

Introduction

The complex and revolutionary creation of the internet in 1960s, which came to mind initially for military purposes, eventually expanded for purposes of communication, was a breakthrough. Similarly, digital transformation of COVID-19 response efforts in the Pacific is complex but it could bring about a breakthrough that can dramatically turn the tide in the fight against COVID-19.

Digital transformation is crucial for strengthening the resilience of the health systems and of the society. Crucial and essential as it is, digital transformation should be holistic, requiring a whole-of-society approach.

Globally, digital technologies are being harnessed to support health response to COVID-19, including surveillance, case identification, contact tracing and assessment/evaluation of interventions. In the Pacific, a robust regulatory framework and environment for digital health service delivery is still wanting. Digital infrastructure is limited, as well as related digital skills and systems. Capacity in the Pacific island countries and territories (PICTs), including the extent of readiness and availability of resources to implement changes and transformation in digital environment, varies considerably.

Development of a sustainable digital health system within PICTs require several key essential components to be in place, including appropriate technology and communication capacity. While the Pacific Joint Incident Management Team (JIMT) is working on a toolkit containing practical suggestions to guide country decision makers as they consider rapid introduction of digitally supported and complemented health services, efforts should be initiated to set-up the required infrastructure and support systems. The project Supporting the Pacific Close the Digital Divides in Response to COVID-19 (SPCDDR-COVID-19) will further progress the digital transformation in the Pacific.

Accelerated digitalisation could lead to widening digital divides, hence should be done with caution. Strong political will, clear and agreed vision, and a systematic approach to realise the potential of digitalisation is needed. And as SPC re-starts the Pacific digital transformation together with WHO and other key partners in the region, we are mindful not to leave anyone behind.

Background on Digital Transformation Efforts in the Pacific

Discussions and efforts for digital transformation to occur in the Pacific is not new. The benefits of digital transformation have been discussed in the Pacific context for a number of years, but the current COVID 19 crisis has highlighted the importance of strengthening and accelerating these efforts. At the regional level the following action plans, strategies and declarations are at the foundation of today's regional digital transformation state.

- The Communication Action Plan (CAP, 1999)
- Pacific Islands ICT Policy and Plan (PIIPP, 2002)
- The Pacific Plan Digital Strategy (PPDS, 2005)
- Further endorsed by Forum ICT Ministers in 2006 : Wellington Declaration, '*We recognize that information and communication technologies (ICTs), while not an end in themselves, have a key role as a basis for economic development, while also promoting and enhancing social cohesion, cultural enrichment and environmental conservation*'.
- The call from Pacific Leaders at the 40th Pacific Islands Forum in Cairns (August 2009) for the Pacific Plan Digital Strategy (PPDS) to be reviewed and updated.

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- ‘Framework for Action on ICT for Development in the Pacific’ (FAIDP) 2010. (based on the gaps identified and the recommendations from the review of the PPDS, findings from the ITU assessment of Pacific national ICT policies as well as inputs from the CROP ICT WG, development partners, and more importantly PICTs contributed significantly to the development of the FAIDP.)
- UNESCAP Committee on Information and Communications Technology, Science, Technology and Innovation. (2016)

The Pacific Community and the Pacific Public Health Surveillance Network

The Pacific Community (SPC) is the principal scientific and technical organisation supporting development in the Pacific region. It is an international organization established by treaty (the Canberra Agreement) in 1947 and is owned and governed by its 26 country and territory members.

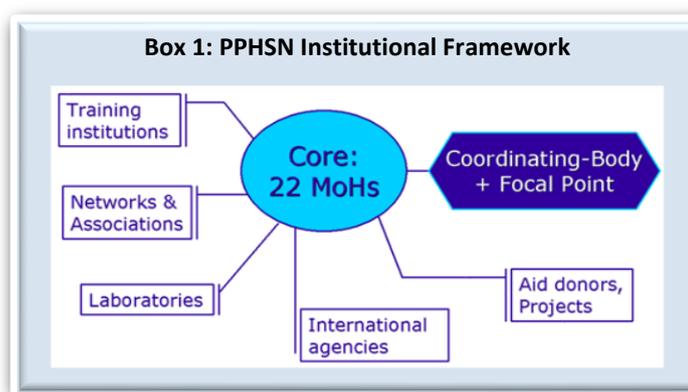
SPC covers more than 20 sectors and is renowned for knowledge and innovation in the areas of public health surveillance, fisheries science, geoscience and conservation of plant genetic resources for food security. The organization contributes to 3 development goals of its member countries:

- A. Pacific people benefit from sustainable economic development;
- B. Pacific communities are empowered and resilient; and
- C. Pacific people reach their potential and live strong and healthy lives.

Public Health, one of the 5 divisions in SPC, is made up of 3 programmes – Surveillance, Preparedness and Response Programme (SPRP), Non-Communicable Disease Programme (NCDP), and Clinical Services Programme (CSP). PHD supports SPC’s development goal 3, through the following development objectives:

1. Strengthen regional public health surveillance and response;
2. Improve multi-sectoral responses to non-communicable diseases and food security; and
3. Strengthen collaboration on regional clinical services and workforce issues

SPRP has been the focal point of the Pacific Public Health Surveillance Network (PPHSN) Coordinating Body (CB) since its inception in December 1996. PPHSN, a voluntary network of 22 core members from the Ministries and Departments of Health in the Pacific islands and territories, is supported by regional and international agencies as allied members who supplement and complement the network with technical expertise (Box 1).



PPHSN has five development strategies (Box 2), and six key services: (i) Pacific Network or PacNet for alert and communication; (ii) Laboratory Network (LabNet) for diagnosis, and support for specimen testing and verification with strong involvement of level 2 laboratory facilities in the Pacific namely: Guam Public Health (GPH), Mataika House Laboratory (MHL), Institut Pasteur New Caledonia (IPNC) and Institut Louis Malardé (ILM); (iii) Epidemiology Network (EpiNet) for outbreak response and investigation; (iv) PICNet for infection prevention and control; (v) Pacific syndromic surveillance

system for early warning and timely detection of outbreaks; and (vi) the SHIP (Strengthening Health Interventions in the Pacific)/DDM (Data for Decision-Making) for capacity building in epidemiology with methodology based on the Field Epidemiology Training Programmes (FETP).

Box 2: PPHSN Development Strategies

- Harmonisation of surveillance data and development of appropriate surveillance systems.
- Publication and dissemination of timely, accurate and relevant information.
- Training in applied epidemiology and public health surveillance.
- Extension of the electronic communication network to new partners, services & other public health networks.

SPC, working closely with the World Health Organization (WHO) Suva office within the Pacific Joint Incident Management Team (JIMT) arrangement, is continuing efforts to further strengthen surveillance systems and capability across the PICTs

to prepare and respond to the COVID-19 crisis.

COVID-19 Current Situation

Highlights at the Global Level

Monitoring of COVID-19 global cases revealed the following¹:

Table 1. Top 10 Countries with the Highest COVID-19 Cases and China, Number of Cases and Deaths, As of 18 March 2021

<i>Location</i>	COVID-19 cases (% of total)	Deaths (% of total)
<i>Global</i>	120,991,457	2,675,301
<i>United States (US)</i>	29,585,015 (24)	537,583 (20)
<i>Brazil</i>	11,603,535 (10)	282,127 (11)
<i>India</i>	11,438,734 (9)	159,044 (6)
<i>Russia</i>	4,368,943 (4)	91,815 (3)
<i>United Kingdom (UK)</i>	4,287,993 (4)	126,068 (5)
<i>France</i>	4,168,439 (3)	91,324 (3)
<i>Italy</i>	3,281,810 (3)	103,432 (4)
<i>Spain</i>	3,206,116 (3)	72,793 (3)
<i>Turkey</i>	2,930,554 (2)	29,696 (1)
<i>Germany</i>	2,610,756 (2)	74,043 (3)
<i>China</i>	101,454 (0)	4,839 (0)
<i>Other countries</i>	43,408,108 (36)	1,102,537 (41)

Note: This table shows the top 10 countries with the highest COVID-19 cases, and numbers from China.

¹ Source: [Johns Hopkins Center of Systems Science and Engineering](#) accessed on 18 March 2021 at 08:00 am

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- More than 120 million cases and 2.6 million deaths reported worldwide, with a 2.2% case fatality proportion.
- The number of countries/regions with COVID-19 cases is at 192.
- Global weekly incidence increased for the second time in 3 weeks, up to 3.0 million new cases. This represents a 10.4% increase over the previous week.
- Global weekly mortality continues to decline for the seventh consecutive week. Mortality fell to 59,031 deaths, a 3.33% decrease from the previous week.
- *Global Vaccination*
 - The [WHO reported](#) 325.6 million vaccine doses administered globally, including 190.7 million individuals with at least 1 dose. The dashboard does not yet include daily or weekly vaccinations.
 - [Our World in Data](#) reports that 381.3 million vaccine doses have been administered globally, a 22% increase compared to this time last week. The [daily average](#) is approaching 10 million doses per day. The current average of 9.7 million doses per day is a 37% increase compared to a week ago.
 - At least 133 countries and territories are reporting national vaccination data.
- Global daily cases and deaths are shown in Figures 1 and 2.

Figure 1. Global Daily COVID-19 Cases, As of 18 March 2021

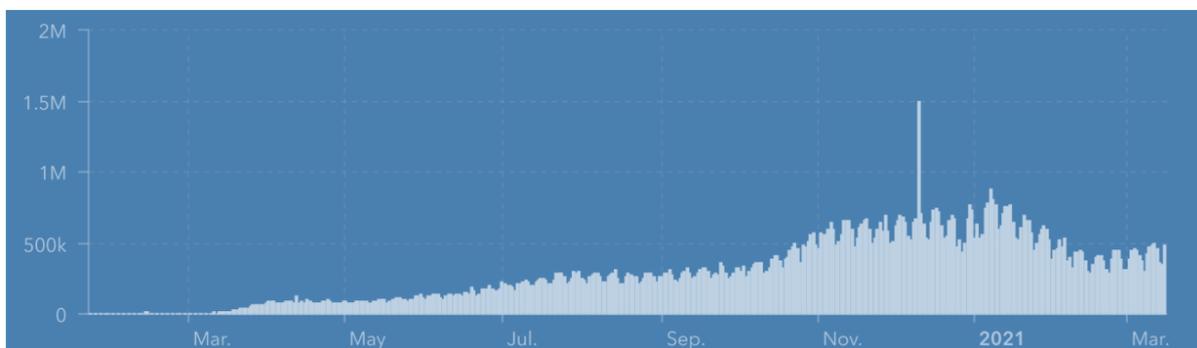
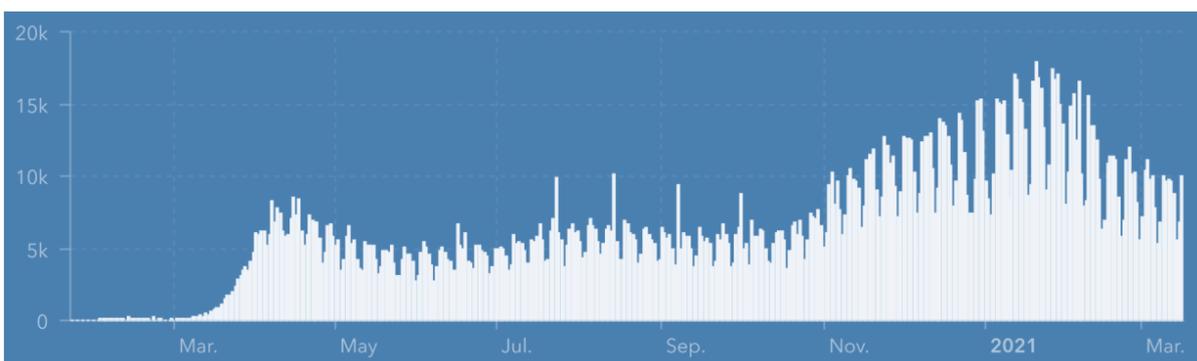


Figure 2. Global Daily COVID-19 Deaths, As of 18 March 2021



COVID-19 Burden in the Pacific

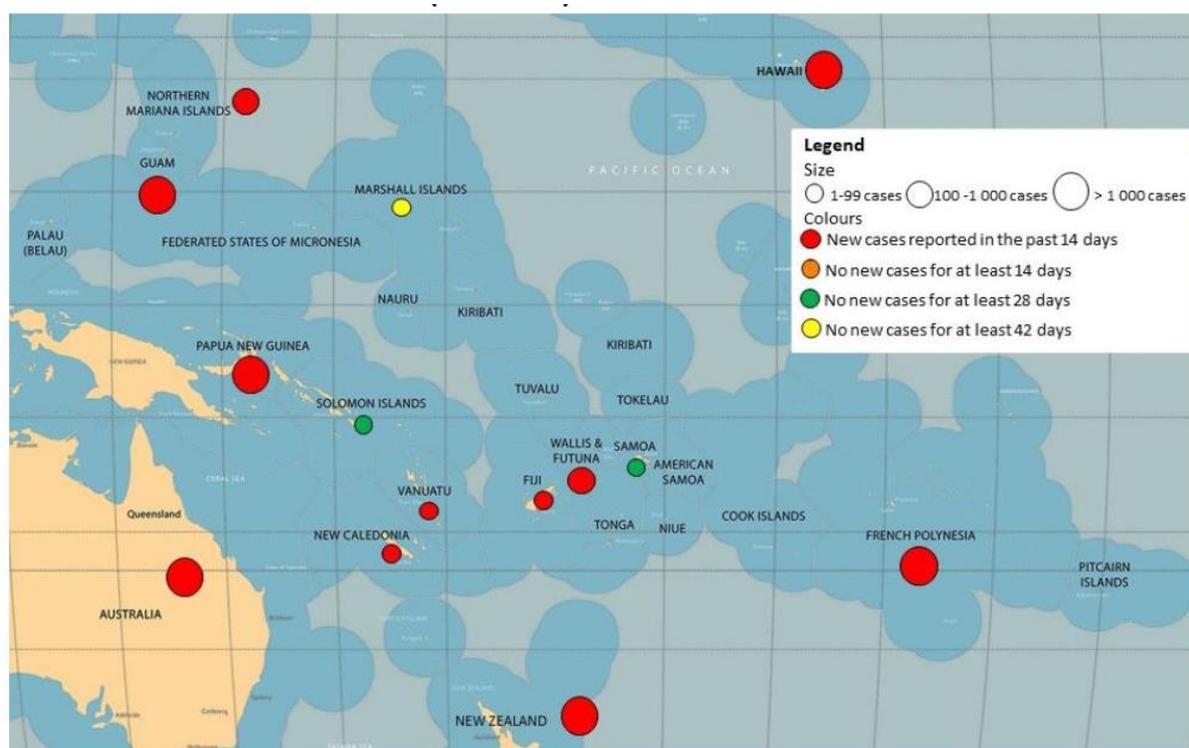
As of 18 March 2021, **11 countries**² (*Commonwealth of the Northern Marianas (CNMI), Fiji, French Polynesia, Guam, New Caledonia, Papua New Guinea (PNG), Republic of the Marshall Islands (RMI), Samoa, Solomon Islands, Vanuatu and Wallis and Futuna*) in the PICTs have reported **29,437 cases**³ and **310 deaths**, with a case fatality proportion of 1.1%.

- Locally acquired cases reported in CNMI, New Caledonia, Wallis and Futuna, French Polynesia, Guam and PNG.
- Wallis and Futuna, Vanuatu, Fiji, New Caledonia, French Polynesia, PNG, CNMI and Guam have reported new cases in the past 14 days.
- Samoa and Solomon Islands have not reported any new cases for at least 28 days.
- RMI has not reported any new cases for at least 42 days.

Other countries in the Pacific

- Australia has reported locally acquired cases in the past 14 days.
- New Zealand has not reported locally acquired cases for at least 14 days.
- Community transmission is ongoing in Hawaii.

Figure 3. Coronavirus Disease 2019 (COVID-19) cases in the Pacific as of 18 March 2021



² The FSM reported case is now classified as a negative and historical case, thus FSM has been removed from the list of countries with reported COVID-19 cases.

³ Numbers include confirmed and probable cases.

Figure 4. Cumulative Number of COVID-19 cases in the Pacific

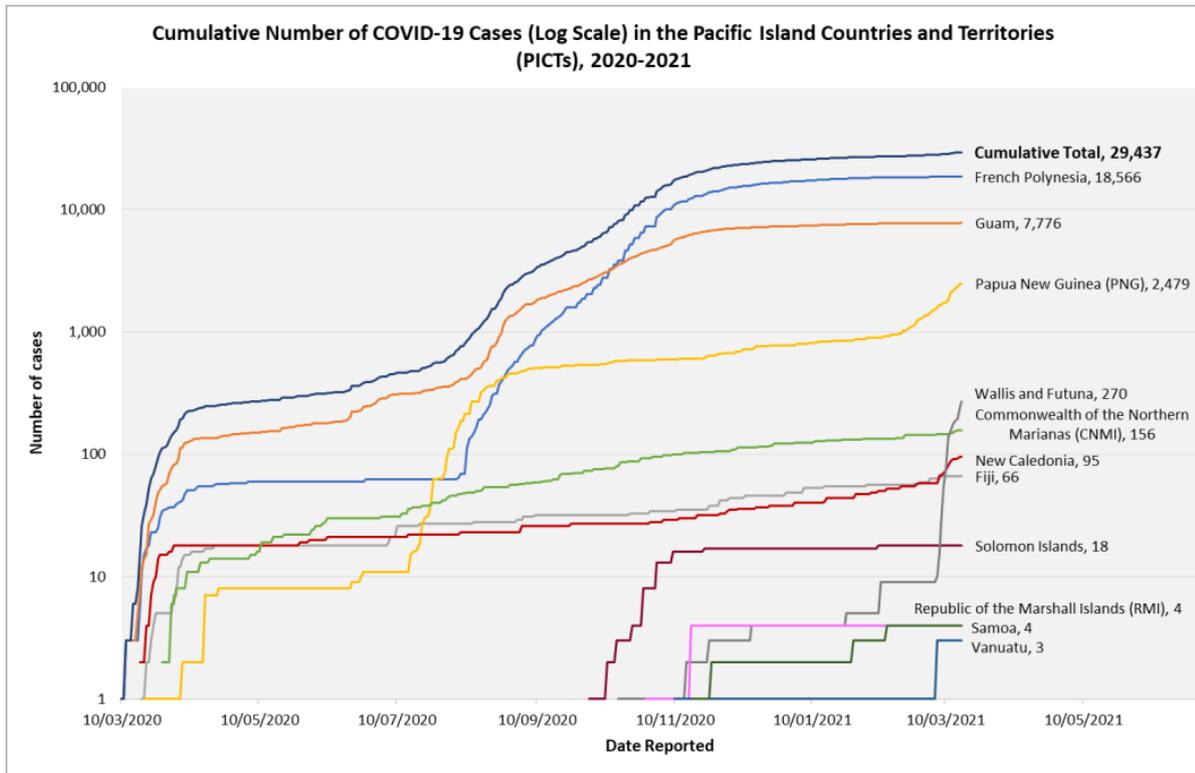
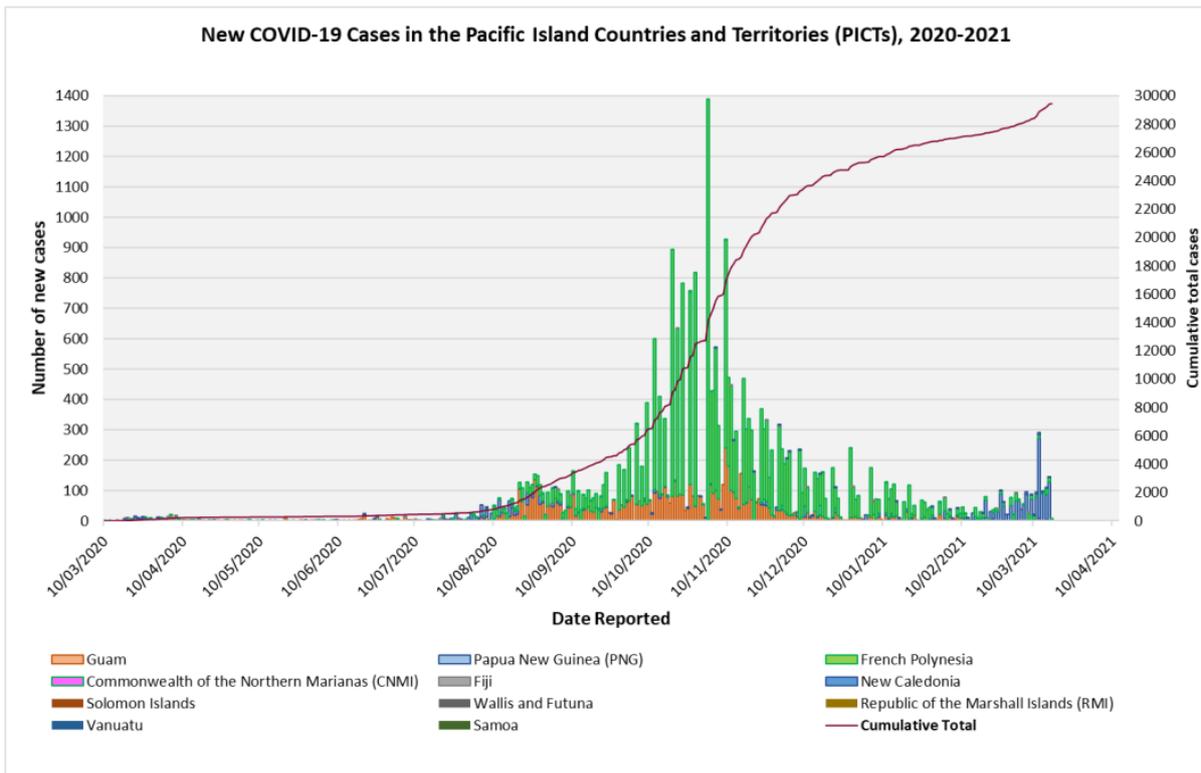


Figure 5. Number of New COVID-19 cases in the Pacific, By Reporting Date, As of 18 March 2021



Pacific Priority Needs Related to Digital Response to be Supported

The SPCDDR-COVID-19 project aims to support 4 key areas:

Capacity building: As with the control of outbreaks and pandemics before it, controlling the COVID-19 pandemic rests on the detection and containment of clusters of infection and the interruption of community transmission to mitigate the impact on human health. Training in epidemiology and outbreak management is essential. With the border closures and social measures in place, online training, blended with other modalities of teaching/training is going to be the norm.

We will provide projector screen and related accessories in 8 PICTs. The projector screens will facilitate conduct of online training sessions and technical meetings and consultation.

Where in-country mission is possible, and where face-to-face training, conferences and technical assistance activities can be done, we will continue to offer simultaneous translation and interpretation into English/French. Portable simultaneous translation system will be procured.

Early and rapid case identification: Early and rapid case identification is crucial for COVID-19 to ensure isolation of cases and appropriate contacts to reduce downstream spread. Digital technologies can supplement and complement surveillance reporting, as well as clinical and laboratory notification.

We will provide mobile phone/tablets to 9 PICTs. The mobile phones will be used for syndromic surveillance reporting, in particular for influenza-like illnesses (ILI), severe acute respiratory infections (SARI) and COVID-19, and where possible and as the digital environment in the Pacific evolves, we will endeavour to expand the use of the mobile phones for laboratory and clinical services.

Data sharing and reporting: A core public health function of outbreak management is understanding infection transmission in time, place and person, and identifying risk factors of the disease to guide effective interventions. Sharing timely and relevant data and information in country and at the regional level is now more critical than before.

We will support internet subscriptions for surveillance units, laboratory facilities and for selected staff involved in COVID-19 surveillance and response activities in 7 PICTs.

Cook Islands will benefit with support for infographic software. Kiribati on the other hand will benefit with support for a dedicated rack server for data storage and archiving.

Implementation of Vanuatu Digital Health Strategy: The Vanuatu Digital Health Strategy 2019-2021 provides a path that guides government and development partners' investments that outlines plans for the development of a set of integrated information systems that is intended to support achievement of the goals set forth in the National Development Plan 2016-2030, and the Health Sector Strategy 2017-2020. This project will support the development and operationalisation of a PWD database, including support for equipment, IT infrastructure and human resource.

Linkage with Other SPC-led Projects and Initiatives

The primal aim of the SPCDDR-COVID-19 project is to strengthen surveillance and capability of PICTs allowing timely response and management of COVID-19 cases. The project is in line with and has synergies with the following programmes and projects being implemented by SPC:

- *Strengthening Capacities of the Pacific Public Health Surveillance Network (PPHSN) 2018-2021*, funded by Agence Francaise de Developpement (AFD), and the AFD top-up COVID-19 emergency funding
- *Scale-up Public Health Surveillance Network Services to Strengthen Health Security in the Pacific 2020-2023* (EDF/2019 CRIS No. 412-104), funded by the European Union
- *Pacific Evidence Informed Policies and Programs (Pac-EVIPP) project*, funded by the Indo-Pacific Centre for Health Security, Department of Foreign Affairs and Trade, Australia

Linkage to Ongoing Actions against COVID-19

The project will complement and build on existing work to strengthen health security, guided by the Healthy Islands Vision, and within the framework of the International Health Regulations (IHR 2005). The scope of the project is complementary to the JIMT Phase 2 Plan focusing on responding to the continued vulnerability of Pacific populations and anticipated pressures on the health systems in addressing needs that are likely to emerge due to COVID-19.

Indicative Budget

The indicative budget of this project is Euro 700,000. A summary of the proposed budget is in Table 2, with breakdown for item 4 in Table 3. The budget allocation per country is shown in Table 4.

Table 2: Indicative Budget

<i>Item #</i>	<i>Area of Focus</i>	<i>Budget (Euro)</i>	<i>Comments</i>
1	Capacity building	281,191	For 8 countries; to facilitate online training and meetings
2	Early and rapid case identification	60,000	for 9 countries
3	Data sharing and reporting	95,506	for 8 countries
4	Development and operationalisation of PWD database	188,100	1 PIC (Vanuatu)
5	Contingency	11,567	
6	Administrative cost (10%)	63,636	10% of direct cost
TOTAL		700,000	

Table 3: PWD Database Development and HR Support, Vanuatu

	Budget (Euro)
<i>Scoping study (Facilitator- ToR V4)</i>	Government counterpart
<i>System design</i>	Government counterpart
<i>System development</i>	90,000
<i>Testing</i>	33,500
<i>Implementation</i>	22,400
<i>Documentation</i>	2,200
<i>HR Support: PWD database manager; over 2 years</i>	40,000
Total	188,100

Table 5: Budget Plan, Allocation per Pacific Island Country

#	Area of Focus / Item	Quantity	Unit Cost (Euro)	Cook Islands	Fiji	Kiribati	Niue	Solomon Is	Tokelau	Tonga	Tuvalu	Vanuatu	Budget Forecast (Euro)
1	Capacity building												
	Projector screen and accessories	8 sets in 8 countries	25,000	25,000	25,000		25,000	25,000	75,000	25,000	25,000	25,000	250,000
	Portable simultaneous translation system	2 sets	15,596										31,191
2	Early and rapid case identification												
	Smart mobile phone / tablet	9 countries	500	10,000	6,000	10,000	2,500	10,000	2,000	6,000	7,500	6,000	60,000
3	Data sharing and reporting												
	Internet subscription	7 countries	1,200		9,600	22,100		4,800	9,600	7,200	14,400	16,800	84,500
	Rack server for Go Data VMs	1 country				6,500							6,500
	Subscription for infographic software	1 country		4,506									4,506
4	Development and operationalisation of PWD database											188,100	188,100
5	Contingency for cost fluctuation and shipment/delivery charges												11,567
6	Administrative cost: 10%												63,636
TOTAL				39,506	40,600	38,600	27,500	39,800	86,600	38,200	46,900	235,900	700,000