IPP CommonSensing Project Case Study

DECEMBER 2020

Content

Executive Summary

Thanks to the UK Space Agency's International Partnership Programme (IPP), funded through the Global Challenges Research Fund (GCRF), the IPP CommonSensing consortium was able to initiate its three-year project to support the three target countries of Fiji, Vanuatu, and Solomon Islands.

Starting in February 2018, with an initial one-year scoping period, the project built off in-depth user-needs analyses to fully launch the implementation phase in February 2019. Now that the project has matured, this IPP Case Study seeks to assess early results and outcomes of the consortium's activities and outputs.

To provide background on the initiative, IPP CommonSensing aims to support the three selected Commonwealth Small Island Developing States (SIDS) by improving national climate resilience through the use of satellite remote sensing applications. Bringing together eight organisations with world-leading expertise in satellite remote sensing, sustainable development, data analysis and modelling, as well as climate financing, the project's benefits range from the varied experiences and strengths of the consortium partners.

To address climate challenges faced by the partner countries, the consortium has pioneered an innovative project delivery structure, in which a geospatial information portal (the IPP CommonSensing platform) with with four web applications – a climate information app, risk information app, map explorer app, and a decision support system – and data cube of 14 products were developed to provide stakeholders with reliable data. These means have been supported by enhanced knowledge and skills on geospatial applications through capacity development trainings. During the two-year implementation period of 2019-2020, consortium partners delivered eight face-to-face technical trainings, two online trainings, 36 outreach awareness raising events, and 43 technical awareness raising workshops, reaching 1039 beneficiaries with a gender ratio of 60 per cent male and 40 per cent female. Through the know-how and tools, stakeholders will then have improved capability to strengthen climate fund applications to address climate issues in their countries.

The midline evaluation – published in September 2020 – found that the progress is still being made to achieve this final vision of the project. Findings from the project's monitoring efforts conclude that the knowledge of stakeholders has increased and that trainings participants have confirmed that the use of geospatial information has increased in their workplace. The IPP CommonSensing Platform user training and testing has shown great interest and excitement from stakeholders. Once it is fully live, the full vision of the project can be realized.

Introduction

Objectives

Small Island Developing States (SIDS) located in the Pacific are among the world's most vulnerable to natural disasters, and the hazards they suffer will only continue to increase in frequency and intensity with climate change.

The additional contingent threats of rising tides and eroding coastlines will require communities to relocate and governments to rethink land-use management to ensure sovereign food security. These examples are just a few needs found by the IPP CommonSensing consortium that could be addressed through earth observation. This project thus sought to harness satellite data to mitigate the devastating impacts of climate change on island communities through innovative and inclusive methods.

Since February 2018, the IPP CommonSensing project has leveraged space-based solutions to respond to challenges posed by climate change with the support of the UK Space Agency's International Partnership Programme (IPP) funded through the Global Challenges Research Fund (GCRF). The overall aim of IPP CommonSensing has been to improve national resilience towards climate change, including disaster risk reduction, and contribute to sustainable development in three selected Commonwealth SIDS: Fiji, the Solomon Islands, and Vanuatu, through the use of Remote Sensing. Led by UNOSAT, which is the Operational Satellite Applications Programme, run by the United Nations Institute for Training and Research, the project is working with local ministries and also includes partners such as Satellite Applications Catapult, Commonwealth Secretariat, and the UK Met Office.

The baseline evaluation report that was finalised in May 2019 found evidence that the limitations associated with a shortage of technical expertise and equipment in the three countries contribute to less frequent use of geospatial data for strategic planning and decision making. Following the initial scoping year, the project officially moved into its second phase of implementation in February 2019 to address the partner countries' needs. Findings from the midline evaluation report that was finalised in September 2020 highlighted that stakeholders that participated in trainings reported to have increased knowledge and skills on geospatial information systems.

At the current point in the project, early results have been achieved through the integration of earth observation derived services and capacity development into national strategic programmes, especially through technical backstopping activities which will be discussed in-depth later in this report. This research included desk-based research and interviews with select stakeholders in three selected countries. Findings and recommendations from the midline independent evaluation and monitoring efforts helped to inform these results.

OBJECTIVES

Objective 1

Funded through the Global Challenges Research Fund (GCRF), the project aims to increase national resource capacities in the use of Earth Observation solutions to address Disaster Risk Reduction and Climate Change resilience in Fiji, Solomon Islands, and Vanuatu by 2021.

- Increase in financial support from Climate Funds,
- Increase in number of successful applications submitted to Climate Funds based on IPP CommonSensing solutions

Objective 2

To enhance evidence-based decision making by using IPP CommonSensing Solutions for Disaster Risk Reduction and Climate Change Adaptation by end 2021.

- Number of Governmental Ministries/Departments in target countries Fiji, the Solomon Islands and Vanuatu using IPP CommonSensing Solutions to inform policy and decision making

END-USERS

- Senior decision makers responsible for financing and planning climate change adaptation and disaster risk reduction in government line ministries
- Technical staff responsible for providing the most up to date and solid analyses which senior decision makers use in prioritizing their plans and actions towards climate change adaptation and disaster risk reduction

KEY LOCAL MINISTRIES

- Fiji: Ministry of Economy
- Solomon Islands: Ministry of Environment, Climate Change, Disaster Management & Meteorology
- Vanuatu: Ministry of Climate Change Adaptation, Meteorology, Geo-Hazards, Environment & Energy and National Disaster Management Office

PRIMARY TARGETED

IPP CommonSensing aims to enhance Disaster Risk Reduction and Climate Change resilience in Fiji, Solomon Islands and Vanuatu in support of

- Sustainable Development Goal 13 (Climate action) and
- Sustainable Development Goal 9 (Industry, innovation and infrastructure)

by 2030, the end date for Agenda 2030 and the implementation of the Sustainable Development Goals, although specific time-bound outputs and indicators are set for 2020.

Project Partners

IPP CommonSensing is comprised of a consortium of international partners, working together to support and build climate resilience and enhance decision making through the use of satellite remote sensing technology.

The consortium is comprised of a partnership of eight international public institutions, UK- based private companies and academia. Its composition presents an optimal mix of organizations whose combined experience presents excellent expertise in the sector (e.g. EO for CCA and DRR); sub-sectors (e.g. food security and agriculture). Local presence is ensured through in-country experts, secondees, and on the ground M&E consultants to have a physical presence in the region.

unitar
United Nations Institute for Training and Research
UNOSAT

IPP CommonSensing is led by the United Nations Operational Satellite Applications programme (UNOSAT), which is part of the United Nations Institute for Training and Research (UNITAR). UNOSAT's role includes producing the monitoring and evaluation reporting, stakeholder engagement, and developing an app to support disaster risk resilience (DRR) in the project countries. UNOSAT also employ three In-Country Experts in Fiji, Vanuatu, and the Solomon Islands to support their engagement with local governments.

UNOSAT is the operational satellite applications programme of the United Nations Institute for Training and Research (UNITAR). It is a technology intensive programme active in all aspects of applied research relating to satellite solutions, from earth observations to telecommunication, positioning and navigation. UNOSAT delivers satellite solutions, geographic information to organizations within and outside the UN system to make a difference in the lives of communities exposed to poverty, hazards, and conflict, or affected by humanitarian and other crises.

CATAPULT
Satellite Applications

The Satellite Applications Catapult Ltd is responsible for the project management, user experience design, data products and development, infrastructure, sustainability support and communications for the IPP CommonSensing project.

It is part of a network of UK technology and innovation companies which aim to drive economic growth through the commercialisation of research. The Catapult exploits the innovation potential in the UK industrial and academic communities, by being a focal point where small and medium enterprises, large industry and end users can work together with researchers to challenge barriers, explore and develop new ideas, and bring these to commercial reality.

The Commonwealth

The Commonwealth's role in the IPP CommonSensing project is to provide technical assistance to countries in accessing to climate finance. Additionally, the Commonwealth is supporting with communications and ensuring that climate finance project learnings survive beyond the project.

The Commonwealth is a voluntary association of 52 independent and equal sovereign states and is home to 2.4 billion people including both advanced economies and developing countries. Thirty of Commonwealth members are small states, many of which are island nations. The Commonwealth Secretariat supports Member States to achieve development, democracy and peace and is a voice championing small and vulnerable states. The Secretariat helps to strengthen governance, build inclusive institutions and promote justice and human rights. The work helps to grow economies and boost trade, empower young people, and address threats such as climate change, debt and inequality.

devex
Do Good. Do It Well.™

Devex are responsible for producing content and events to highlight the IPP CommonSensing project and raise awareness of the challenges faced by small island nations as a result of climate change and access to data to support decision-making and policy development. Based in Barcelona and Washington D.C., the Devex team support starting conversations around IPP CommonSensing and small island nations from within the development communities through the production of articles, videos, podcasts, and thought leadership events.

Serving more than a million development, health and relief professionals, Devex is the leading media platform for the international development community. Devex work with leading aid agencies, corporations, NGOs, universities and other organization to foster collaboration, discussion and learning on critical issues in development, including climate change and its effects. Together with partners, Devex builds online discussions using written and video content, contributes opinion pieces from luminaries in the field and interactive social media to amplify and advance issues that are critical to the global development community.

sensonomic

Based in the UK and Norway, Sensonomic are delivering software solutions for food system resilience for the IPP CommonSensing project. Their experience spans from technology to geography and economics and they combine this expertise with a vision of a bright, prosperous and inclusive future for agriculture. Sensonomic deliver actionable insights for adaptive agriculture and their novel agritech solution allows you to make informed decisions and build a robust, resilient, and profitable future.

Sensonomic is a software-as-a-service company specialising in data analytics of nature's relevance to people, government and businesses. The company integrates big data in computational simulation services, which enable flexible and fast solutions for finding emergent properties in complex dynamic systems.

Spatial Days

As part of the IPP CommonSensing project, Spatial Days is providing solution architecture, technical management and technical support.

Spatial Days Ltd was founded in 2010 to provide vendor-neutral Geographic Information Systems (GIS) mapping and remote sensing consultancy and services to customers in the UK public and private sector and elsewhere.

UNIVERSITY OF PORTSMOUTH

The University of Portsmouth are developing models and running in-country training exercises to help the nations improve their disaster risk resilience for the IPP CommonSensing project.

University of Portsmouth is ranked in the top 2% of the world's universities by the 2016 Times Higher Education World University Rankings. The staff working on this project are from three departments that have research outputs classified as world-leading or internationally excellent by the 2014 UK Research Excellence Framework: Computer Sciences, Earth & Environmental Sciences; and Physics. The university is a hub for EO innovation, hosting the South Coast Centre of Excellence in Satellite Applications.

Project Progress

Theory of Change

The ultimate aim of the IPP CommonSensing project is to support Fiji, Solomon Islands, and Vanuatu in reaching their most crucial sustainable development objectives.

IPP CommonSensing targets two key priorities for the three partner countries: Enhanced disaster risk reduction and climate change resilience in support of SDG 13 (action to combat climate change and its impacts) and SDG 9 (investment in industry, innovation and infrastructure). These overarching goals are achieved through the results chain presented in the project's Theory of Change (ToC).

The impact-level goal is namely supported by the institutional outcomes in the level below, which aim to improve lives in the three partner countries through the use of earth observation expertise to reduce disaster risk, increase national resource capacities through financial support from climate funds using IPP CommonSensing solutions, and enhance evidence-based decision making in the areas of DRR and CCA.

These goals are in turn accomplished through the immediate and intermediate outcomes brought about from the project's outputs and activities, centered on the key components of the technical solutions and products, capacity development trainings, and climate finance advice. These depend on the number of participants and number of governmental ministries and departments in Fiji, Solomon Islands, and Vanuatu using the IPP CommonSensing Platform to inform policy and decision making.

Table 1

Indicator reference	Indicators and Key Performance Indicators (quantitative and qualitative		Midline
7.2	Percentage of national stakeholders who feel that geospatial and remote sensing data regularly contributes to climate change-related strategic planning in their organisafions	**Planned**	FJ: 30% SI: 30% VN: 30%
		Achieved	**73%**
7.3	Percentage of national stakeholders who feel that geospatial and remote sensing data are used regularly for decision-making in their organisa-tions	**Planned**	FJ: 30% SI: 30% VN: 30%
		Achieved	**76%**

Table 2

Indicator reference	Indicators and Key Performance Indicators (quantitative and qualitative		2019	Dec-20	Target 03/2021
6.1	Percentage of technical staff from government ministnes who achieve "high" or "moderate" levels of competency in utilizing Earth Observation applications for DRR and CCA through the IPP CommonSensing technical trainings.	**Planned**	70%	70%	70%
		Achieved	81%	89%	
6.2	Percentage of technical staff from government ministnes who achieve "high" or "moderate" levels of competency in utilizing Earth Observation applications for DRR and CCA through the IPP CommonSensing technical trainings.	**Planned**	70%	70%	70%
		Achieved	94%		

Midline Findings on Capacity Development

The mid-line evaluation found that it was too early to determine impacts, but confirmed signs of indications of potential for impact traced to capacity development from trainings and backstopping activities. It noted that 80 to 90 per cent of participants were considered as having achieved 'high or moderate competency in utilising EO for DRR and CCA' as per participant feedback provided after the trainings. The favourable reactions from training participants on their intent to use knowledge and skills gained from the technical trainings suggest that they will indeed use EO data in their planning and decision making, as 93 per cent agreed that it is likely they will use the information from the trainings. Several participants highlighted the trainings were very useful for their jobs and careers, and that they could see direct applications to improve decision-making processes in their respective Ministries. Further results gleaned from the project's monitoring system can be seen below.

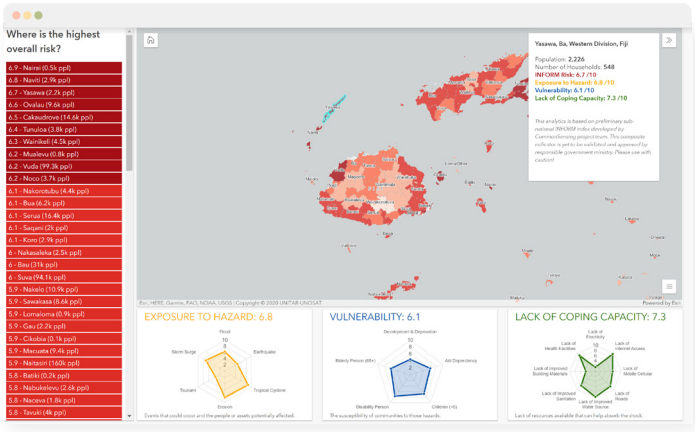
Table 3

Indicator reference	Indicators and Key Performance Indicators (quantitative and qualitative)		2019	2020
3.1	Number of technical trainings organised by the project consortium in Fiji, Solomon Islands, and Vanuatu	**Planned**	4	12 (cumulative)
		Achieved	Total: 4 FJ: 1 SI: 1 VN: 1 Regional: 1	Cumulative: 10 FJ: 1 SI: 1 VN: 2 Regional: 2
3.2	Number of participants in technical trainings organised by the project consortium in Fiji, Solomon Islands, and Vanuatu (KPI 2)	**Planned**	10 per country (5 M; 5 F)	30 per country (15 M; 15 F)
		Achieved	101 (72% M; 28% F)	131 (66% M; 34% F)
3.3	Number of unique government ministries of the three partner countries represented at technical trainings (co)organised by the project consortium	**Planned**	FI: 3 SI: 3 VN: 3	FJ: 4 SI: 4 VN: 4
		Achieved	FJ: 14 SI: 10 VN: 8	(cumulative) FJ: 14 SI: 12 VN: 12
3.4	Number of technical backstopping activities completed by in-country experts in Fiji, Solomon Islands, and Vanuatu	**Planned**	15	15
		Achieved	FJ: 4 SI: 4 VN: 4	FJ: 76 SI: 124 VN: 17
3.5	Number of unique government ministries taking part in technical backstopping activities completed by in-country experts in Fiji, Solomon Islands, and Vanuatu	**Planned**	FJ: 3 SI: 3 VN: 3	FJ: 4 SI: 4 VN: 4
		Achieved	FJ: 4 SI: 2 VN: 1	(cumulative) FJ: 14 SI: 8 VN: 5
3.6	Number of technical awareness-raising events on IPP CommonSensing solutions (co)organised by the project consortium in Fiji, Solomon Islands, and Vanuatu	**Planned**	1 per country	2 per country
		Achieved	FJ: 14 SI: 4 VN: 5	FJ: 15 SI: 5 VN: 6
3.7	Number of attendees of technical awareness-raising events on IPP CommonSensing solutions (co)organised by the project consortium in Fiji, Solomon Islands, and Vanuatu	**Planned**	6 per country (3 M; 3 F)	10 per country (5 M; 5 F)
		Achieved	591 (58% M; 42% F)	922 (62% M; 38% F)
3.8	Number of unique government ministries of the three partner countries represented at the technical awareness-raising events on IPP CommonSensing solutions (co)organised by the project consortium	**Planned**	FJ: 3 SI: 3 VN: 3	FJ: 5 SI: 5 VN: 5
		Achieved	FJ: 9 SI: 6 VN: 3	(cumulative) FJ: 39 SI: 14 VN: 12

Technical Solution

As the goal of the IPP CommonSensing project is support Fiji, the Solomon Islands, and Vanuatu utilise information derived from satellite images and geospatial information technology (GIT) applications, the IPP CommonSensing Platform is a vital component in realizing the project's objectives. By developing satellite-based information services that directly match the challenges and needs identified for each country, the project hopes to strengthen each country's capacity to improve their climate resilience and disaster risk reduction.

The IPP CommonSensing Platform for the Fijian stakeholders was at its minimal viable product (MVP) stage in September 2020, so the midline evaluation was not able to gather feedback on its various components. Though it has been tested by the selected end users in order to iterate the portal and its app in a way that is most relevant for the local stakeholders' interest and use. The web portal and apps have also been developed for Vanuatu and the Solomon Islands, and will be tested by stakeholders in user training workshops for further updates. Once they are officially launched this year, the full analysis can be conducted to assess the outcomes from the application of the tools. As such, the platform could not be examined in the independent midline evaluation nor this case study. Instead, the focus of the technical solutions in this in-depth look will be on the technical backstopping activities.



Decision Support System (DSS) Snapshot of Fiji

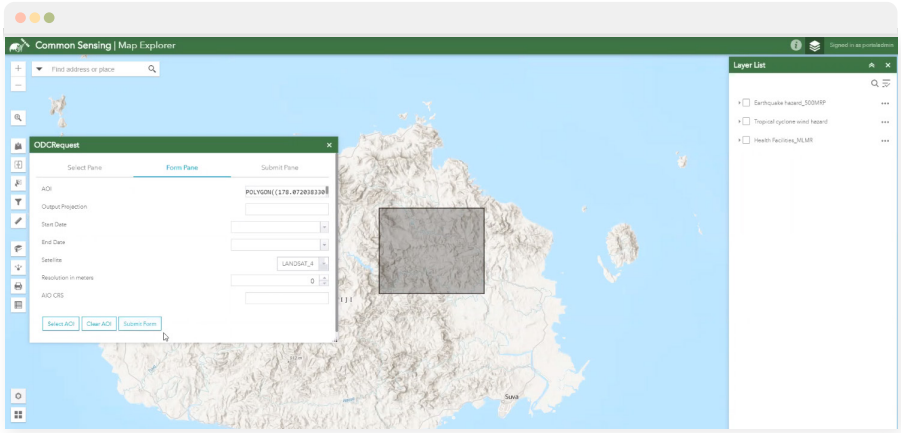


Image of IPP CommonSensing Portal Map Explorer app

Early Results

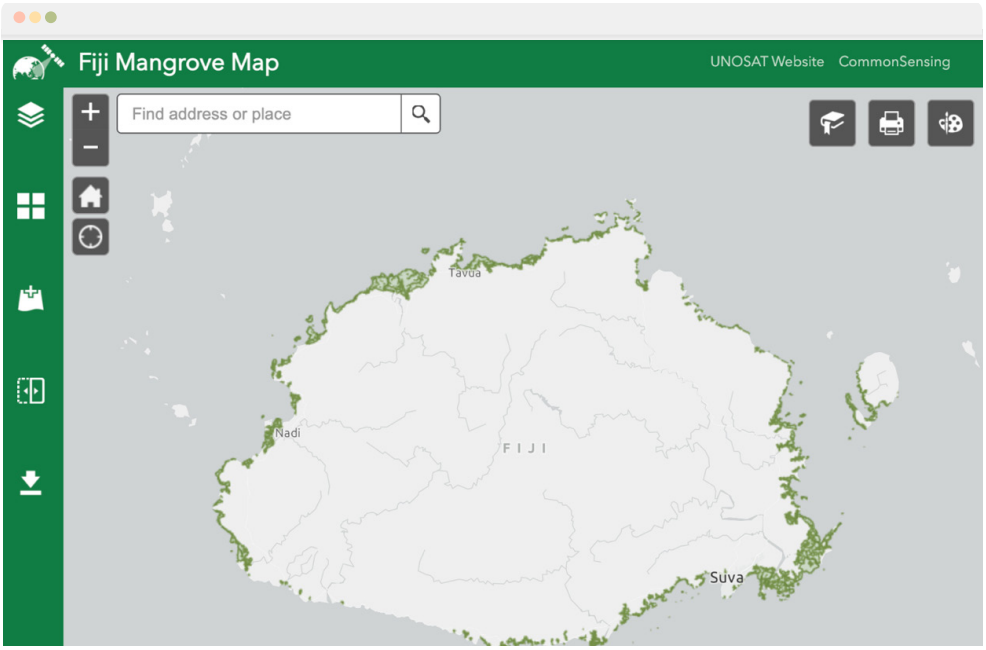
As the project's full vision depends on full accessibility of the IPP CommonSensing Platform to stakeholders in the three partner countries, results could not be analysed on the wider encompassing objectives of the project. However, one portion of the project's activities has filled that technical gap, providing stakeholders with ad-hoc geospatial data, information and tools that allow for on-the-job application of knowledge and skills gained from capacity development trainings.

These technical backstopping activities have been a much-lauded service that stakeholders have considered key in their daily activities. As a demand driven service, only a few stakeholders in the line-ministries had requested support in the first year of project implementation. Though by the second year, backstopping requests skyrocketed from 12 requests in 2019 to 158 in 2020, owed to the quick mobilisation of tailor-made support.

The success of the service has contributed to the overarching goal of the project to provide technical solutions and the capacity to use the tools, as stakeholders have used the provided data, tools and information to support decision-making processes on numerous programmes and policies, including during emergencies and throughout the time-sensitive disaster management cycle – as was seen during Tropical Cyclone (TC) Harold, TC Yasa, and the Covid19 pandemic.

Fiji: Mangrove Map

In September 2020, UNOSAT carried out a request to provide Fiji's Ministry of Forestry (MoF) with shapefiles and a web-map to detect changes to mangroves over a decade spanning 2009 to 2019. UNOSAT used Sentinel-2 multi spectral satellite imagery to digitise latest mangrove boundary. Once ready, it was shared to relevant government department for validation.



UNOSAT regularly organises or engages in awareness raising events to foster communication and encourage information exchange among different stakeholder groups for stimulating actions and new ideas. Mohammed Shorab, the Forestry Focal Point for Fiji's Ministry of Forestry, first heard of UNOSAT's technical backstopping service at the Fiji Geospatial Information Management Council in 2019[1], where Leba Gaunavinaka – UNOSAT's in-country expert – gave a presentation on the IPP CommonSensing project. The team at the Ministry reached out for this particular request as they lacked specific technical expertise in the detection of mangroves using satellite imagery, stating "in previous years we have not had the ability to detect mangroves separately" explaining that they tend to be detected with forests, rendering it difficult to differentiate between the two. Following the swift receipt of the mangrove shapefiles and webmap from the backstopping team, the delineation soon became clear. Analysis of these products was further improved, as two officers from the MoF had attended IPP CommonSensing's Advanced Training on Earth Observation and Geospatial Technology in September 2020 – which Mr. Shorab expressed had supported them in navigating the webmap.

With the digital maps in hand, the Ministry of Forestry would then have to conduct on-the-ground validation of the data. At the time of the interview, the team had not completed verification yet, though they commented that they would use drones and other means to verify the location of mangroves, and then upload geotagged photos onto UN-ASIGN[2], a mobile application used to collect field data. These geo-tagged photos can then be displayed on UNOSAT's Live Map along with other crowd-sourced images, allowing for wider support in validation. Mr. Shorab and his team at the MoF were enthusiastic about the end result of the backstopping request, claiming that it was the best interpretation of mangroves in Fiji thus far, adding that the accuracy was impressive.

It is widely known that mangroves are dynamic habitats that deliver numerous natural capital and ecosystem services. They provide protection against coastal erosion, give safe haven for marine nurseries, and vitally sequester carbon to aid in climate change mitigation. When asked how the tool will help the Ministry manage mangroves in Fiji, Mr. Shorab stated "mangrove detection is important for us as it indicates which deforested areas need to be rehabilitated", affirming that the shape files and web map would help the team plan sites for restoration and rehabilitation for the Ministry's ambitious 30MillionTrees15Years mangrove and tree planting initiative.

1 FGIMC is the platform of exchange for high level decision makers from 44 government ministries, statutory agencies and regional and academic advisors where issues on national geospatial developments and challenges are addressed and decisions taken to foster progress and support Fiji's development goals
2 UN-ASIGN is a free application offered by UNOSAT and AnsuR to assist the humanitarian and wider development community to facilitate the collection of photos, assessments, and geo-located text messaging in the field. The app can be downloaded from the following link: https://asign.cern.ch/.

Regarding carbon stock taking, a key activity in forestry management, he replied that "mangrove detection also is important for GHG inventory as studies indicate that mangroves are able to sequester four times more carbon than rainforests" adding improved and detailed delineation of mangroves helps the Ministry to disaggregate different forest types for greenhouse gas (GHG) and carbon trading, for a specific view of contributions from mangroves. He stipulated that pending final adoption of by management, these mangrove maps could further assist in Fiji's activities under REDD+[3], as well as Fiji's Emissions Reduction Program (ERP) implementation. Overall, the MoF team had commented that this activity had improved his outlook on mangrove conservation in Fiji and that they would continue to work with UNOSAT for backstopping support.

Vanuatu: Tropical Cyclone Harold Emergency Response Dashboard

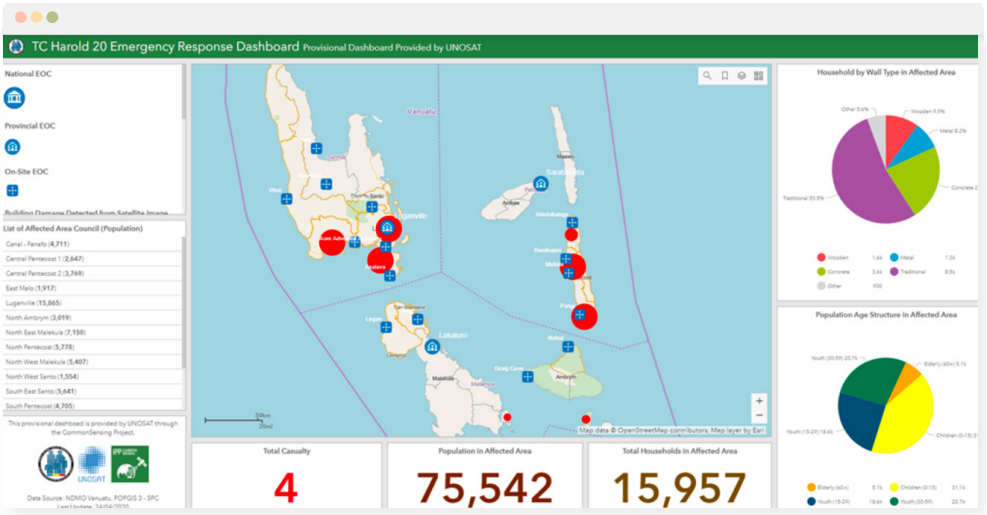
Following the devastating force of Tropical Cyclone (TC) Harold in April 2020, UNOSAT approached Lopanga Yerta, the Information Management Officer at Vanuatu's NDMO, to see if the technical backstopping team could offer GIS expertise to support post-disaster efforts.

When asked how their team in the NDMO normally assess damage of affected areas, Ms. Yerta replied that they first have to retrieve baseline data from the Vanuatu National Statistics Office (VNSO) and then obtain cyclone data from the Vanuatu Meteorology and Geohazards Department (VMGD), and then use QGIS to map out potentially affected areas. With the provision of the dashboard, key data was more easily displayed and obtained in the National Emergency Operations Centre (NEOC) as a central point of information, as well as in onsite emergency operation centres (EOC)s to aid field staff.

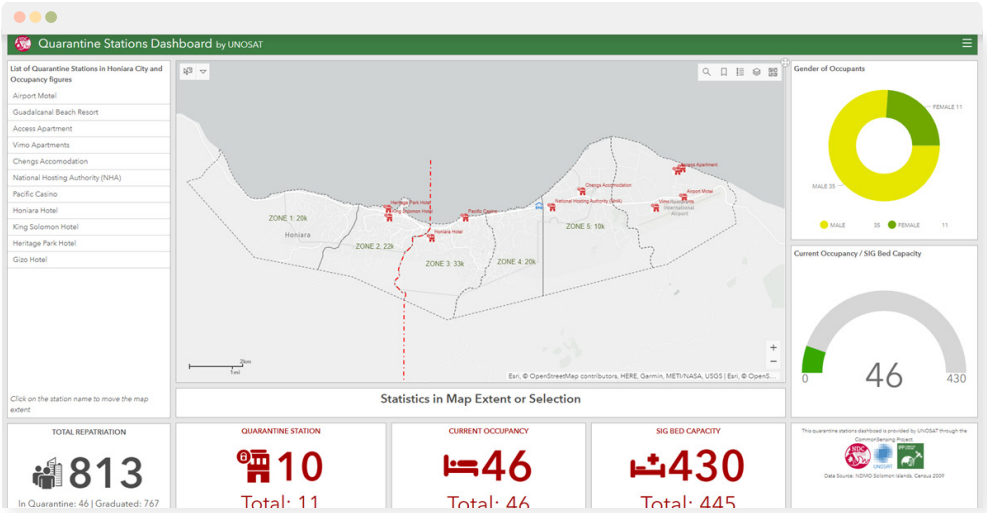
It further helped her team at NDMO prepare the post-disaster needs assessment (PDNA) to focus their analyses on the most affected areas, particularly the provinces of Malampa, Sanma and Penama. They were then able to communicate this information to the Department of Strategic Policy, Planning & Aid Coordination (DPPAC) to support decision-making on response and coordination planning for the deployment of humanitarian aid.

As advice for future technical backstopping tools, Ms. Yerta suggested that operations could be further advanced by providing real-time data analysis and additional options for filters to customize the context for visualization.

3 Reducing Emissions from Deforestation and Forest Degradation Forest Conservation, Sustainable Management of Forests and Carbon Stock Enhancement



Solomon Islands: Covid-19 Dashboard



Most nations in the Pacific have been spared the worst of the health crises caused the Covid-19 pandemic, owed to preemptive lockdowns which have helped to keep infection levels low and prevented medical facilities from being overwhelmed. To ensure those figures remained low, the National Disaster Management Office (NDMO) of the Solomon Islands reached out to UNOSAT's technical backstopping team for a covid-19 dashboard to centralise information.

Jonathan Tafiariki, the NDMO Deputy Director, has known the IPP CommonSensing project very well since its inception, due to the project's continued cooperation with the Ministry through trainings and backstopping. At the time of the interview in August 2020, the Solomon Islands had not recorded a single locally transmitted case but remained wary in a state of emergency allowing for measures such as quarantine stations to be instituted.

Mr. Tafiariki exclaimed that the government needed assistance in preparing for such arrangements and that main challenge was having readily available information available to different ministries and departments, emphasizing that information sharing was key. He stated that they would benefit from a central of point of access, so his team had begun discussion with UNOSAT for what they required on a dashboard. Mr. Tafiariki stated, "we heard UNOSAT helped Vanuatu by creating a dashboard for TC Harold, so we thought it would be great to ask for similar support".

Sites for returning citizens on repatriation flights had already been established, the government just needed a consolidated dashboard to display which quarantine stations were empty, reaching capacity, or full. Mr. Tafiariki added that the dashboard had helped the different government agencies involved in Covid-19 response efforts obtain centralized information, allowing for quick decision-making and planning for operations. This data was especially key for local police and health workers who would have to react quickly to ill returnees. He also added that the provision of the dashboard assisted operation centers, so the government could see the full picture, so they could plan how to disperse services.

The deputy director closed his remarks by stating, "we expected the dashboard to provide us with a clear picture of the situation to allow us to contain the situation" adding that it had helped "create some peace of mind for operations manager who are currently struggling to stay abreast with this information".

Conclusions and Lessons Learnt

One of the key lessons learnt, from the mid-line evaluation, was on the success of the technical backstopping service, specifically that integrating flexible mechanisms that can react to local demands, especially during rapidly changing situations such as emergencies, is essential to supporting the partner countries' needs.

Another lesson was the need for alignment of the theory of change and logical framework, to ensure a clear pathway to impact – which the project possesses, but has not yet attained due to the dependency of outcomes upon the delivery of the IPP CommonSensing Web Platform. Once all outputs have been delivered, the next essential step will be to ensure the outputs and outcomes are sustainable beyond the end of the project, and the three partner countries: Fiji, Solomon Islands, and Vanuatu use the data to build resilience and better secure funding for climate change mitigation.

Several Technical Trainings have been planned for the first quarter of 2021 to be delivered by UNOSAT and the IPP CommonSensing consortium partners. The last few months of the project hope to see its full vision achieved, as the IPP CommonSensing project will continue to strengthen the institutional capacity of the beneficiary countries through these trainings and awareness raising events with special emphasis on facilitating access and use of IPP CommonSensing platform and creating linkages with the sustainability plan to ensure knowledge and skills from the activities are long-lasting.

This case study will be updated once the final endline evaluation has been completed.

Abbreviations

CS	IPP CommonSensing
DPPAC	Department of Strategic Policy, Planning & Aid Coordination
IPP	International Partnership Programme
EO	Earth Observation
GCRF	Global Challenges Research Fund
MoF	Ministry of Forestry
MVP	Minimum Viable Product
NEOC	National Emergency Operations Centre
NDMO	National Disaster Management Office
ODC	Open Data Cube
PDNA	Post-disaster needs assessment
SDG	Sustainable Development Goal
ToC	Theory of Change
VNSO	Vanuatu National Statistics Office
VMGD	Vanuatu Meteorology and Geohazards Department

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UK SPACE AGENCY

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