be one of the most important fields of study you have ever heard of. Geospatial information is location information. At its simplest, this can be topographical information found on a map. But you can also add in layers of location-tagged data, to show changes or trends, for example, in land use, population density, vaccine distribution, or coral reef health over time.

"If you look at Fiji's national development plan, there are so many areas where geospatial information comes in. There are calls for hazard maps, for strengthening land administration," says Ms Meizyanne Hicks, Fiji's Director, Geospatial and vice-chair of the Pacific Geospatial and Surveying Council. "In this way, the Integrated Geospatial Information Framework (IGIF) supports the implementation of Fiji's national development plan."

What is the IGIF?



Collaboration Efforts



Australian Government
Department of Foreign Affairs and Trade



NEW ZEALAND
FOREIGN AFFAIRS & TRADE
Aid Programme



UN-GGIM
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT



Climate and Oceans Support
Program in the Pacific



Australian Government
Bureau of Meteorology



Land Information
New Zealand
Toitū te whenua



UNOOSA



Australian Government
Geoscience Australia



United Kingdom
Hydrographic Office



Climate and Oceans Support Program in the Pacific



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Traditional Knowledge

Contact Us

Email: zulfikarb@spc.int

The Australian Government is supporting Pacific Island countries to adapt to and mitigate the impacts of climate variability. A major part of Australia's assistance is the Climate and Oceans Support Program in the Pacific (COSPPac).

WOMEN IN OCEAN

2023 TIDE CALENDAR

CALL FOR
PHOTOS



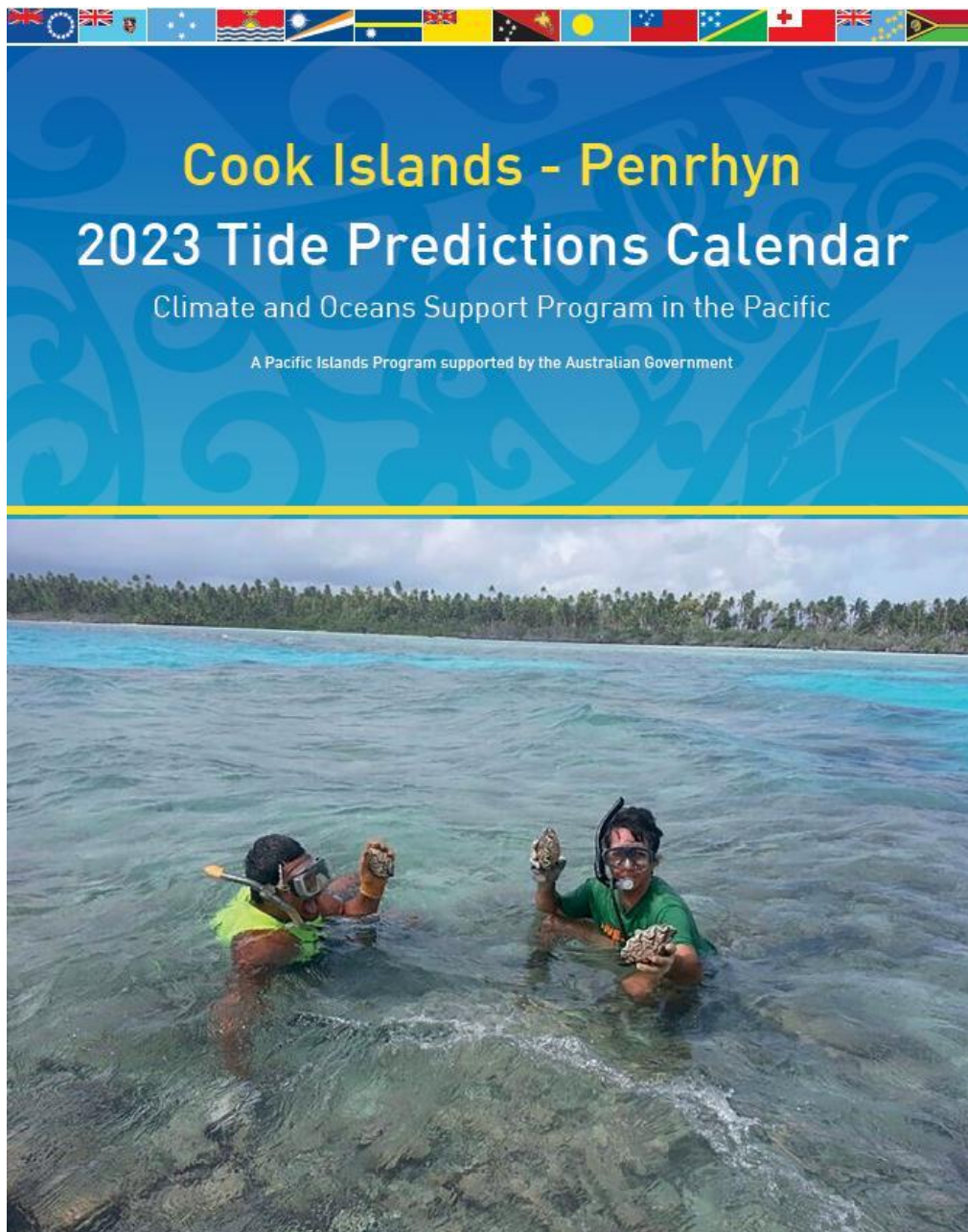
COSPPac 2023 Tide Calendar

2023 Tide Calendar

- Cover Photo Theme

Moving forward each year the calendar will be based on a theme

- Fact Sheet – Women in Ocean
- Fact Sheet – Pacific Tides App

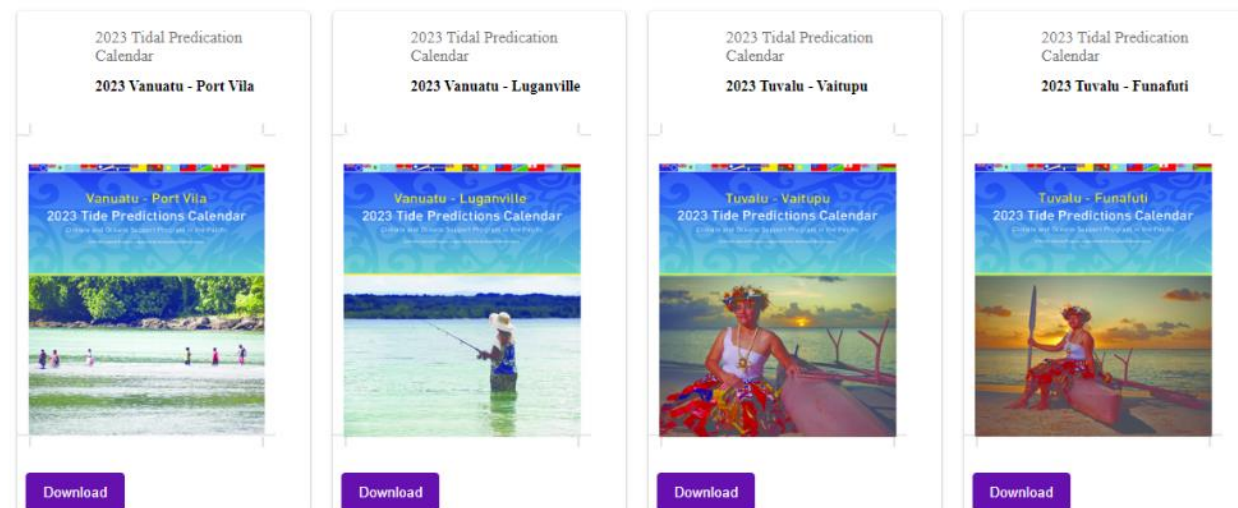



2023 Tide Calendar

- Calendar for 25 locations
- New Location added: Penrhyn Cook Islands
- Digital copies available through the Pacific Ocean Portal



Pacific Ocean Portal






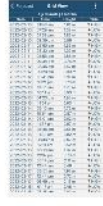


WELCOME TO THE HOME OF PACIFIC TIDES

Climate and Oceans Support Program in the Pacific

What is the Pacific Tides App?

A simple way to access reliable tide and moon phase forecasts for Pacific Island countries from your mobile phone.

How do I download the App on my mobile device?

The app is free to download for iPhone or Android devices. Simply, search "Pacific Tides" in the Apple App Store or Google Play Store.

What information is on the Pacific Tides App?

The same tide and moon phase predictions in the annual calendars developed under the Climate and Oceans Support Program for the Pacific (COSPPac) are now available in your pocket on the App.

Do I need internet to access the App?

Initially you will need an internet connection (wifi or cellular data) to download the predictions for any station. Once downloaded, you can seamlessly view forecasts offline.

How many (days/months/years) of data can we find on the App?


The app holds an unlimited amount of data. The Gridview feature allows the user to view all predicted data stored on their device for a given station. Users can download more data using the Downloader.

Who can use this App?

The app is designed for coastal communities in the Pacific including fishing groups, tourism providers, the shipping and maritime sector, divers, surfers and other ocean going people in mind.



More Information

The COSPPac project aims to help Pacific Islanders to access, understand and apply climate, ocean, and sea level information to strengthen climate and disaster resilience. We welcome your feedback, bug reports, and suggestions! Please contact us: cosppac@spc.int





Pacific Tides App

Updated with 2023 tides and moon phases






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Now available on the App Store and Google Play.

In-Country maintenance of tide gauges

- ✓ The six monthly infrastructure maintenance visit by local NMS teams are now followed by a video call with the NMS, BoM and SPC technical staff.
- ✓ Action items are listed and guidance to conduct further refurbishment work locally is provided to NMS technician.
- ✓ From the success of the Sea Level network, we are now developing a six monthly infrastructure maintenance schedule for the local LSD staff of the GNSS network. This will also be followed by a video call with the LSD, GA and SPC Geodetic staff.





Climate Change in the Pacific 2022:

Historical and Recent Variability,
Extremes and Change



Launched recently and includes analysis of datasets from the tide gauges looking at historical trends.

Online via

<https://bit.ly/3JpcIWl>

Regional Tides Training

6th to 10th March 2023, Nadi, Fiji

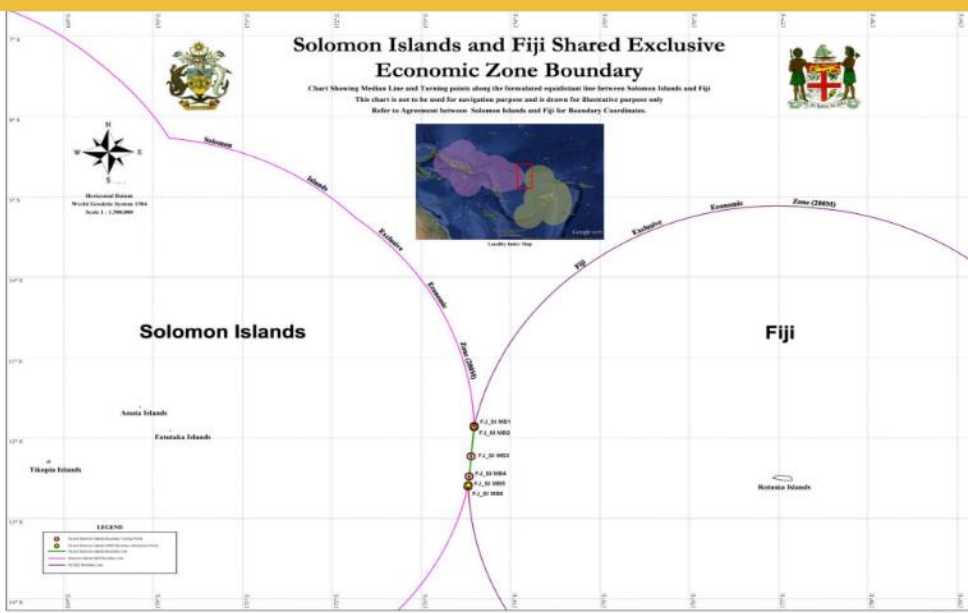
Training Objectives

- Increase participant's awareness and understanding of the fundamentals of tides, how tides are generated, instrumentation to record tides, data analysis and interpretation
- Increase participant's awareness on Geodesy and how to establish survey control and calibrate newly installed tide gauges
- Develop skills of participants in installing temporary tide gauges and use survey equipment
- Strengthen understanding of sea level its historical trends and future projections and impact of climate change.
- Develop skills of participants in acquiring baseline datasets required for undertaking post disaster assessments
- Strengthen participants understanding on establishing and validating local datum, controls, and levels to support baseline acquisition survey (bathymetry and topography survey such as LiDAR surveys) and support increased risk knowledge.
- Increase participants awareness on the use of sea level datasets for coastal infrastructure development

Maritime boundaries work: Technical Progress



Solomon Islands and Fiji (Jul 2022)



Fiji and Solomon Islands Sign Maritime Boundary Agreement



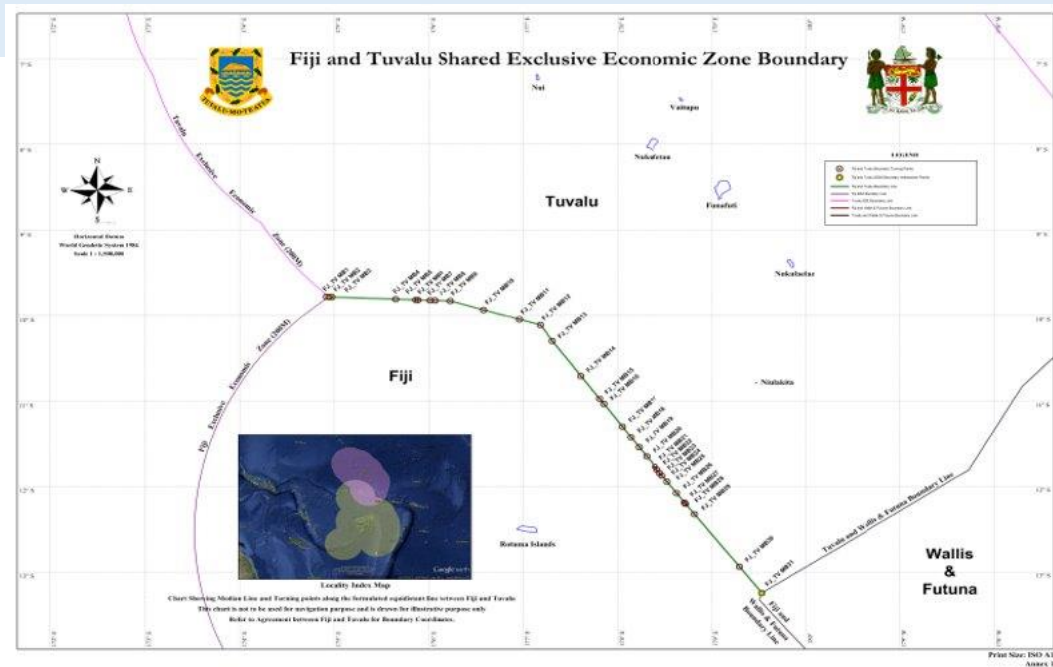
The Pacific Maritime Boundaries Programme supports Pacific Island Countries and Territories to secure the rights and responsibilities over their ocean space, in accordance with the UN Convention of the Sea (UNCLOS).

Source: the Pacific Community

Tuesday, 12 July 2022 09:51 AM

Share   

The Governments of Fiji and the Solomon Islands have signed an agreement on their shared maritime boundary, marking the first boundary treaty to be signed in the Pacific region in 6 years.



Tuvalu and Fiji (Jul 2022)

with Tuvalu

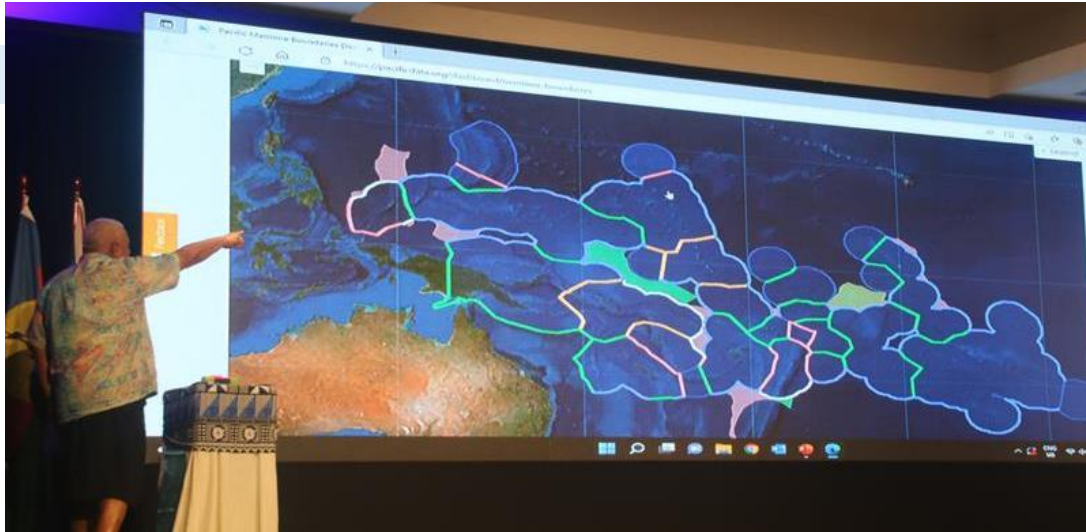
■ Agreement between the Government of Fiji and the Government of Tuvalu concerning their maritime boundaries, 17 October 2014 (entry into force: 17 October 2014; registration #: I-56867; registration date: 1 August 2021; [link to UNTS](#))

■ Exchange of notes constituting an agreement between the Government of Fiji and the Government of Tuvalu amending Article 1 of the Agreement between the Government of Fiji and the Government of Tuvalu concerning their maritime boundaries, 4 April 2019 and 26 October 2020 (entry into force: 26 October 2020; registration #: A-56867; registration date: 1 August 2021; [link to UNTS](#))



ECS: South Fiji Basin Handover (Jul 2022)

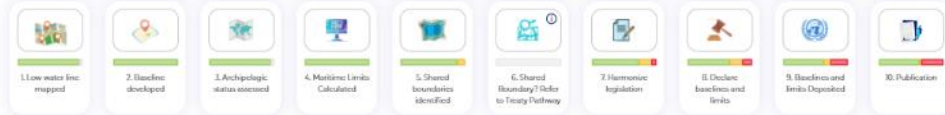
Data and Information Management



Dashboard Launch (Jul 2022)

1. Pathway to maritime zones

Download PDF file



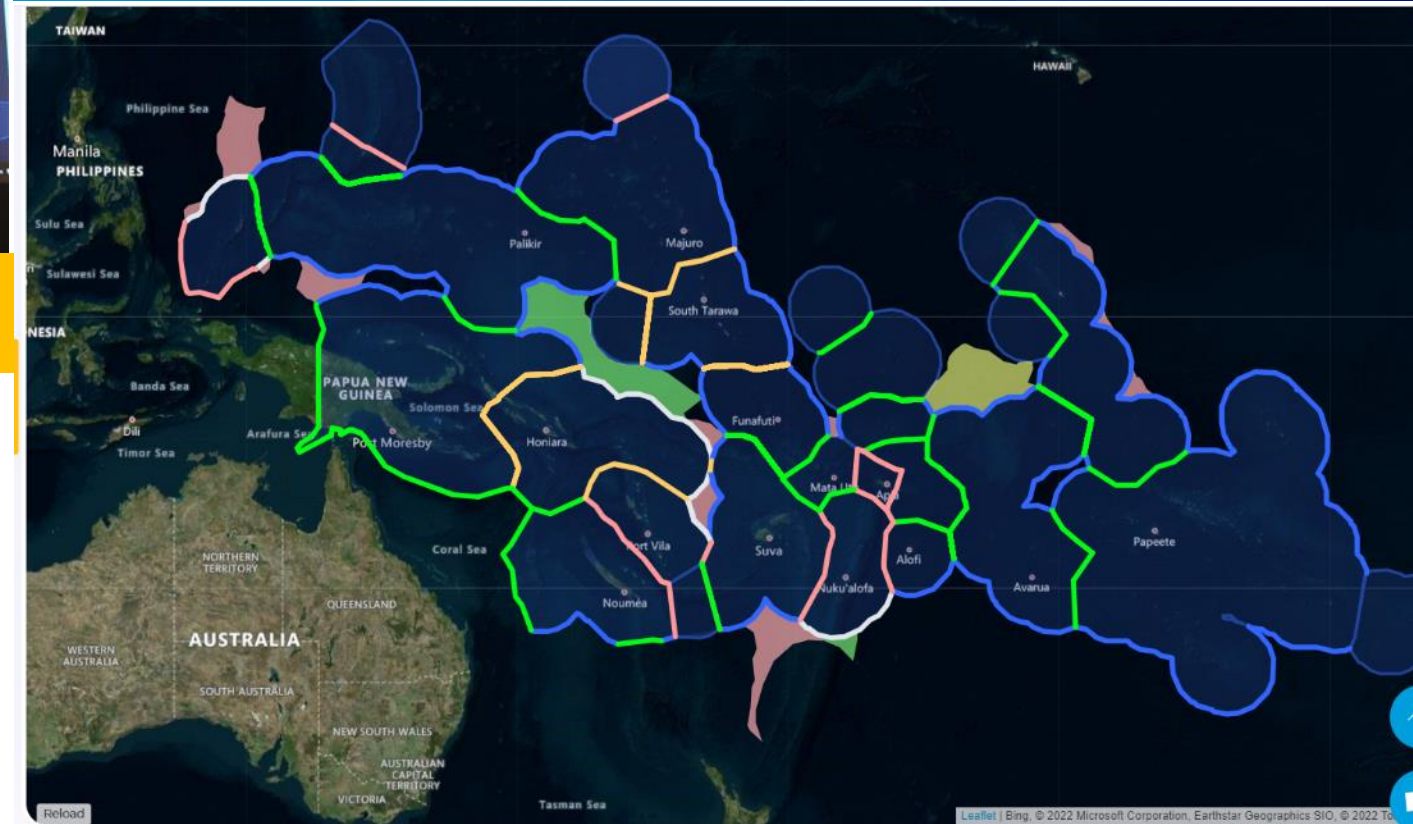
2. Pathway to Maritime Boundary Treaty

Download PDF file



3. Extended Continental Shelf Pathway

Download PDF file



Capacity Building & National Workshops

GEOCAP and ECS Training



Fiji (Mar 2022)



Vanuatu (Aug 2022)



Solomons (Sept 2022)

Capacity Building & National Workshops

21st Maritime Boundaries Session & RBBP Experts Meeting (Dec 2022)



- **46 Country** participants from 13 PICS (30% women)
- **54 Trainers/ regional partners** (29% women)

Please indicate which of the objectives you were able to achieve over the past 2 weeks. (1/2)

033

Conducted bilaterals with our neighbors

67 %

Progressed on our ECS areas

45 %

Improved understanding of national next steps with maritime zones

76 %

Gained new technical skills

48 %

Worked on our national legislation

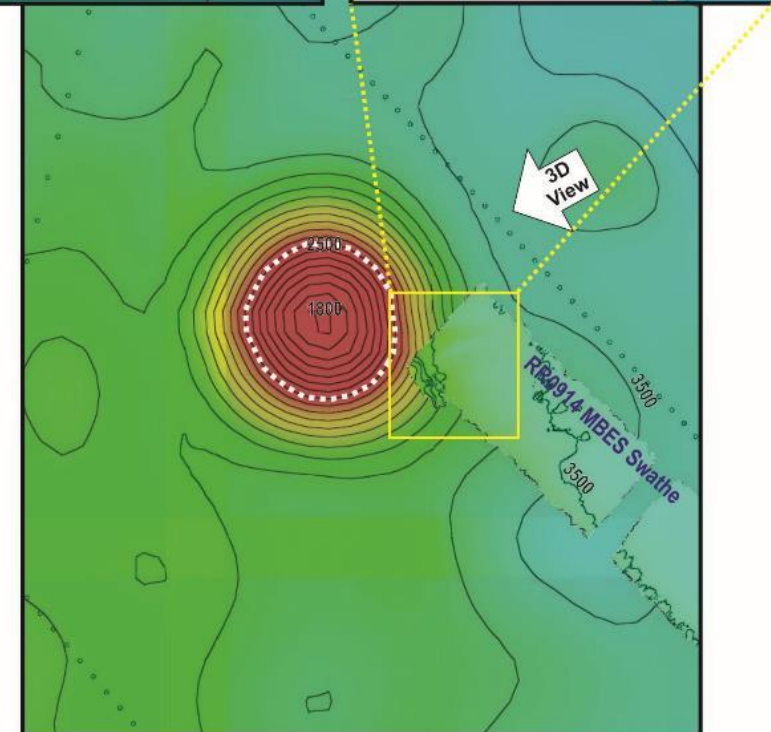
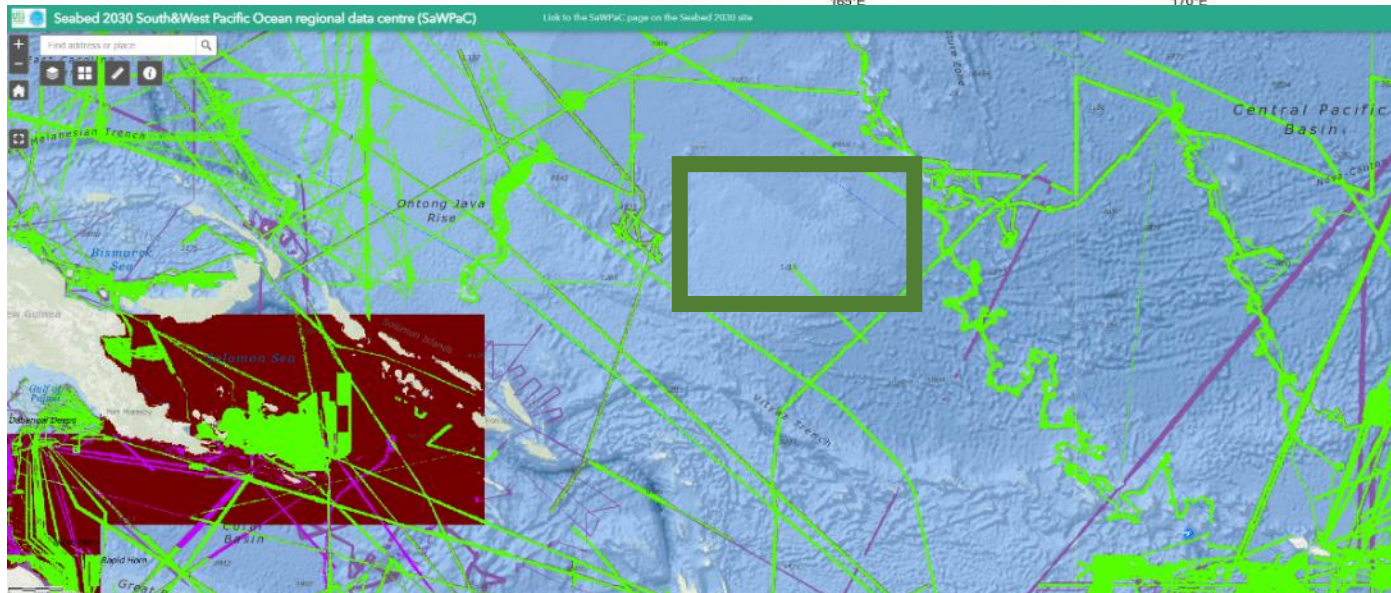
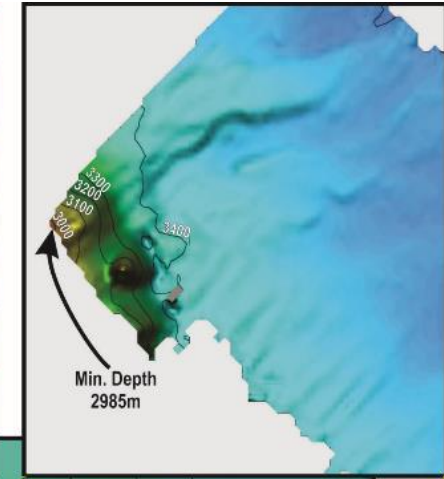
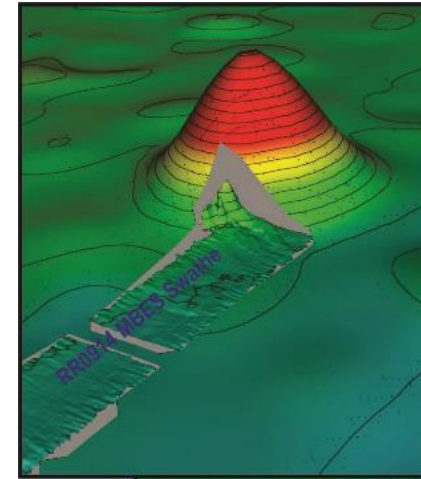
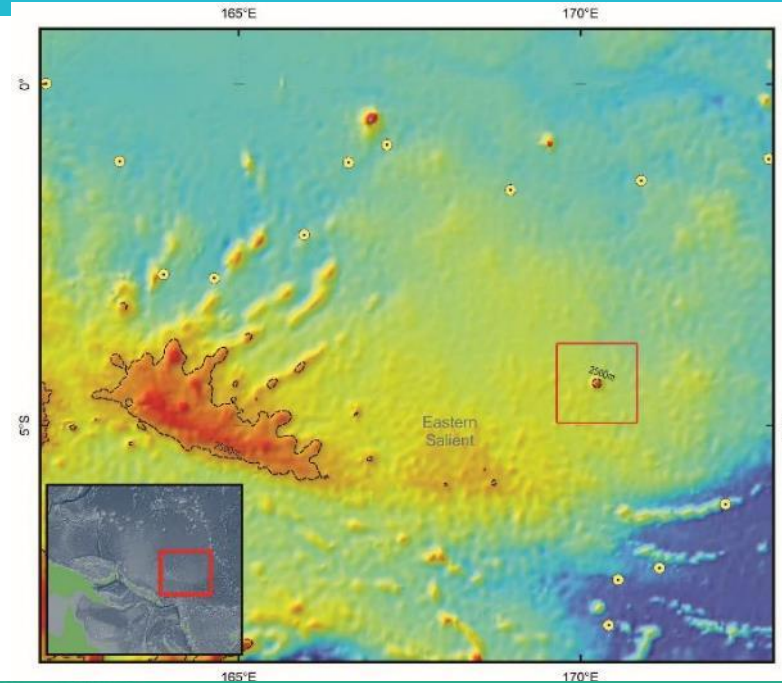
18 %

Learned more about climate change risks to national maritime zone basepoints

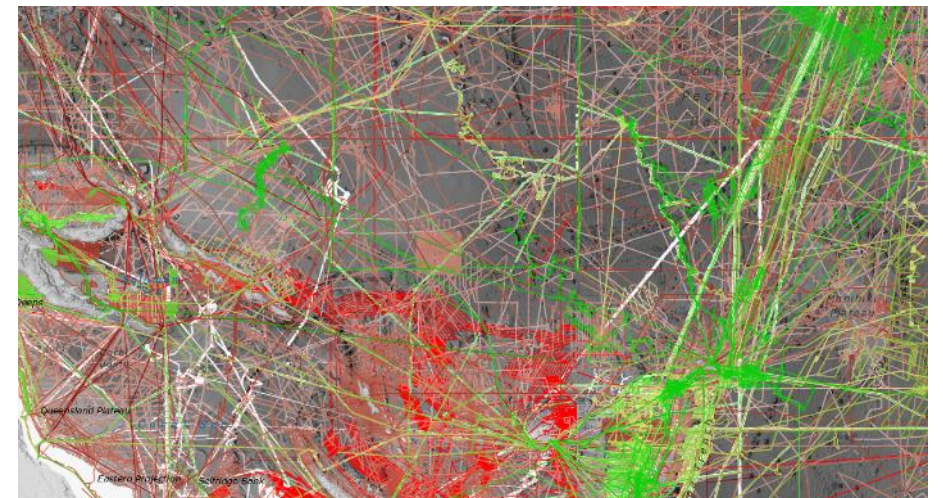
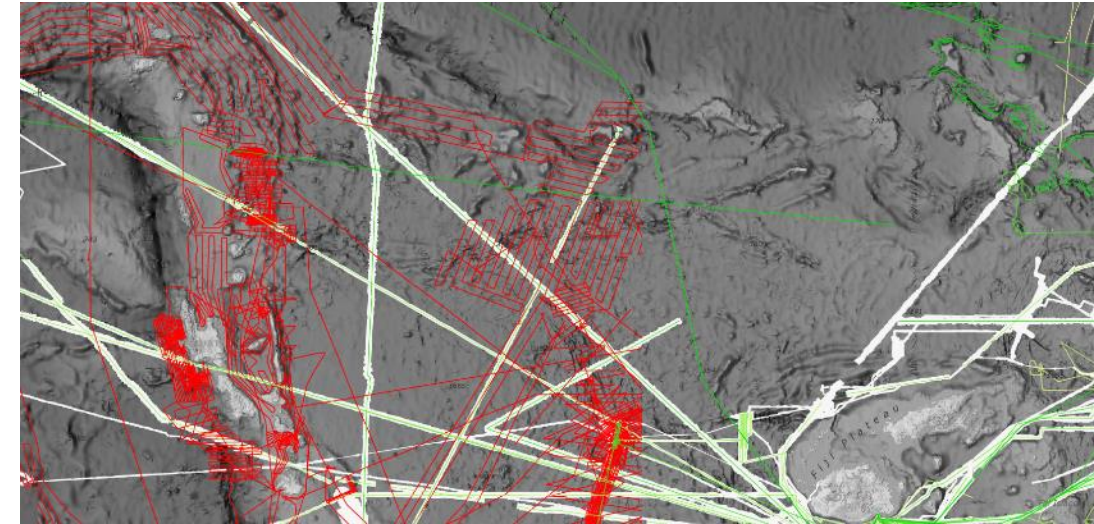
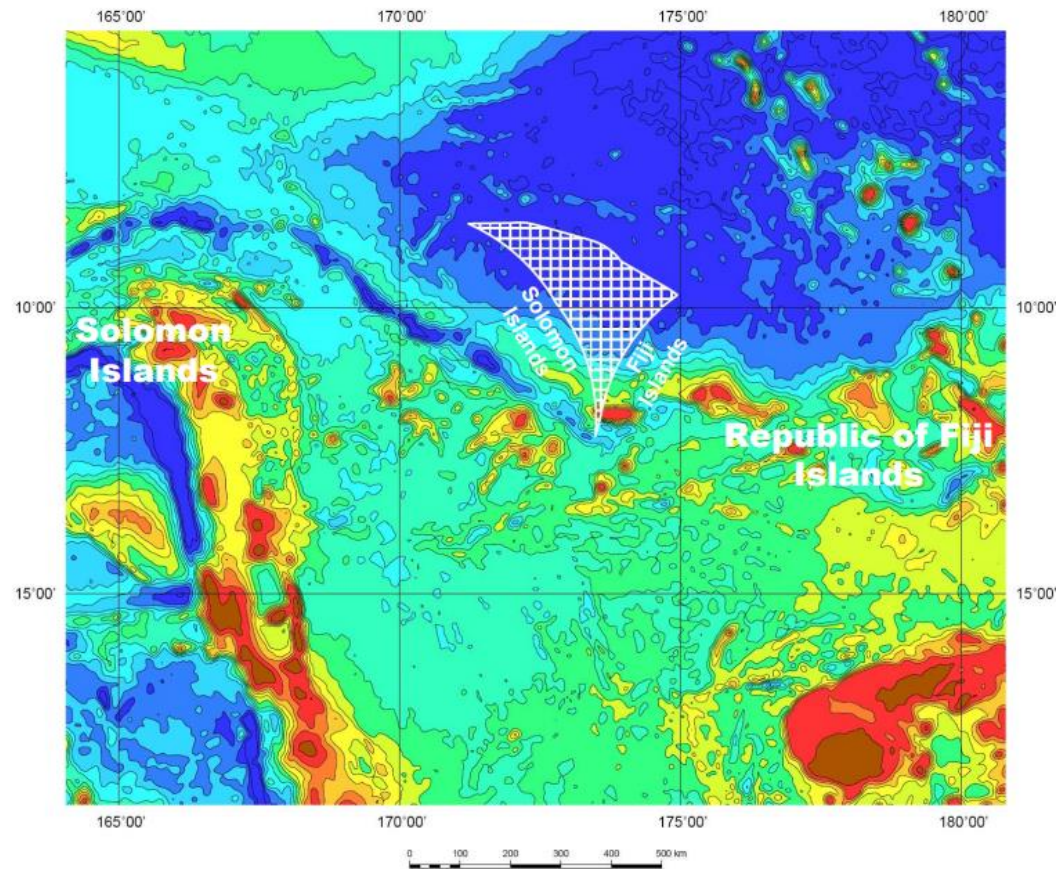
76 %

Bathymetry, seismic data needs

- Ontong Java Plateau
- 2500 m isobath data acquisition

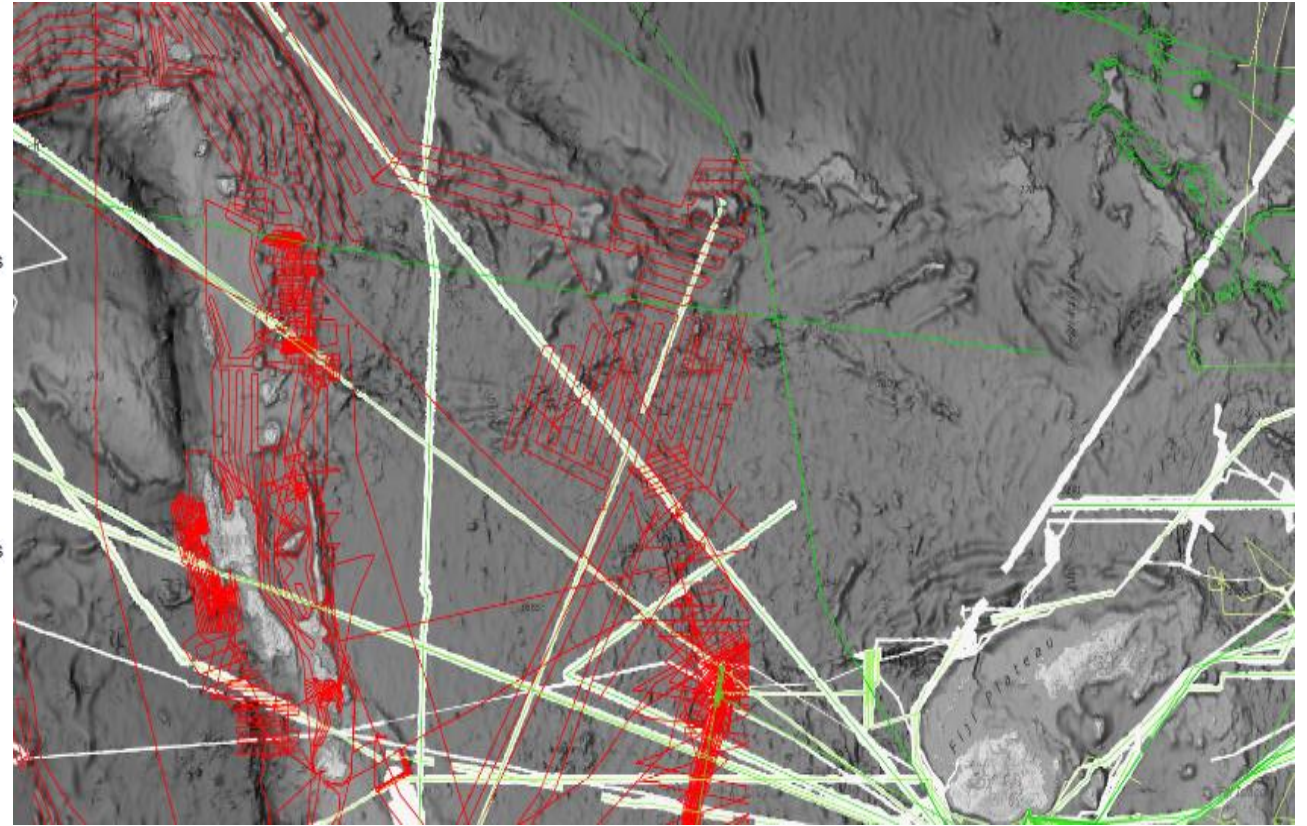
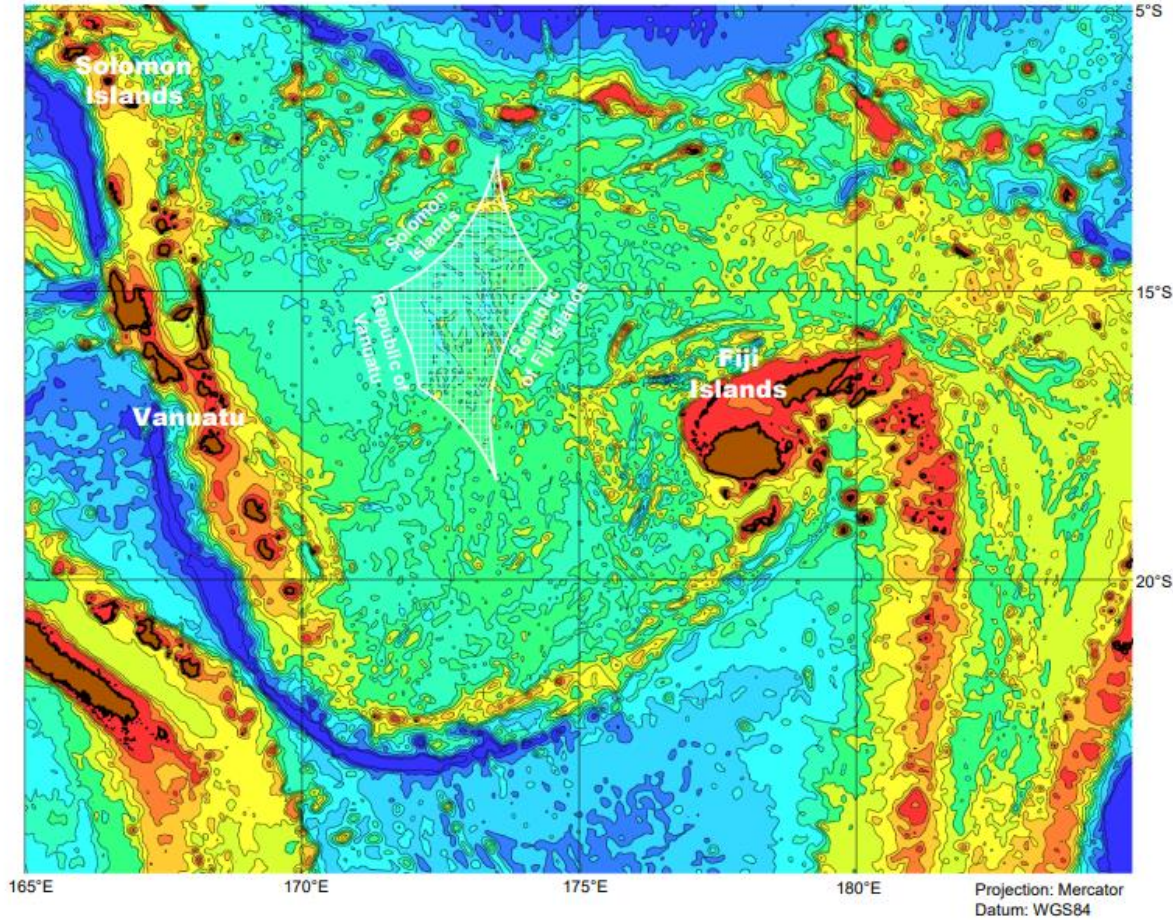


Charlotte Bank – Ellice Rise



Bathymetry, seismic data needs...cont

North Fiji Basin



New

Integrated Ocean Management Programme

- UN Ocean Decade endorsed programme
- EU seed-funding
- 1.5 million EUR
- 3 years



Palau Marine Spatial Planning Project

- US Dept of State
- 5.8 million USD
- 3 years





Pacific Data Hub



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[Pacific Data Hub \(PDH\) | The Pacific Community \(spc.int\)](https://spc.int)

Pacific Data Hub (PDH)

A screenshot of the Pacific Data Hub website. The header includes navigation links: HOME, TOPICS, TOOLS, DASHBOARDS, PORTALS, and DATA CATALOGUE. The main heading is "PACIFIC DATA HUB" with the tagline "Harnessing the power of data and knowledge for sustainable development". Below this is a search bar with the placeholder text "Search" and a magnifying glass icon. Under the search bar is a link for "Advanced search". A row of four icons represents different sectors: Climate Change (cloud and sun), Economic Development (line graph), Education (graduation cap), and Energy (lightning bolt). To the right of these icons is a right arrow. A text box on the right side of the page says "Check out the Pacific Data Hub (PHD) at pacificdata.org". At the bottom right, there are logos for the New Zealand Foreign Affairs & Trade and the Pacific Community.

Opportunities ahead



**2021
2030** United Nations Decade
of Ocean Science
for Sustainable Development

The Science We
Need
For The Ocean
We Want



The Pacific Community Centre for Ocean Science

‘PCCOS provides a platform for coordination and integration of ocean science, knowledge and information in the Pacific and for partnerships with international and regional stakeholders

A global framework to support efforts to reverse the cycle of decline in Ocean health & create improved conditions for sustainable development

PCCOS aims to help Pacific Island governments and communities **easily access the ocean science and expertise they need** to make informed decisions and to protect and sustainably manage ocean resources.

Opportunities ahead ...



SPC/PCCOS Research Vessel Project



The Fisheries, Aquaculture and Marine Ecosystems (FAME) Division of SPC are investigating the potential to design and construct a specific research platform for the Pacific region to support:

- The development of regional scientific advice
- To reinforce the region's capabilities to manage its natural resources
- Potential for vessel usage sharing by regional scientific organisations

- A pre-assessment study in 2017
- A thorough feasibility study in 2020
- Project endorsement during Heads of Fisheries (HoF-13) meeting in 2021
- Unanimous regional support confirmed during HoF-14 in 2022
- Recruitment (RFP currently in progress) of a naval architect to realize a functionality study (Apr-Jun 2023) and write technical ToRs to be included in a call-for-tenders directed to suitable shipyards
- *Finance consultation in September 2023*
- *Shipyard selection in December 2023*
- *Start vessel construction in 2024*



Recommendations to the 20th SWPHC



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Note SPC activities under the Oceans and Maritime Programme and its role and continued involvement in the Maritime Sector

Acknowledge the importance of a safe, green, accessible, and efficient maritime sector under the 2050 Strategy for the Blue Pacific Continent

Agree for a consistent and coordinated approach of safety of navigation in the Pacific between countries and interested partners and to engage with IMO through Pacific position papers and formal requests for support



Thank You



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