



[\*\*CLICK TO KNOW MORE\*\*](#)

# Value of EO and Geospatial data for financing a Sustainable Blue Economy – Fiji Case Study

**Katherine Cooke**

May 2024

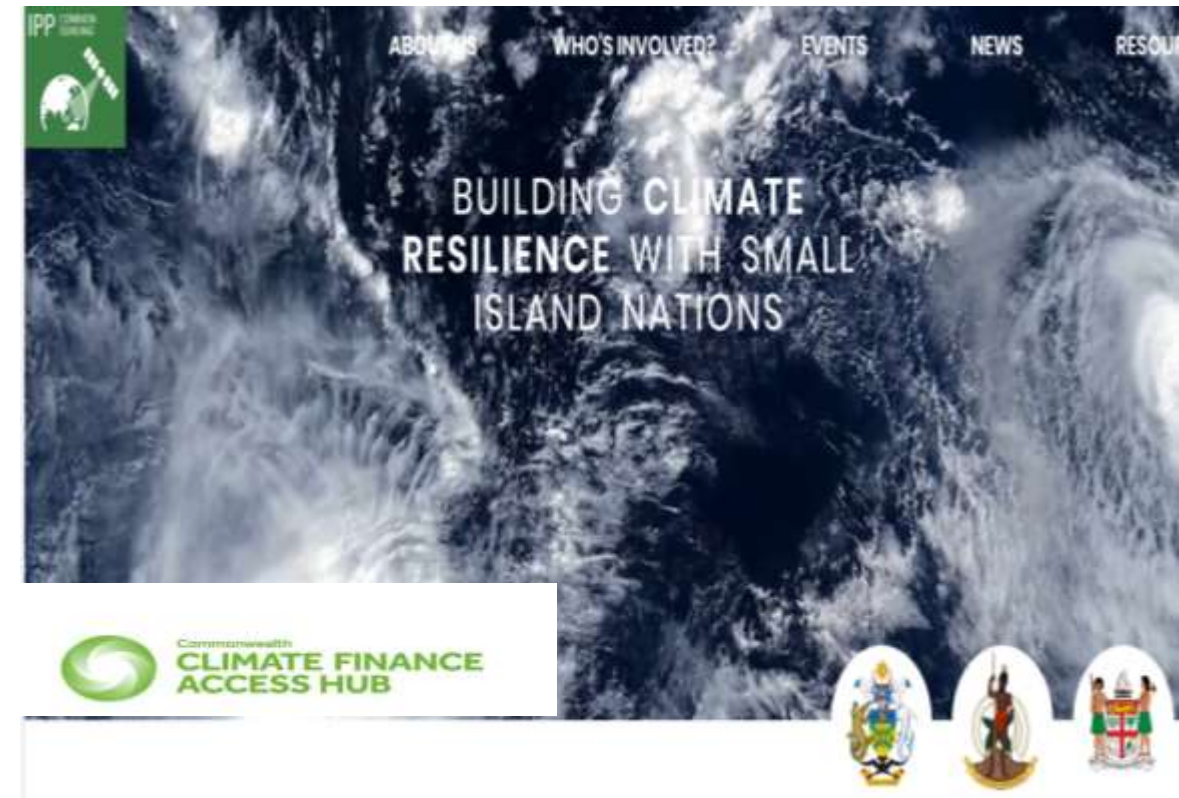


# Contents

- Introduction
- Problem definition – Fiji Case study
- Global policy context – frameworks toward a sustainable Blue Economy
- National context – policies plans, challenges and opportunities
- Role of EO and geospatial data in accessing finance toward increased resilience of coastal communities and a sustainable blue economy (SIDS case)
- What next..... ?

# Climate and Ocean Finance Advisor (CFA) role, Fiji

- Embedded within the Climate Change and International Cooperation Division (CCICD) Ministry of Economy, Fiji –until 2023
- To provide Long-term, dedicated and nationally embedded technical assistance on a demand lead basis, and institutional capacity building for climate and blue finance project structuring, increasing access to climate and Ocean Finance .
- Specifically, working with the Commonsensing platform to assess project pipelines with the objective of using satellite remote sensing technology and EO data to feed into climate finance proposals and make them more evidence-based and robust
- The MoE and other ministries such as Energy, lands, Oceans, waterways and infrastructure are also able to use the platform to enhance climate resilience and decision making.



# Oxford Policy Management (OPM)

- Research based organization – with four decades of experience in providing rigorous evaluation, research, policy advice, technical assistance, and capacity building to over 120 national governments
- Our work is deeply rooted in academic evidence. We ensure that we ask the right questions, focus rigorous evidence, and so tailor our services to what is most needed.
- We work to support governments and policymakers in a wide range of sectors - energy, climate, health, education, agriculture, disaster risk
- Today we have a network of offices around the world. We operate at not just the national level, but actively with local and regional governments in the countries we work in.
- Bringing together national and international expertise and leveraging south-south collaboration is not just fundamental to the way we implement our approach – it is critical to our success.
- We are truly driven by development impact and our belief that policy can make a real difference to people's lives – it is why we exist.





## Climate & Ocean Policy work at Oxford Policy Management (OPM)

- **Long-term GCF Project Preparation Facility framework for designing projects and preparing Climate and Ocean Funding Proposal**, to enhance capacities of countries in accessing international finance for national climate adaptation goals. OPM designed studies with recommendations to integrate climate considerations into sectoral policies and schemes to support resilient practices and approaches. We developed coastal adaptation assessment tools and vulnerability and risk assessment studies for African island states, to prioritize coastal adaptation projects for funding and to inform adaptation policies and planning decisions.
- **OPM is updating the *'Blueing' the NDCs: A Review of the Nationally Determined Contributions of Commonwealth Coastal and Island Countries for Ocean-Based Actions and Commitments*** for the Commonwealth Blue Charter. This stocktake will be presented at COP28 and the World Ocean Summit 2024.
- **OPM is currently developing a comprehensive monitoring and evaluation framework for the Ocean Country Partnership Programme (OCP)**, OPM has practical, policy, and academic expertise in water governance, restoration, resilient water systems, and marine thematic areas (litter, ocean plastics, circular economy, conservation).
- OPM and Itad are commissioned to independently evaluate the Biodiverse Landscape Fund (Defra, £4,45m 2022-2031): an 8-year programme that operated across 6 environmentally critical landscapes spanning 18 countries including Vietnam.
- OPM and Itad are commissioned to independently evaluate FCDO 500 million Blue Planet Fund

# Working across the policy cycle



From researching the key drivers of a problem through to implementing the chosen policy, and monitoring and evaluating progress, this holistic approach enables us to provide **integrated support** which is **both practically and politically feasible** – essential ingredients for long-term change.

# Our global offices

Through our global network of offices, we work in partnership with national stakeholders and decision makers to research, design, implement and evaluate impactful public policy.





**Problem  
definition  
and finance  
need \$\$\$**



# Problem Definition

- IPCC Sixth Assessment Report makes clear: Human-induced climate change, driven by (GHGs), poses an imminent threat to our planet, its inhabitants and its oceans.
- 3.5 billion people live in highly vulnerable areas to climate change **with more than one-third being coastal dwellers**
- **Nationally Determined Contributions (NDCs)** are the main mechanism by which countries communicate their ambitions and efforts towards Paris Agreement
- **GST to evaluate progress on climate action globally, identify gaps to achieve Paris Agreement**, and opportunities to bridge them - COP28 comprised final, political phase
- OPM and Commonwealth Blue Charter (CBC) **analysis of country NDCs, NAPs and NoPs commitments** showed that **progress is NOT happening 'at a pace or scale consistent with achieving' its goals**
- **Current levels of climate and Ocean finance are woefully inadequate to support the planning and projects needed** to limit the social and economic damage that will arise due to intensifying climate change
- **SDG 14 is remains most underfunded – requires \$175bn each year ..**



## SIDS ... “A way of life” ...

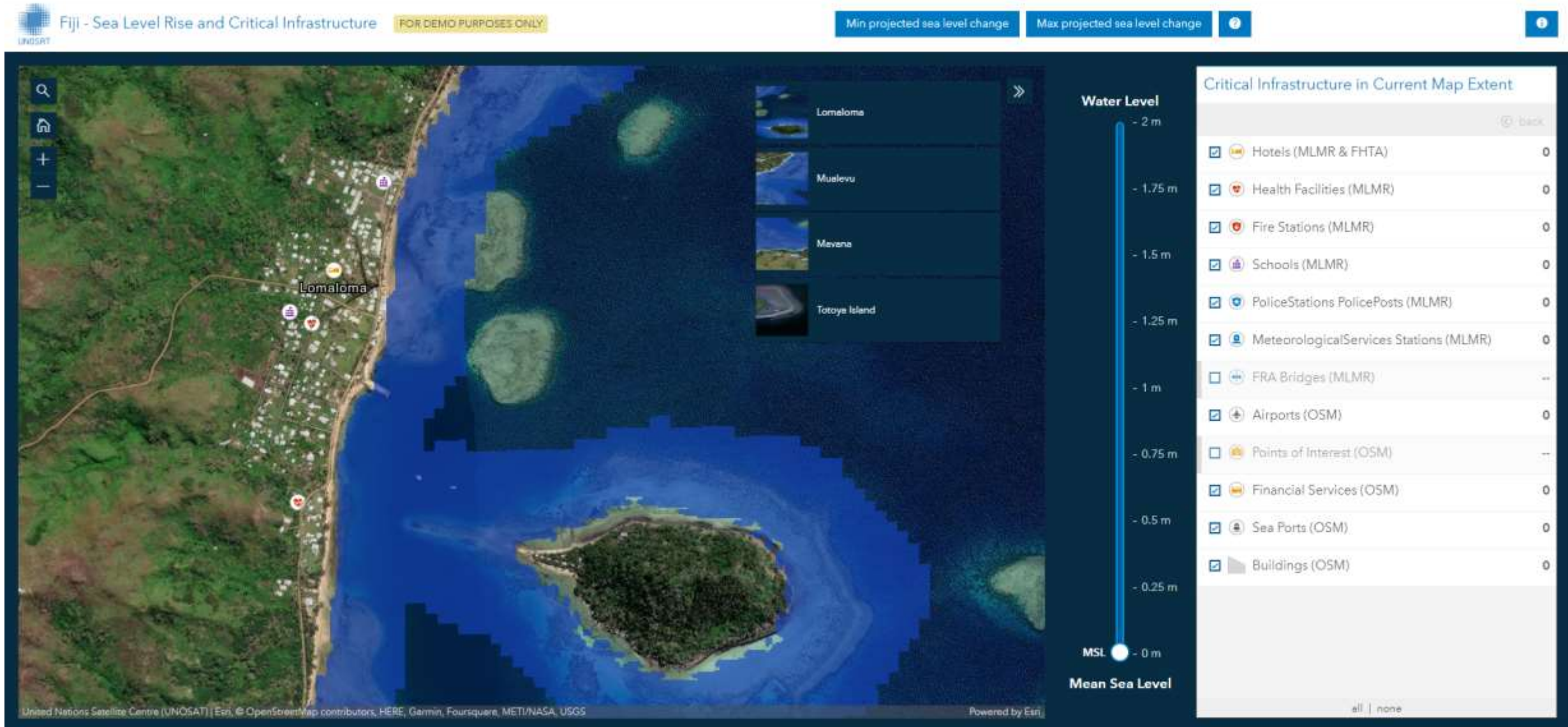


More than 675,000 Fijians live near the coasts - 75% of the population (in several cases over 90%) and have total dependence on the coastline (40% contribution to the economy) they are directly exposed to impacts including:

- Saltwater inundation is contaminating drinking water and ruining previously fertile croplands, reducing crop production
- More frequent flooding at high tide is destroying houses, schools, churches, roads, and other critical infrastructure in the community
- Extreme flooding, due to storm surges or cyclones, is also destroying vital public infrastructure
- Coastal erosion, due to a combination of storm surges, cyclones, flooding, and sea level rise, is amplifying communities' climate vulnerability.
- For communities living along the coasts, the human and economic consequences of these impacts are significant.

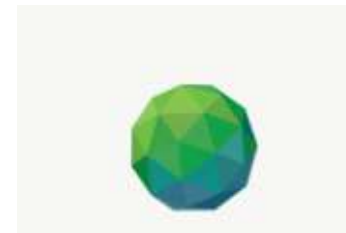
# Sea-level Rise

<https://unosat-geodrr.cern.ch/Climate/SeaLevelRise/index.html>



# Finance gap and the need for EO and Geospatial data

- Only 20.5 percent of reported finance was allocated to Least Developed Countries (LDCs) and 3 percent to Small Island Developing States (SPC). According to OECD approximately 1% reaches PSIDS
- Accessing finance from the major international and regional climate funds is difficult - **consuming and complex access requirements, combined with limited resources to produce climate finance proposals in the required format, producing sufficient evidence, justification and climate rationale for proposed interventions**
- **Major climate funds, such as the GCF, GEF and AF require strong justification and robust climate rationale for approving project proposals.** These funds have been explicit about the role of EO data in these proposals.
- Advances in technology are resulting in the emergence of more and enhanced forms of data from initiatives.
- The **Common Sensing/ NORAD** project is an example of the innovative use of EO data – **to build national capacity, data sets and institutionalise evidence-based decision making** –in disaster preparedness and response
- It can also **catalyse financing for priority project and implementing country policies and plans**



**Global policy frameworks – for ocean knowledge and hydrospatial information to support blue economy**



- **UNFCCC Paris Agreement contains the sole reference to the ocean**, ‘noting the importance of ensuring the integrity of all ecosystems, including oceans’.
- **The Glasgow Climate Pact**, reiterates ‘the importance of ensuring the integrity of all ecosystems, including in forests and the oceans’.
- **United Nations Convention on the Law of the Sea (UNCLOS)**: UNCLOS provides the legal framework for the conservation and sustainable use of oceans and their resources
- June 2022, the **second United Nations Ocean Conference – to Support the Implementation of SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.**
- **The UNFCCC’s Subsidiary Body for Scientific and Technical Advice (SBSTA)** released in September 2023 **summary report of the Ocean and Climate Change Dialogue**
- **United Nations Convention on the Law of the Sea (UNCLOS)**: UNCLOS provides the legal framework for the conservation and sustainable use of oceans and their resources
- **Global Ocean Observing System (GOOS)**: GOOS is a global network observing systems - collect, analyze, and disseminate oceanographic data. It provides essential information for understanding ocean dynamics, ecosystems, and climate variability, supporting various applications such as weather forecasting, maritime safety, and resource management.
- **International Hydrographic Organization (IHO)**: IHO coordinates efforts to survey and map the world's oceans, development of hydrospatial information and promotes standards for data exchange and

# Global policy frameworks – for ocean knowledge and hydrospatial information to support blue econom

- **Integrated Coastal Zone Management (ICZM):** ICZM is a planning and management approach that considers the diverse interests and activities within coastal zones, aiming to balance economic development with environmental conservation
- **Marine Spatial Planning (MSP):** process of allocating and managing ocean space to achieve multiple objectives, such as conservation, recreation, energy production, and shipping. It involves stakeholders in decision-making to minimize conflicts and maximize the sustainable use of marine resources.
- **Blue Economy Strategies and Initiatives:** Many countries (including Fiji) have developed blue economy strategies to harness the economic potential of oceans while addressing environmental and social challenges - involve investments in sectors such as fisheries, aquaculture, tourism, renewable energy, and biotechnology, guided by principles of sustainability and ecosystem-based management.
- **By integrating these frameworks and initiatives, stakeholders can improve their understanding of ocean dynamics, enhance maritime spatial planning and management, and promote sustainable development of marine resources, thus supporting a sustainable Blue Economy and increased resilience to climate impacts.**



**National-level  
strategies,  
blueprints, action  
plans, and  
initiatives  
financing and  
blue economy  
development**



# *The economic value of the ocean health is greater than the amount of finance needed to sustain it !*

- **The economic and environmental value of Ocean Resources to PICs is vast (\$100s of millions)** and relies on healthy oceans, reefs and coastal ecosystems, tourism, revenue from licensing for exploitation of renewable marine resources - cultural significance unquantifiable. It is also provides, a carbon sink.
- Whilst **MPAS have been advocated by marine scientists for decades**. But we cannot **underestimate the challenges they present..**
- **Fiji has committed 30% of its EEZ to MPA with full sustainable management of EEZ by 2030 - this is enshrined in law by both the NoP and the CCA - but what does this mean for people?**
  - removal of fishing rights in productive fishing grounds
  - loss of existing national revenue, additional costs associated with designation, surveillance and enforcement (MPA and EEZ).
- BUT the biggest challenge is the scale of finance needed to **ensure required regulation of MPAs in the long-term and requires ongoing and sustainable financing**. This type of finance is not popular with donors.....
- We can also see there is a **significant lack of finance not just for MPAs but ALL projects to enable implementation of national policies and plans NDC pipelines, NAPs, NoP, LEDS and NDP** toward a sustainable Blue economy and to increase resilience of coastal communities

# Financing a Blue Economy.....

- At the macro level we can see that **climate and blue finance is flowing to climate and ocean solutions - but not at the pace or scale needed** ~\$ 632 bn last year
- We all now know that **SDG 14 is the most underfunded** - but some success has been demonstrated on meeting targets
- But given the trajectories we are seeing - **combined with the right policies and evidence it is feasible to imagine that this finance will be scaled, and flows will begin to flow effectively from private sources**
- There are **a number of existing and emerging blue financing instruments and mechanisms available** e.g. Bilateral, Multilateral, MDBs budget allocation, Blended finance Private and philanthropic grants, ODA Debt for Nature Swaps, Blue Bonds /Biodiversity and carbon off sets. insurance solutions, Green/blue taxes
- But **no single source of climate finance will cover all the types of investments required to realise a sustainable blue economy** but rather a combination of sources at various stages of project

# Blue Economy– Innovative Financial Instruments/Mechanisms

|   |   |  |  |
|---|---|--|--|
| <b>Sovereign Blue Bonds</b><br>(Seychelles' first sovereign blue bond in 2018; Fijian Sustainable Bond, Belize)                             | <b>Blended Finance Instruments</b><br>(PPPs by Global Fund for Coral Reefs; Blue Halo Program; ORRAA) | <b>Blue Carbon Credits</b><br>(Fair Carbon; Blue Carbon Accelerator Fund)                          | <b>National Funds and insurance underwriting for coastal protection</b><br>(Parametric models WTW and others)                          |
| <b>Non-gov conservation organizations</b><br>(CI, WWF, TNC, IUCN)<br><b>Philanthropic</b><br>(Packard Foundation, Walton Family Foundation) | <b>Bilateral Funds and Multilateral funds under the UNFCCC</b><br>(GCF, GEF, AF, CIF)                 | <b>Investment strategies including passive funds, actively managed blue funds and impact funds</b> | <b>Dedicated regional 'blue banks' as well as initiatives of multilateral development banks</b> (WB's Pro-Blue multi-donor trust fund) |

## Policy Framework

**The Sustainable Blue Economy Finance Principles (2018)** offer framework to align financial activities with SDG14  
Encompass 14 characteristics signatories should endorse

**UN Blue Bond Initiative** offers guidance for issuing blue bonds & sustainability-linked bonds

**European Union's Taxonomy for Sustainable Activities** – A regulatory framework directing finance to activities aligned with EU's climate/energy objectives

**So how can  
Geospatial data  
help to leverage  
the finance  
needed to enable  
blue economy  
strategies and  
frameworks,  
importantly  
financing**

June 2021  
HARWELL, UK

# CommonSensing Project

Practical Application of Earth Observation and Geospatial Data Solutions  
in Climate Finance Proposals and Projects





## Welcome to CommonSensing.

CommonSensing is a platform designed to enable you to visualise, analyse, and compare different data in order to produce actionable insights for building better climate resilience for Fiji. It brings together a variety of data from different sources, including geospatial data and local knowledge.



# Implementing Partners:



- CommonSensing is implemented by a Consortium of International partners



United Nations Operational Satellite Applications Programme (UNOSAT)



United Nations Institute for Training and Research (UNITAR)



Met Office

UK Meteorological Office



The Commonwealth

Commonwealth Secretariat

sensonomic

Sensomic



UNIVERSITY OF PORTSMOUTH

University of Portsmouth

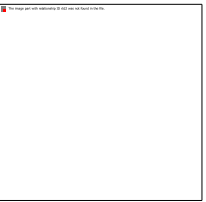
**CATAPULT**  
Satellite Applications

**Spatial Days**

Spatial Days

**devex**  
Do Good. Do It Well.™

Devex



Goal: Support Climate Finance Applications by creating:



Geospatial and climate  
Data and decision-support  
Tools



Capacity building of:  
Technical staff  
Specialised analysts  
Decision makers



# Focus Areas Applications

Browse through the four strategic focus areas for climate adaption and disaster risk resilience efforts.

On each page you can find how topic-specific applications can support a variety of use cases.



2019-2022



## Climate Information

Providing climate data for evidence and decision-making

Explore



## Disaster Risk Resilience

Building disaster-resilient communities in a changing climate

Explore



## Food Security

Enhancing climate-resilient agricultural production

Explore



## Climate Finance

Improving access to climate finance with evidential support

Explore

**Geospatial and Climate Information & Systems**

**CommonSensing**

**Strengthened access to Climate Finance**

**Capacity Development & Strengthening activities**

1. Government ITC hosted Platform
2. USP hosted platform



## Climate Information Application

This app allows users to visualise historical information on a variety of climate variables and datasets, observing changes through the years.

The users will be able to add contextual information to their maps to visualise specific use-case led data together, including local data.

For further resources on climate data, the eLearning course "Using climate information in the Pacific" is available at this link. Additional materials are available in the Knowledge Hub at this link.

[Open Application](#)

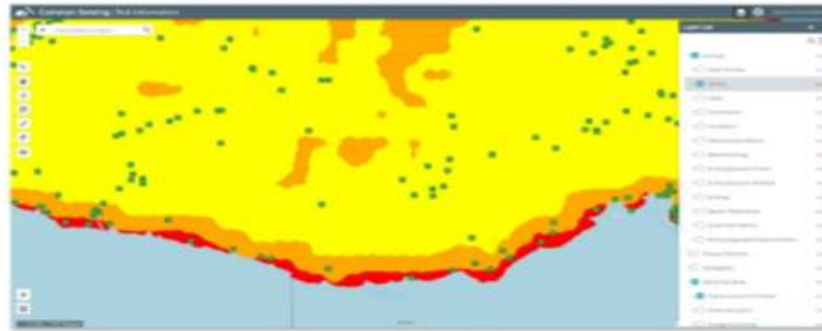


## Risk Information Application

Users can visualise a range of DRR layers through the Risk Information app, and add datasets from other sources to enrich the map and understand relationship between the data.

The Query tool allows to delve into more detail, and the Scene tool provides 3D visualisation.

[Open Application](#)

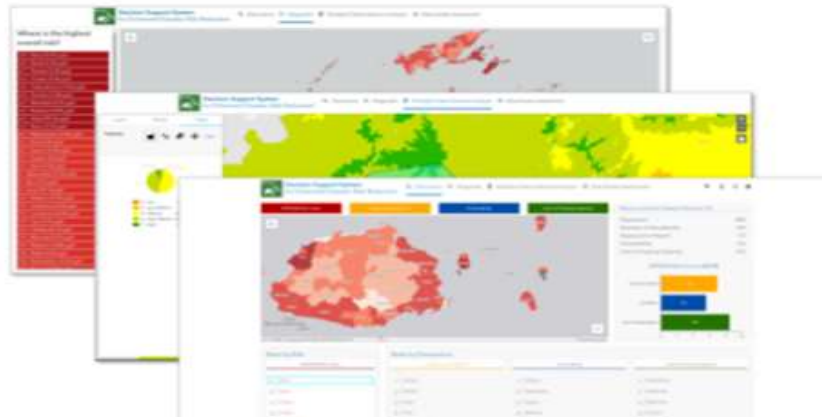


## Decision Support System for Enhanced Disaster Risk Reduction

This system informs decision-makers on disaster risk and its elements to bring real impact towards reducing disaster risk and increasing resilience to climate change.

It comprises of three elements: Descriptive, Diagnostic and Multi-Criteria Decision Analysis (MCDA).

[Open Application](#)





# Data

- Collated datasets from various sources (including MLMR, NDMO, FRA, HDX, HOTOSM, PacGeo, UNEP, SPREP, JRC, JAXA, PopGIS, World Bank, Census and Facebook)
- Created the following datasets:
  - Digital Elevation Models (30m and 12.5m resolution)
  - Elevation Zones
  - Slope Classes
  - Relative Bathymetry
  - Climate Models (ERA5, ERA5 Land, CMAP, GPCP, TRMM, CRU, NCEP/NCAR, ENSO)
  - Sugar Plantations
  - Mangrove Forests
  - Cube ARD Products (Sentinel-1, Sentinel-2, Landsat 4, 5, 7 and 8, SPOT 1 to 5, Water Masks, Geomedian)
  - Cube On-Demand Products (Geomedian, S-1 Median, Fractional Cover, Water Change, Water Permanency, Water Quality, Coastline Extraction, Mosaic Indices, NDVI Anomaly, Vegetation Change, Land Change)





# Tools

- **ESRI Enterprise Portal for Fiji complete with a Sites homepage, a Data Catalogue and Apps including:**

- **Climate Information Application**
- **Map Explorer Application**
- **Risk Information Application (with 3D Scene Viewer)**

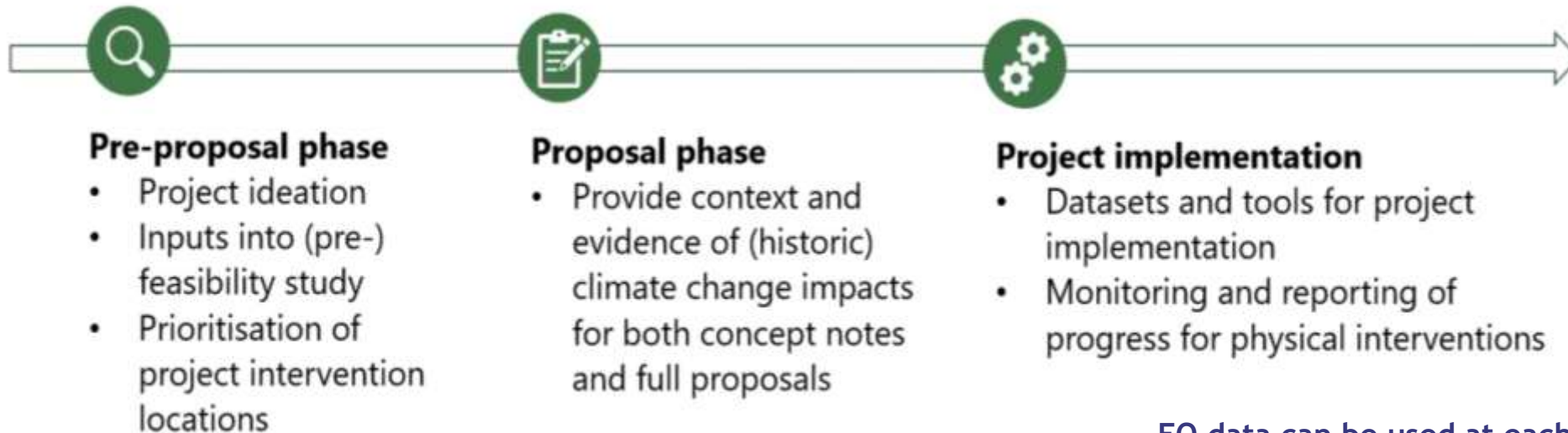
- **ESRI ArcOnline Decision Support System (DSS) for Fiji, Vanuatu and Solomon Islands**

- **Open Source Data Cube for Fiji, Vanuatu and Solomon Islands**
- **Bespoke Agriculture Apps for Fiji, Vanuatu and Solomon Islands**

- **Open Portal with Apps for Fiji, Vanuatu and Solomon Islands including:**

- **Open Source Vanuatu Web GIS**
- **Open Source Solomon Islands Web GIS**
- **Open Source Data Cube Browser**
- **Open Source Data Cube Query API**

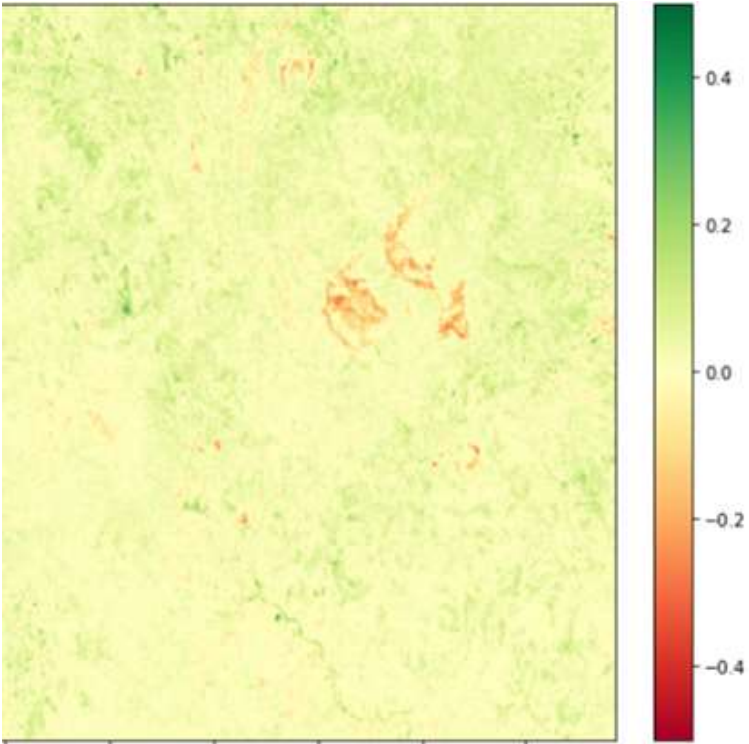
# CommonSensing support to CF projects



EO data can be used at each stage of the project cycle

# NDVI Anomaly

On-Demand



Value Range: -1 to 1

**Sensors:**

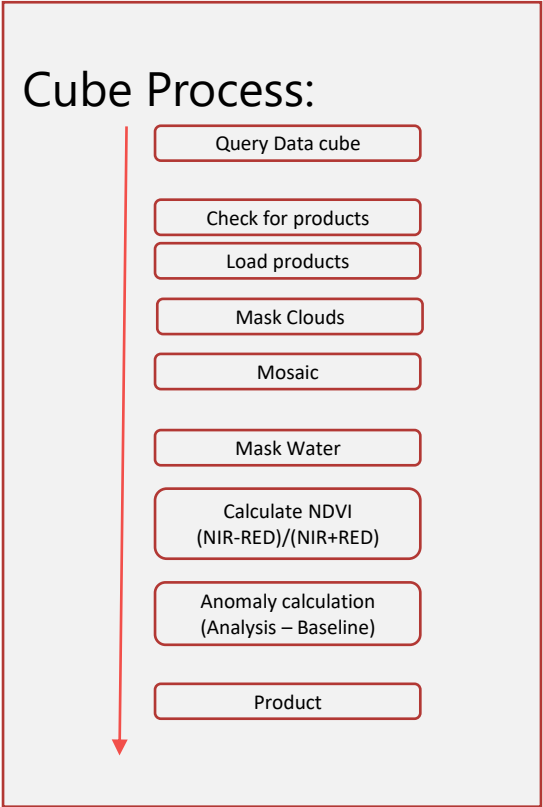
- Sentinel-2
- Landsat series

**Query Parameters:**

|                     |                 |                  |                             |
|---------------------|-----------------|------------------|-----------------------------|
| Baseline Time Range | Baseline Sensor | Resolution       | Coordinate Reference System |
| Analysis Time Range | Analysis Sensor | Area of Interest | Mosaic Type                 |

**Description:**  
 The Normalised Difference Vegetation Index (NDVI) represents the chlorophyll content of a surface – the 'greenness'. This product represents the change of NDVI between two user-defined time periods. Areas of positive change represent an increase in vegetation on the surface, whilst negative values represent a decrease.

**Use Cases:**  
**Analyse long-term or abrupt land use changes, natural seasonal variances may exist, so need to be cautious when choosing date ranges that you are experiencing actual change not seasonal.**



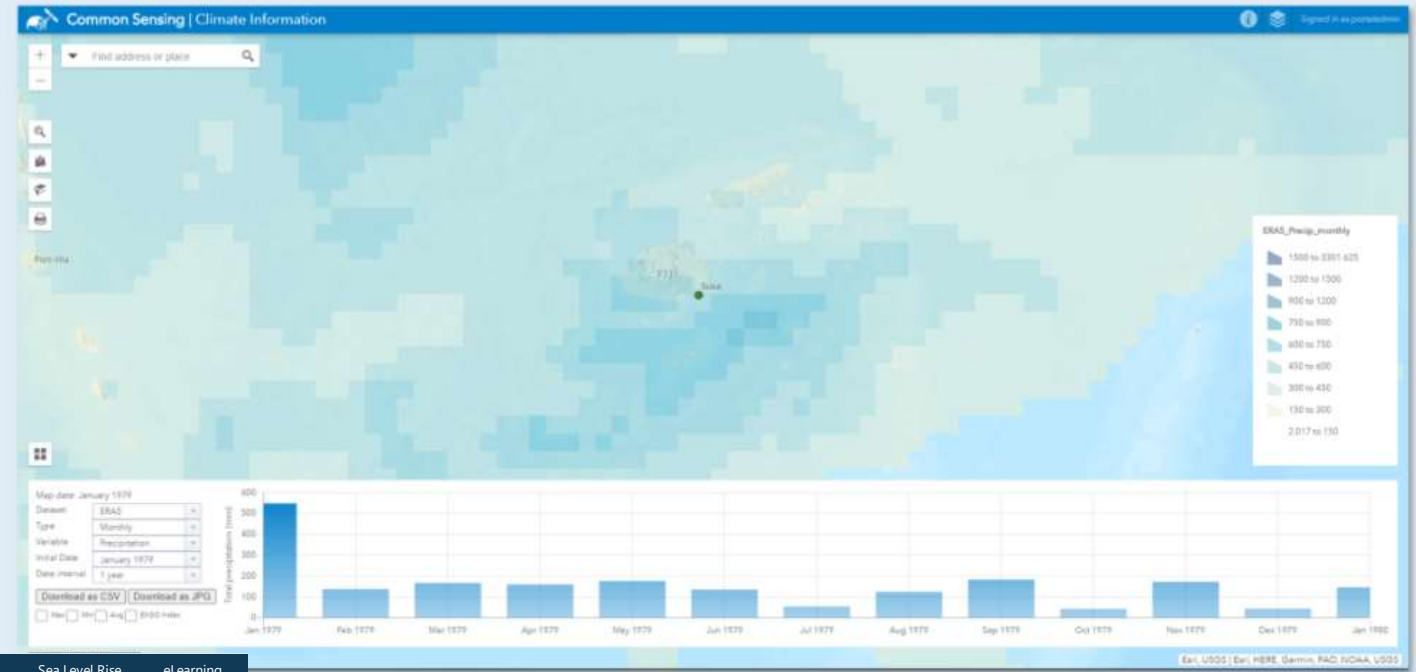
# Climate Information application

This app allows users to visualise historical information on a variety of climate variables and datasets, observing changes through the years.

The users will be able to add contextual information to their maps to visualise specific use-case led data together, including local data.

It is possible to export such information in a variety of formats.

Open Application



CS Climate Information Application

Pacific Climate Futures Sea Level Rise eLearning

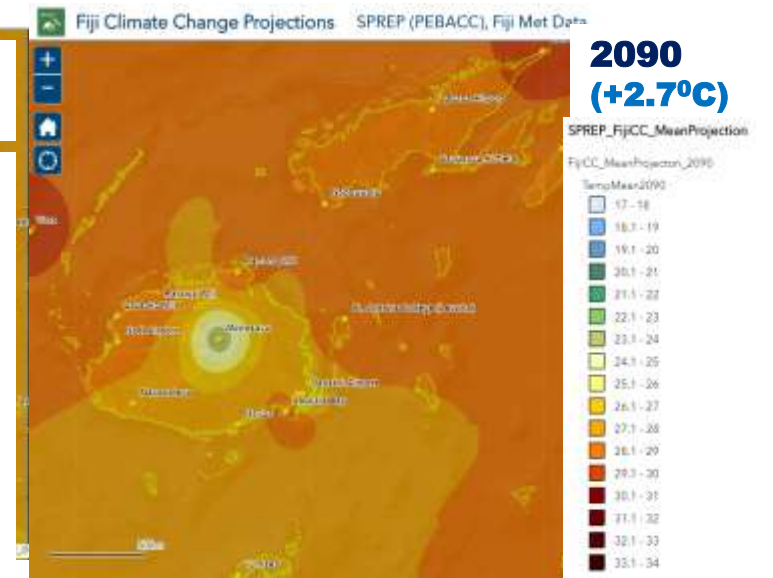
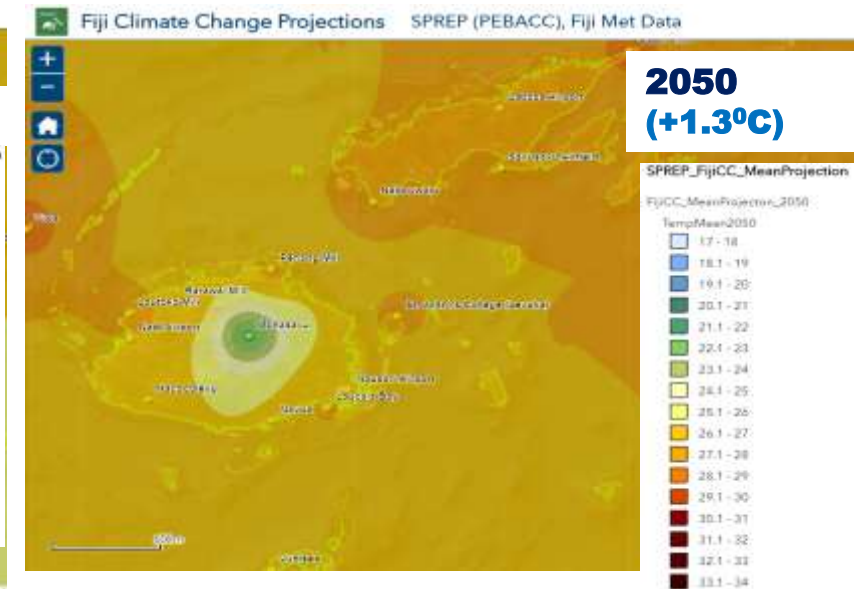
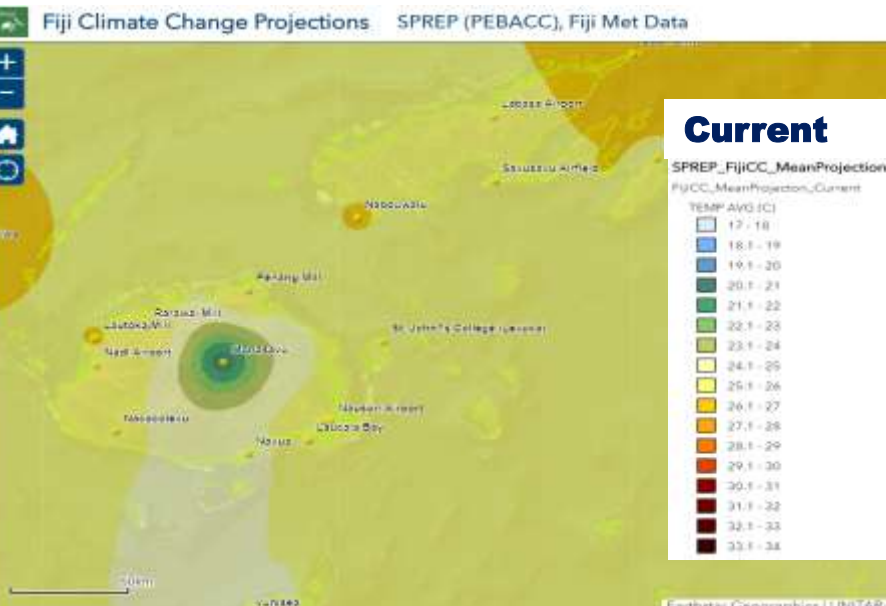
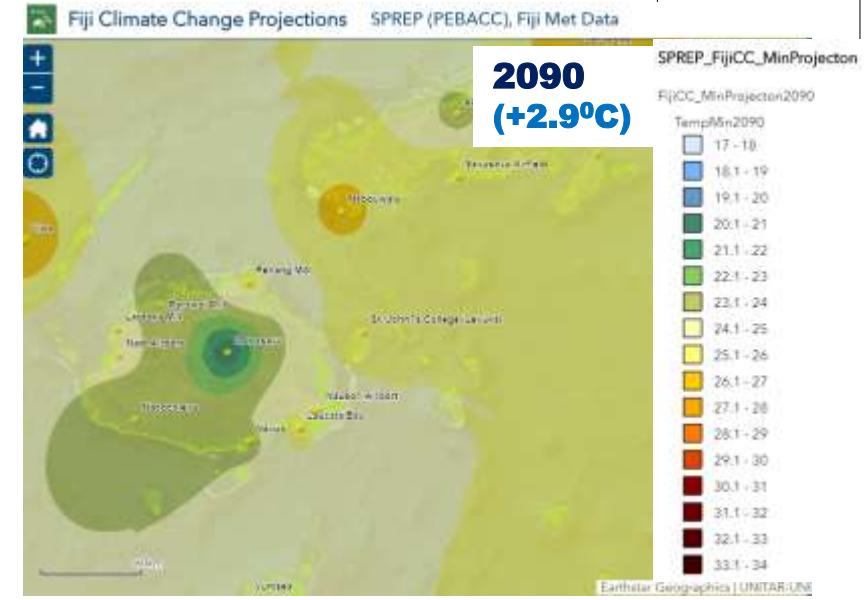
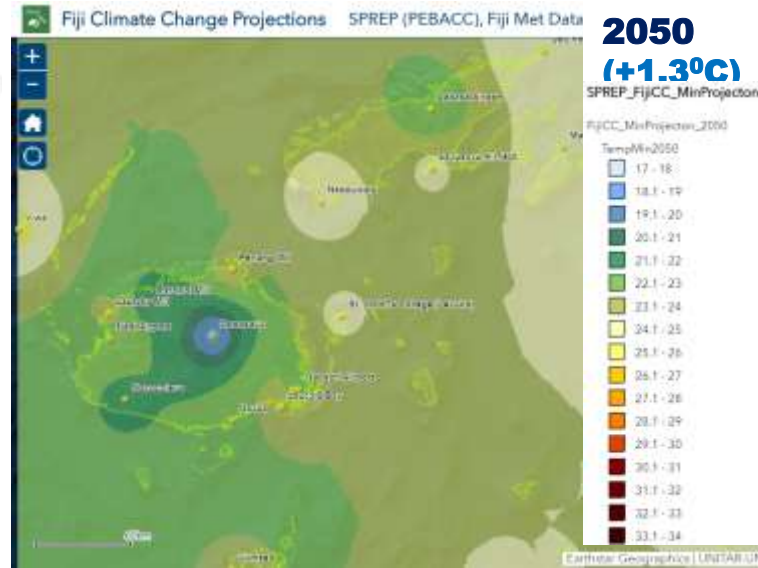
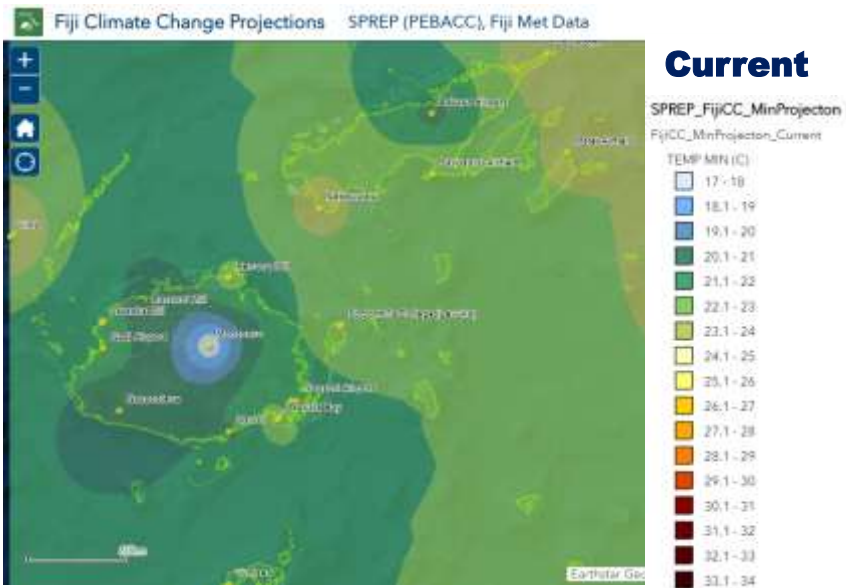


Global interpolated datasets for observation data

Users can also add regional datasets such as SPREP's Climate Change Projections for Fiji from the PEBACC project as part of the pre-loaded layers available on this app.

Fiji Climate Change Projections

# Fiji CC Minimum Projection, Surface Air Temperature (RCP 8.5)



# Fiji Climate Change Projection - Mean Surface Air Temperature (RCP 8.5)



# SCENARIO 1

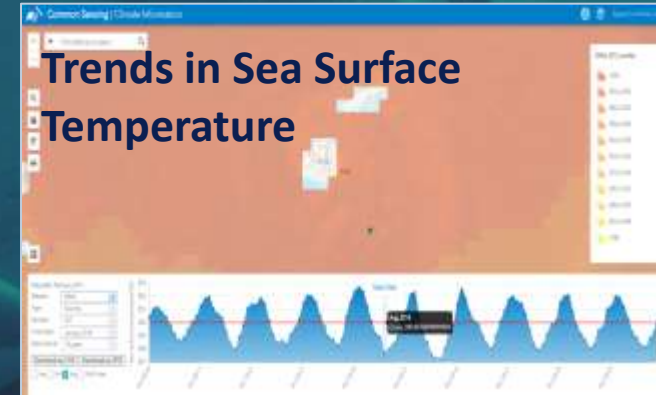
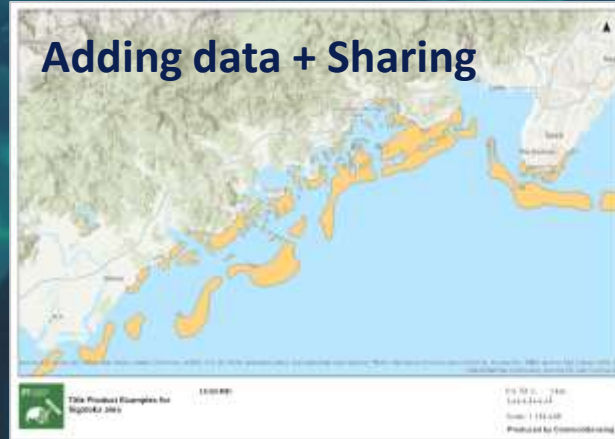
## Adaptation to Climate Change in Coastal Zone

(Adapted from GEF proposal for Vanuatu)



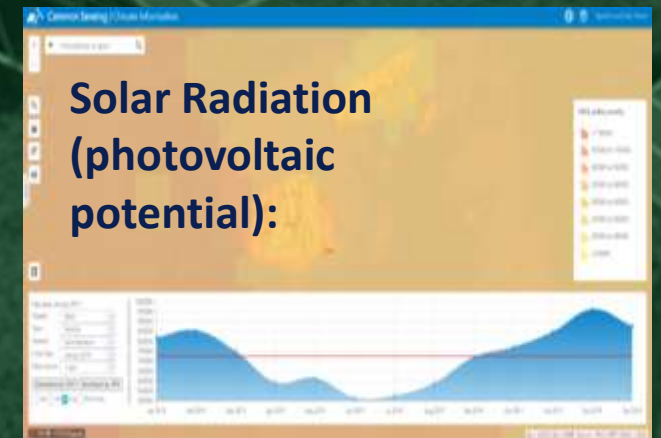
# SCENARIO 2

## Adapting Pacific Island Tuna Fisheries to Climate Change (GCF



# SCENARIO 3

## SAP016: Fiji Agrophotovoltaic Project in Ovalau



|  |   |
|--|---|
| <b>Assignment name: Strengthening the Adaptive Capacity of Coastal Communities of Fiji to Climate Change through Nature-Based Seawalls</b> | <b>Approx. value of the contract (in current US\$):</b><br>5,764,000  |
| <b>Country:</b> Fiji<br><br><b>Location within country:</b> Fiji (16) Coastal areas on Vanua Levu and Viti Levu                            | <b>Duration of assignment (months):</b><br>12 Months (project Proposal)<br><br>Project implementation will be 36 Months |
| <b>Name of Client:</b> Adaptation Fund ( AF project Proposal)  | <b>Total N<sup>o</sup> of-staff months of the assignment:</b> 12  |

**Project Description** This proposed project will target over 3,000 people across 16 climate-vulnerable Fijian communities, addressing vulnerabilities through enhanced technical knowledge and financial assistance for locally designed nature-based adaptation measures. Further, the project will build the capacity of Fiji’s Ministry of Waterways (MoW), target communities and other stakeholders to manage these interventions and implement similar measures in other communities. The project will achieve this through three project-specific Objectives:

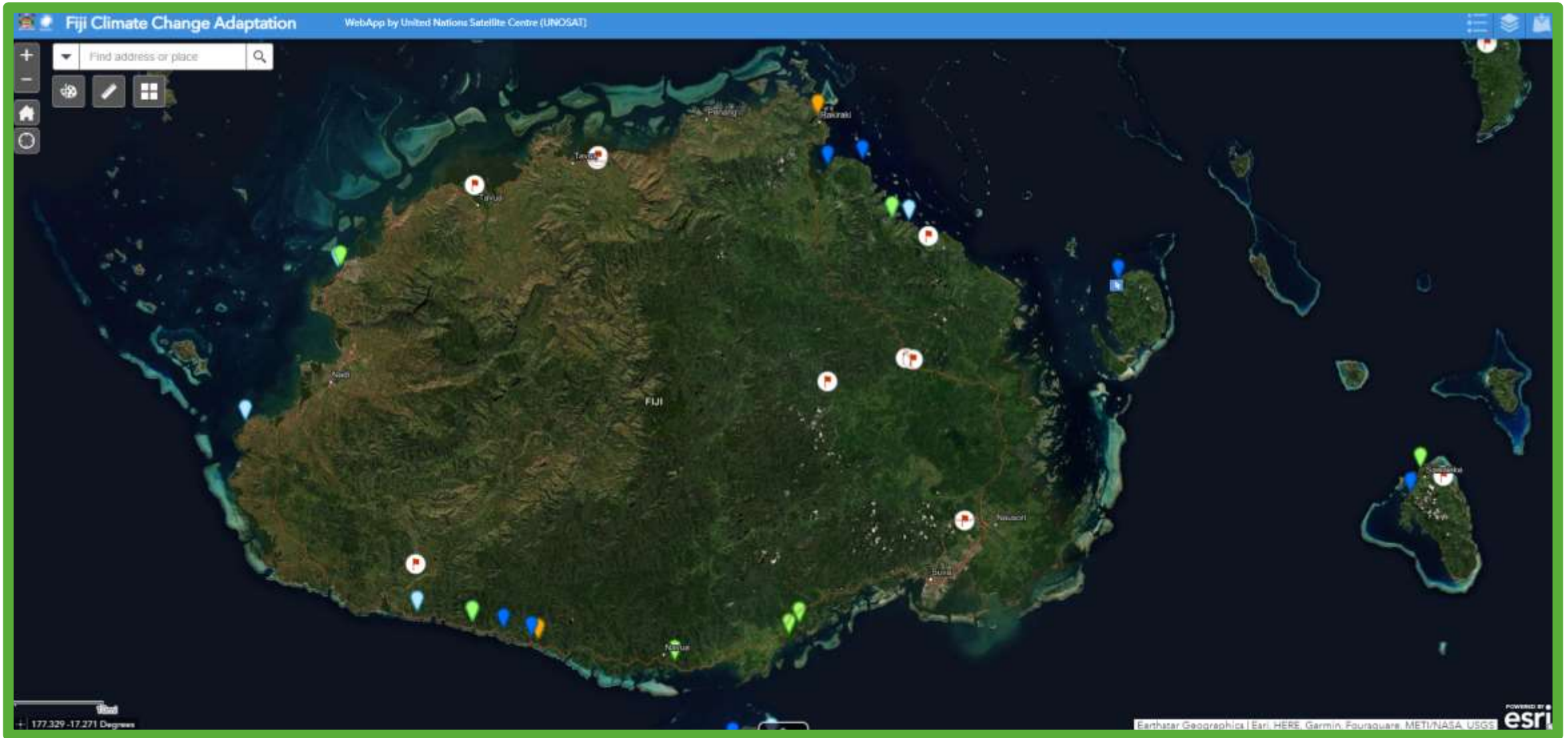
- Create an enabling environment for the scaling-up and rolling out of NbS coastal protection approaches across Fiji.
- Construct NbS seawalls in 16 climate vulnerable coastal communities to enhance community resilience and increase extension structure capacity to implement NbS projects

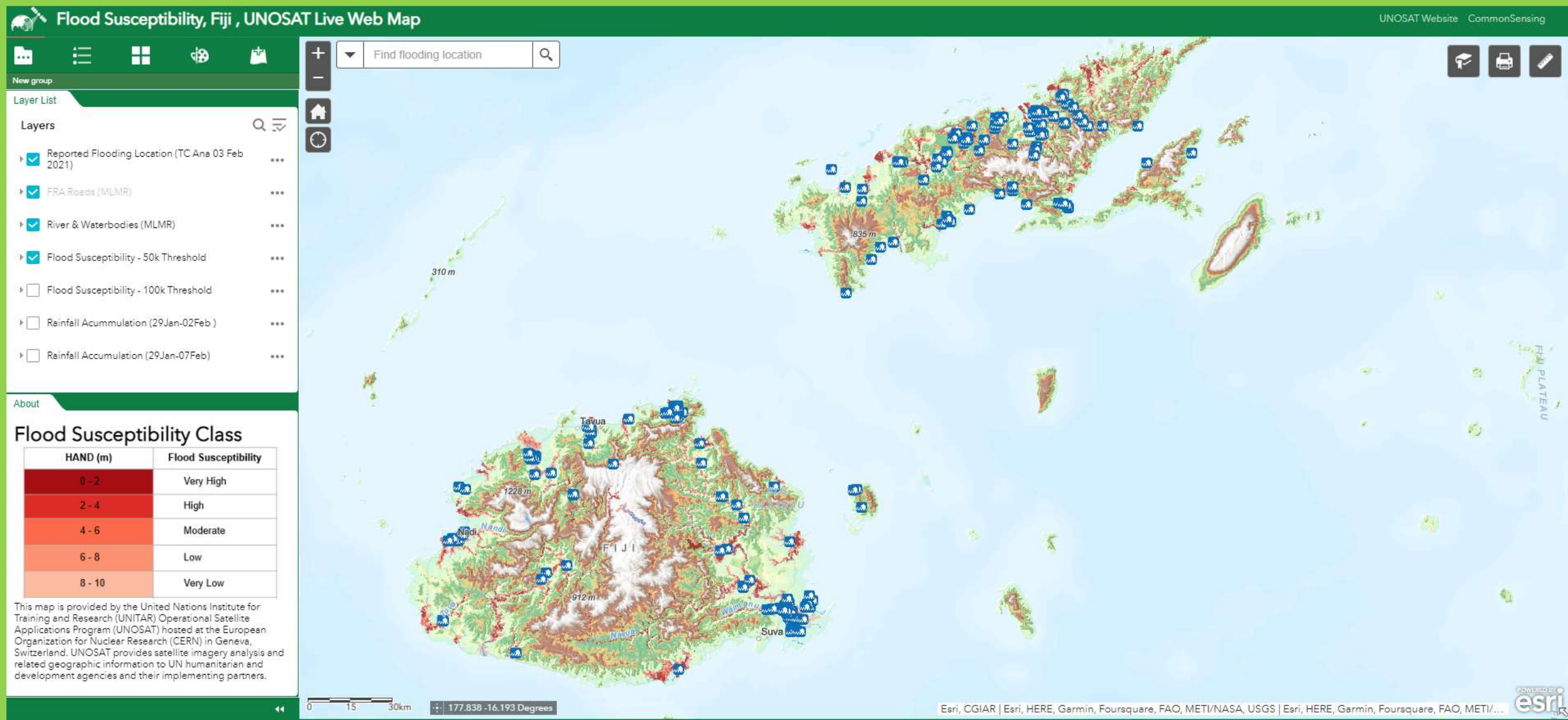


# Consultations ,Mapping and drone mapping for Base lining



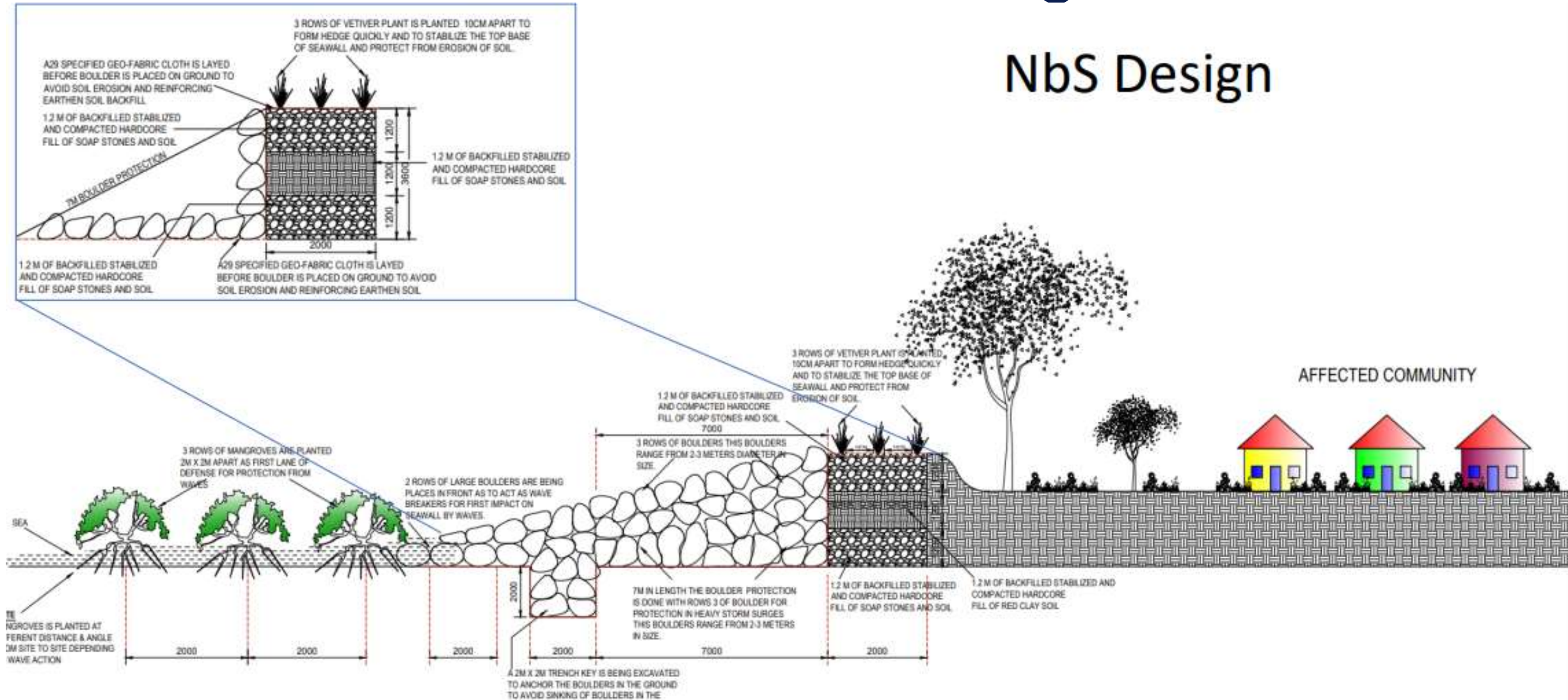
# Climate Change Adaptation Application





# Nature-Based Sea Walls (funding \$5.7 million)

## NbS Design



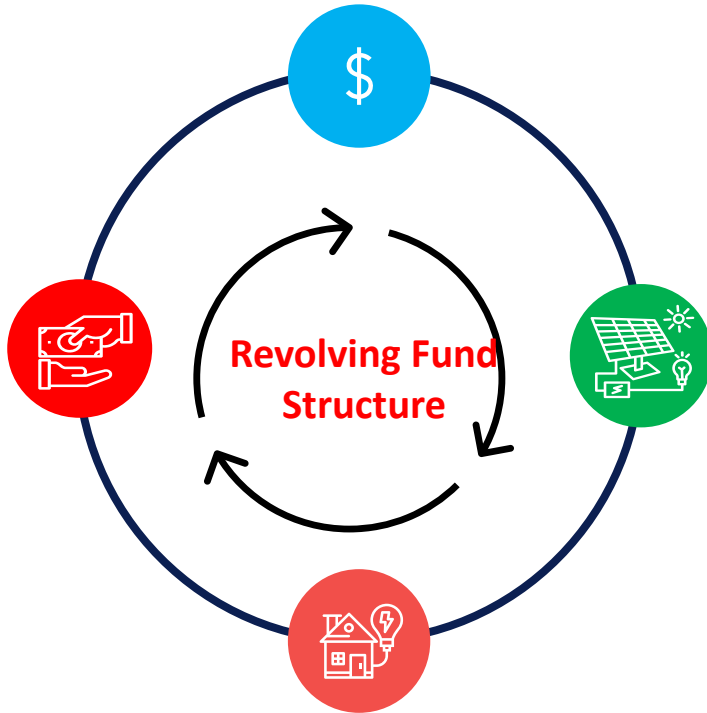
# Fiji Outer Island Electrification Fund – Purpose



- *COP23 legacy project developed to provide clean, affordable and reliable electricity to rural Fijians.*
- *Solar energy is the most economical option – backed on various feasibility studies*

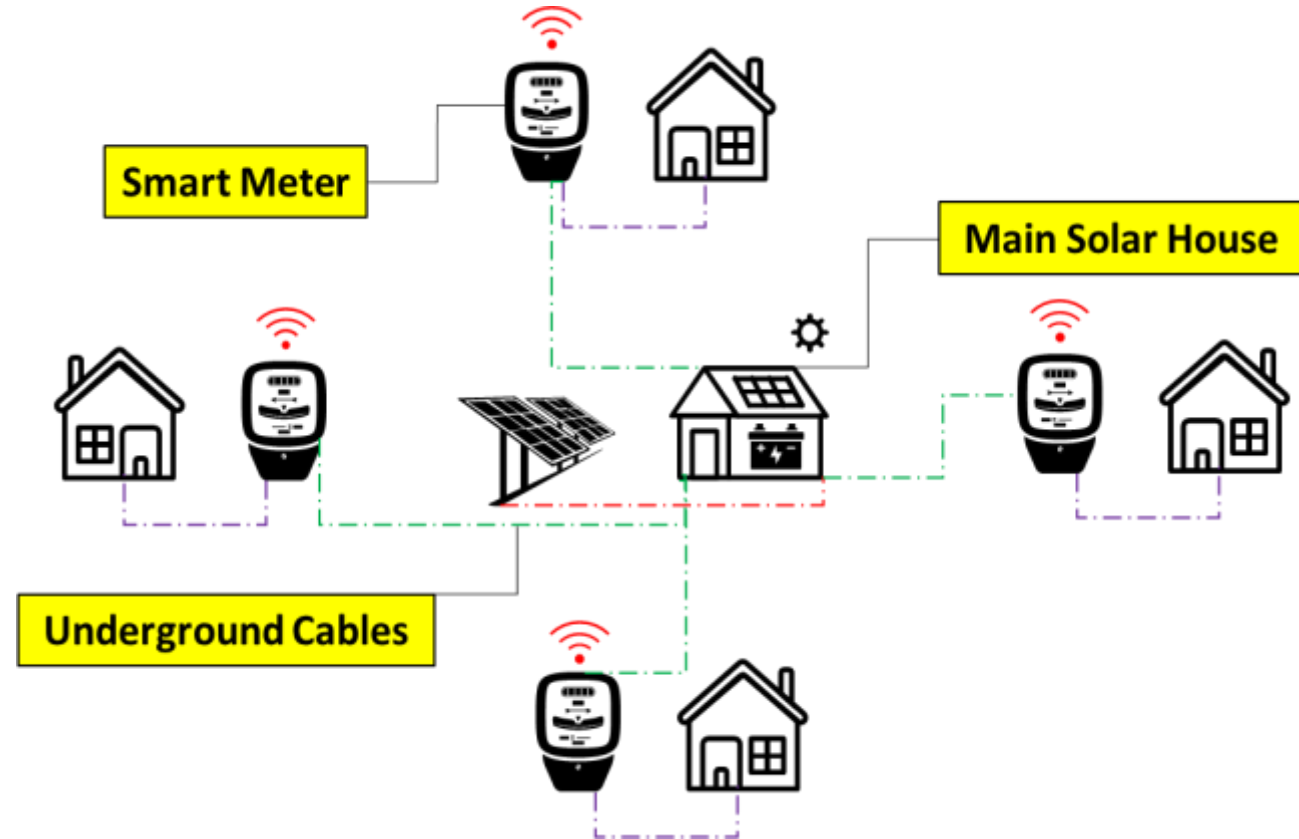
## 1. FREF Funds Capital Works

4. Rural Households Pay Tariff



## 3. Rural Households Receive Power

2. Solar Mini Grid Built & Managed







**Fiji Rural Electrification Fund (FREF) Programme** WebApp by United Nations Satellite Centre (UNOSAT) and Ministry of Economy

Find address or place

**UK Government**

**Te Kāwanatanga o Aotearoa  
New Zealand Government**

**Australian Government**

**JAPANGOV  
THE GOVERNMENT OF JAPAN**

**ADB  
Asian Development Bank**

**Layer List**

- FREF Sites (Phase 1)
- FREF Sites (Phase 2)
- Identified Hybrid Sites (Department of Energy)
- Solar Hybrid Project (Department of Energy)
- SHS Project (Department of Energy)
- Wind Monitoring Site (Department of Energy)
- Potential Hydro Site (Department of Energy)
- Diesel Scheme (Department of Energy)
- Biofuel Projects (Department of Energy)
- REU House Wiring 2022 (Department of Energy)
- Health Facilities location (MLMR)
- Education location (PopGIS)
- Police Stations
- Fire Stations
- Settlements Boundaries
- Government Stations
- Buildings (OSM)
- Roads (OSM)
- Waterways (OSM)

20mi  
-179.296 -16.301 Degrees

# **Continuation of Geospatial data for climate resilience and access to Climate/ Blue Finance: Strengthening Capacities in the use of geospatial information for improved resilience in Asia-Pacific and Africa**

- Since April 2022, UNOSAT and the Norwegian Agency for Development Cooperation (NORAD) expanded on a new cooperation framework to sustain in-country activities in Fiji (building on from CommonSensing), that strengthen capacities in the utilization of geospatial information technologies for improved resilience.

This project builds on previous efforts under 'commonsensing' and aims to further enhance capacities leveraging technological advances and innovation in providing integrated geospatial solutions to support Disaster Risk Reduction, Climate Resilience, Climate Finance and Environmental Preservation & Food Security.

Integrating ocean knowledge and hydrospatial information into blue economy strategies and frameworks can help secure finance, aid decision making and ensure sustainable use of marine resources - promoting economic growth while preserving ocean health.



# Constraints Include

- lack of robust data sets and baselines
- lack of technical capacity
- lack of robust project pipelines
- lack of awareness of opportunities
- lack of finance
- lack of coordination across government entities and other stakeholders
- competing priorities, lack of policy alignment

*Financiers say:*

*"We'd love to invest, but we just don't have a robust project pipeline with bankable projects.*

*And governments say:*

*"We'd love to implement more ocean based actions , but the money just isn't there".*

*(in particular in LDCS and SIDS)*

*To ensure progress on Ocean-based actions toward a sustainable blue economy – integration of hydrpospatial data into decision making, spatial planning and management, risk mitigation and assessment and harnessing blue finance in all ocean sectors, will be critical and require adequate technical assistance, capacity building, finance, innovation and convening the right partners*

**So within five years, what can we hope to achieve .....**

**Collaboration between different regions should be encouraged – with a focus on data collection and analysis**

**Project preparation facilities could be established and hosted within MDBs, relevant ministries or other international organizations to create bankable blue economy projects / plans and de-risk private sector investment**

**A comprehensive framework and clear plans for integration and adoption of ocean-based actions in country policies and plans should be established**

**Critical stakeholders should harness the momentum in the ocean space in the UNFCCC under the ‘Ocean Dialogue’ and other relevant mechanisms such as Sharm el-Sheikh Implementation Plan,188 as well as the UN High Seas Treaty189**

# Thank you

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