

Pacific Community Communauté du Pacifique

Epidemic and emerging disease alerts in the Pacific report 2021

Prepared by the Surveillance, Preparedness and Response Programme, Public Health Division





Epidemic and emerging disease alerts in the Pacific report 2021



Noumea, New Caledonia, 2022

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Contents

ABBREVIATIONS	vi
ACKNOWLEDGEMENTS	vii
1. BACKGROUND	1
2. METHOD	3
3. RESULTS: Epidemic and emerging disease alerts in the Pacific	4
3.1 COVID-19	7
3.2 Dengue	9
Dengue serotype 1	
Dengue serotype 2	
Dengue serotype 3	
Dengue serotype 4	
3.3 Diarrhoea	10
Samoa	
Solomon Islands	
3.4 Leptospirosis	10
French Polynesia	10
New Caledonia	
Vanuatu	
3.5 Measles	
3.6 Hepatitis A	11
4. SURVEILLANCE LIMITATIONS	12
ANNEX 1: INFORMATION SOURCES	
Indicator-based surveillance information	
Event-based surveillance information	

ABBREVIATIONS

CD	communicable disease	PHD	Public Health Division
CNMI	Commonwealth of the Northern Mariana Islands	PICTs	Pacific Island countries and territories
EI	epidemic intelligence	PNG	Papua New Guinea
EBS	event-based surveillance	PPHSN	Pacific Public Health Surveillance Network
FSM	Federated States of Micronesia	RMI	Republic of Marshall Islands
IBS	indicator-based surveillance	SPC	Pacific Community

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1. BACKGROUND

Over the past decade, the Surveillance, Preparedness and Response Programme (SPRP) of the Public Health Division (PHD) at the Pacific Community (SPC) has developed a regional epidemic intelligence (EI) system to provide public health professionals from the Pacific (and beyond) with an accurate, comprehensive and timely picture of epidemic and emerging disease alerts in the Pacific.

The objectives of the EI system are:1

- 1. to detect health threats of priority infectious diseases in the Pacific region;
- to collect further information and updates on ongoing health events or alerts of epidemic and emerging diseases occurring in the Pacific or beyond that potentially represent an acute risk to population health in the Pacific and/or have a potential for regional and international spread; and
- 3. to provide validated information on disease threats to PICTs for their response.

SPC's regional EI system comprises an indicator-based surveillance (IBS) component and an event-based surveillance (EBS) component. Each component includes several sources of data and information (Annex 1). The IBS component involves structured data derived from routine surveillance systems (e.g., syndromic surveillance, laboratory-based surveillance), while the EBS component involves unstructured data and information usually gathered from informal sources (e.g., online media). These components are integrated in the EI system and undergo the following processes: detection and collection, triage, verification, risk assessment and timely dissemination of alerts, including data and information on epidemic and emerging diseases circulating and threatening the Pacific region (Figure 1). Throughout the processes, data and information collected are entered into a database.

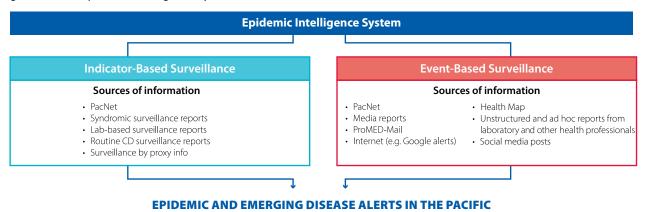


Figure 1: SPC's Epidemic Intelligence System

¹SPC Regional EIS Policy and Procedures – March 2018

Reports of epidemic and emerging disease alerts generated by the EI system, including a map and narrative report, are produced weekly and disseminated through PacNet, the alert and communication service of the Pacific Public Health Surveillance Network (PPHSN).² Simultaneously, an interactive web-based map is updated and made available on the PHD website.³

This report provides a summary of alerts, data and information on epidemic and emerging diseases in the Pacific countries that has been collated through SPC's regional EI system since the dissemination of the first EIS report on PacNet in August 2014 until December 2021.

A special focus on 2021 alerts is also presented in the report and our intention is to produce reports on an annual basis.

Pacific countries covered by the EI system include the 22 Pacific Island countries and territories (PICTs) (American Samoa, Commonwealth of the Northern Mariana Islands, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Pitcairn Islands, Republic of Marshall Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, and Wallis and Futuna) as well as Australia, New Zealand and Hawaii.

²PPHSN (http://www.pphsn.net/) ³Interactive web-based map (<u>https://www.spc.int/phd/epidemics/</u>)

2. METHOD

Epidemiological data and information on epidemic and emerging diseases circulating in the Pacific gathered through SPC'S regional EI system, including IBS and EBS reports as detailed below, were used to compile this report.

Indicator-based surveillance (IBS)

- Country reports on PacNet/official website/official social media page
- National and regional syndromic surveillance reports
- Laboratory-based surveillance reports
- Routine communicable disease surveillance reports.

Event-based surveillance (EBS)

- Messages sent on PacNet
- Social media posts
- Media reports
- ProMed-Mail
- Google alerts
- Unstructured and ad hoc reports from laboratories and other health professionals.

3. RESULTS: Epidemic and emerging disease alerts in the Pacific

August 2014–December 2021

Since the first disease alert report sent on PacNet in August 2014, there have been **265 new alerts** of epidemic

and emerging diseases occurring in the Pacific reported until 31 December 2021 (Figures 2 and 3).

Figure 2: Number of new alerts of epidemic and emerging disease alerts in the Pacific reported from 29 August 2014 to 31 December 2021

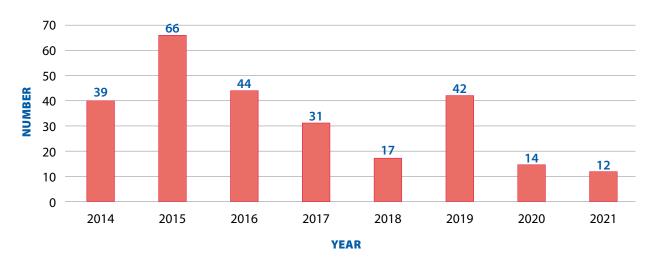
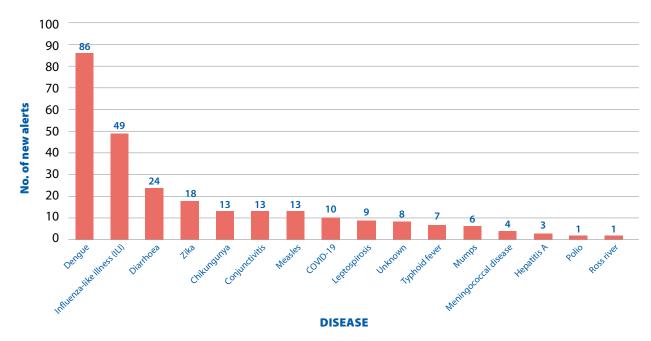


Figure 3: Number of new alerts in the Pacific reported per disease from 29 August 2014 to 31 December 2021



Focus on 2021 alerts

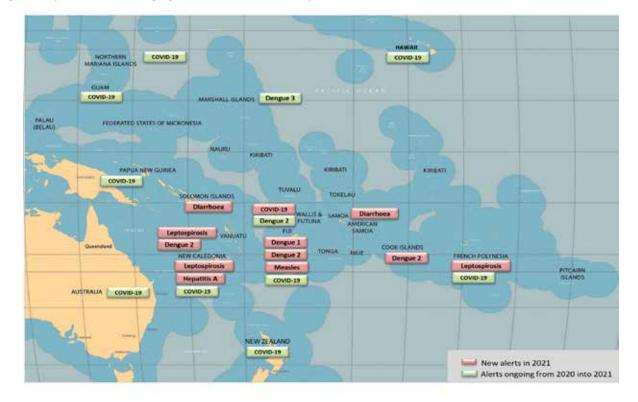


Figure 4: Epidemic and emerging disease alerts in the Pacific, 2021

In 2021, there were a total of **23 alerts** of 8 epidemic and emerging diseases/syndromes in the Pacific, reported amongst 15 countries (*Figure 4*).

There were **12 new alerts** recorded amongst the 23 alerts. The 12 new alerts were of 7 epidemic and emerging diseases/syndromes reported amongst 8 countries.

Of the alerts first reported in 2020, 11 continued into 2021.

Disease	New alerts in 2021 N (% of total new alerts)	Ongoing alerts* N (% of total ongoing alerts)	Total alerts N (% of total alerts)
COVID-19	1 (8%)	9 (82)	10 (43%)
Dengue serotype 1	1 (8%)	0	1 (4%)
Dengue serotype 2	3 (25%)	1 (9)	4 (17%)
Dengue serotype 3	-	1 (9)	1 (4%)
Diarrhoea	2 (17%)	0	2 (9%)
Hepatitis A	1 (8%)	0	1 (4%)
Leptospirosis	3 (25%)	0	3 (13%)
Measles	1 (8%)	0	1 (4%)
TOTAL	12	11	23

Table 1: New and ongoing alerts per disease in the Pacific, 2021

*Alerts that were first reported in 2020 and continued into 2021

Table 2: Number of disease alerts per country in the Pacific, 2021

Country	No. of new alerts in 2021	No. of ongoing alerts*	Total no. of alerts
Australia	0	1	1
СММІ	0	1	1
Cook Islands	1	0	1
Fiji	3	1	4
French Polynesia	1	1	2
Guam	0	1	1
Hawaii	0	1	1
New Caledonia	2	1	3
New Zealand	0	1	1
PNG	0	1	1
RMI	0	1	1
Samoa	1	0	1
Solomon Islands	1	0	1
Vanuatu	2	0	2
Wallis and Futuna	1	1	2
TOTAL	12	11	23

*Alerts that were first reported in 2020 and continued into 2021

3.1 COVID-19

Since the beginning of the COVID-19 pandemic (January 2020) to 31 December 2021, a total of 17 Pacific countries have reported COVID-19 cases; however, only 10 reported locally transmitted cases which resulted in an alert on the epidemic

map (Table 3). Alerts were added to the disease alert map if local cases were reported in a specific country or territory and the alerts were removed after 2 incubation periods (28 days) with no local cases reported in the country.

Country	Total cases*	Cumulative cases per 100,000 population ⁵	Number of deaths	Case fatality proportion %
American Samoa	11	19	0	0
СММІ	3,255	5,731	13	0.4
Fiji	53,871	5,996	698	1.3
French Polynesia	46,967	16,781	636	1.4
Guam	19,607	10,996	268	1.4
New Caledonia	12,928	4,724	281	2.2
Palau	12	67	0	0
PNG	36,190	397	590	1.6
RMI	4	7	0	0
Samoa	2	1	0	0
Solomon Islands	24	3	0	0
Tonga	1	1	0	0
Vanuatu	7	2	0	0
Wallis and Futuna	454	3,993	7	1.5
TOTAL	173,333	1,381	2,493	1.4

Table 3: Number of COVID-19 cases⁴ and deaths reported in the Pacific, from 1 January 2020 to 31 December 2021

Table 4: Number of COVID-19 cases and deaths reported in Australia, Hawaii and New Zealand, 1 January 2020 to 31 December 2021

Country	Total cases	Number of deaths
Australia	395,385	2,239
Hawaii	109,576	1,079
New Zealand	13,746	51

⁴Cases include locally acquired cases and imported/border cases. ⁵SPC 2021 Mid-year population used to calculate rate.

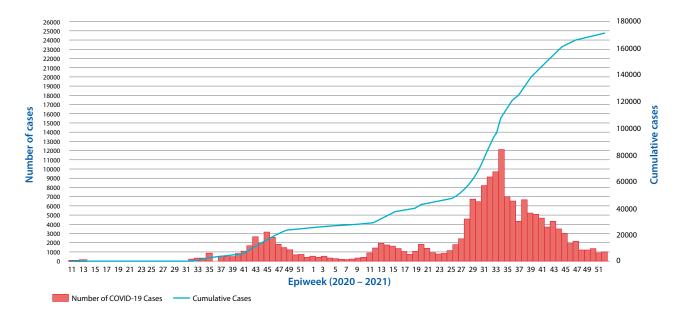
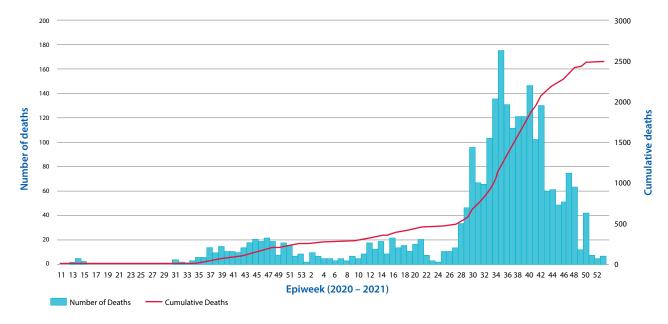


Figure 5: Number of COVID-19 cases⁶ reported in the Pacific per epiweek, 2020–2021

Figure 6: Number of COVID-19 deaths reported in the Pacific per epiweek, 2020–2021



⁶Cases include locally acquired cases and imported/border cases.

3.2 Dengue

There were **4** newly reported dengue alerts in 2021 (*Figure 4*).

The 4 new dengue alerts were in Fiji (DENV-1 and DENV-2), Vanuatu (DENV-2) and Cook Islands (DENV-2).

In 2021, a total of **6** dengue alerts (including 4 newly reported alerts and 2 alerts continuing from 2020) were recorded in the disease alerts map (*Figure 4*) consisting of **1** Dengue serotype **1**, **4** dengue serotype **2**, and **1** dengue serotype **3** alerts.

Dengue serotype 1

New dengue serotype 1 circulation has been recorded in **1** country in 2021: *Fiji*.

Alert duration:7

12 April-17 May 2021

Location:

National (following Cyclones Yasa and Ana)

Causative agent: DENV-1

Further information:

As of 26 March 2021, the Ministry of Health Fiji has recorded 1,747 dengue cases with 5 deaths. Serotype results confirmed 7 samples positive for DENV-1.

Dengue serotype 2

New dengue serotype 2 circulation has been recorded in **3** countries in 2021: *Cook Islands, Fiji* and *Vanuatu*. Ongoing (from 2020) dengue serotype 2 circulation has been recorded in Wallis and Futuna in 2021.

Cook Islands

Alert duration: 8 February–10 August 2021

Location:

Rarotonga; Mauke; Aitutaki; Managia

Causative agent: DENV-2

Further information:

The DENV-2 outbreak was declared on 2 February 2021. Of the 16 samples sent to New Zealand, LabPlus confirmed 8 positive dengue cases.

As of 19 July 2021, 219 dengue cases (47 -DENV-2 and 172 probable cases) were reported:

- 60 cases hospitalised
- age range: 3–87 years old (young people under the age of 20 years were mostly affected)
- male to female ratio was 1:3.

Fiji

Alert duration: 12 April–17 May 2021

Location:

National (following Cyclones Yasa and Ana)

Causative agent:

DENV-2

Further information:

As of 26 March 2021, the Ministry of Health Fiji has recorded 1,747 dengue cases with 5 deaths. Serotype results confirmed 1 sample was positive for DENV-2.

Vanuatu

Alert duration:

7 September-21 December 2021

Location:

Cases are sporadically distributed within Port Vila and its peri-urban areas including Erakor Area, Beverly Hills,

⁷Alert duration based on the SPRP assessment

Freshwota and Namburu.

Causative agent: DENV-2

Further information:

As of 14 November 2021, a total of 26 dengue cases have been reported by Vila Central Hospital.

- Age range: 9–84 years old
- 48% are over 35 years old
- 74% are female.

Dengue serotype 3

Ongoing (from 2020) dengue serotype 3 circulation has been recorded in 1 country in 2021: RMI.

Dengue serotype 4

There were no dengue serotype 4 alerts recorded in 2021.

3.3 Diarrhoea

Two diarrhoea alerts were reported in *Samoa* and *Solomon Islands* in 2021.

Samoa

Alert duration: 27–31 July 2021

Location: Apia Urban Area and West Upolu Area

Causative agent: Rotavirus

Further information:

Hospital surveillance in the fortnight to 23 July 2021 noted an increase in the number of diarrhoea cases being reported and admitted to the hospital. The increase was beyond the usual threshold of diarrhoea cases reported on a yearly basis, as per surveillance monitoring.

As of 22 July 2021, 31 rotavirus cases were confirmed by laboratory testing.

Solomon Islands

Alert duration: 8 June–3 August 2021

Location:

Gizo Hospital in the Western Province, Good Samaritan Hospital in Guadalcanal Lata Hospital, in Temotu province, and the National Referral Hospital in Honiara.

Causative agent:

Rotavirus

Further information:

The Ministry of Health and Medical Services (MHMS) surveillance system triggered an alert following a national surge in diarrhoea cases in the week to 7 June 2021.

Of the 6 deaths reported, 5 deaths have occurred in Western Province and 1 death in Guadalcanal province. The most affected age group are children under 5 (0-4) years and most of the cases presented with diarrhoea and vomiting.

As of 7 June 2021, 15 stool specimens were tested of which 5 tested positive for rotavirus on rapid diagnostic test (RDT); 3 of the positive cases were from Gizo Hospital and 2 were positive cases from Good Samaritan Hospital.

3.4 Leptospirosis

A total of **3** leptospirosis alerts were reported in 2021 in *French Polynesia, New Caledonia* and *Vanuatu.*

French Polynesia

Alert duration: 7 May–20 July 2021

Location:

Bora-Bora; Hao; Hiva-Oa; Huahine; Kaukura; Makemo; Moorea; Nuku-Hiva; Raiatea; Rangiroa; Rapa; Tahaa; Tahiti; Takaroa; Ua-Huka; Ua-Pou.

Further information:

The *Direction de la santé, Bureau de veille sanitaire* reported on 25 April 2021 an increase in leptospirosis cases, corresponding to a seasonal peak observed at this time of the year.

New Caledonia

Alert duration:

1 March-20 July 2021

Location:

Three provinces (the Southern, Northern and Loyalty Islands Provinces)

Further information:

An increasing number of leptospirosis cases have been notified in New Caledonia at the beginning of 2021: 86 cases were reported between 1 January 2021 and 23 February 2021, in comparison to 69 cases reported in total in 2020.

In 2021, a total of 229 cases of leptospirosis were declared. Among them, 170 people (74.2%) were hospitalised and 4 deaths were recorded (1.7%).

On average (over the last 20 years):

- approximately 90 cases of leptospirosis were reported per year;
- 72% of cases were hospitalised;
- the fatality rate is around 3%;
- 90% of cases occurred from January to June with a peak in March.

Vanuatu

Alert duration:

31 August-23 November 2021

Location:

Sanma, Shefa, Malampa, Penama and Torba provinces (5 of the 6 provinces).

Further information:

From 13 January to 9 August 2021, a total of 76 leptospirosis cases have been reported in Vanuatu; 68 in Sanma, 3 in Shefa, 2 in Malampa, 2 in Penama and 1 in Torba Province.

As of 14 November 2021, a total of 88 leptospirosis cases were reported: 80 in Sanma, 3 in Shefa, 2 in Malampa, 2 in Penama and 1 in Torba Province.

- age range: 10–80 years old
- majority of cases were above 35 years old
- 64% of cases were male.

3.5 Measles

Only 1 measles alert was reported in 2021 in Fiji.

Alert duration:

14-21 December 2021

Location:

Serua province

Further information:

A total of **2** cases of measles were identified in two villages in the Serua province in the Serua-Namosi Medical Sub-Division. The 2 cases were identified after a child was presented to Korovisilou Health Centre and later transferred to Colonial War Memorial Hospital from Navua, on Wednesday 17 November 2021. The measles case was later confirmed after testing by the Fiji Centre for Disease Control. Investigation suggests that the disease transmission took place some weeks before, at a funeral gathering in a village located in the Serua-Namosi area.

3.6 Hepatitis A

Only **1** Hepatitis A alert was reported in 2021 in New Caledonia.

Alert duration:

8 March 2021-8 February 2022.

Location:

South, North and Loyalty Islands Provinces.

Further information:

An outbreak of Hepatitis A was reported in New Caledonia: 73 cases were reported between 1 January 2021 and 5 March 2021, in comparison to 100 cases reported the previous year (total cases reported in 2020). As of 27 December 2021, 525 cases of Hepatitis A were reported:

- sex ratio (M/F) = 1.3
- average age = 15.1 years
- median age = 12 years.

4. SURVEILLANCE LIMITATIONS

The case numbers reported are not all based on the same case definition and may vary from one PICT to another. The data also depend on reporting and therefore only reflect the information available to us but are based on a long-term collaboration between Pacific Islands, SPC and other partners, including WHO through the Pacific Public Health Surveillance Network. Delays in removal of alerts from the map may occur due to delays in obtaining updates from countries.

ANNEX 1: INFORMATION SOURCES

Indicator-based surveillance information

Reports received from

- ministries or departments of health of Pacific Island countries and territories:
 - American Samoa
 - <u>Commonwealth of the Northern Mariana Islands</u>
 - <u>Cook Islands</u>
 - Federated States of Micronesia
 - <u>Fiji</u>
 - French Polynesia
 - <u>Guam</u>
 - <u>Kiribati</u>
 - <u>Nauru</u>
 - <u>New Caledonia</u>
 - <u>Niue</u>
 - <u>Palau</u>
 - Papua New Guinea
 - <u>Pitcairn Islands</u>
 - <u>Republic of Marshall Islands</u>
 - <u>Samoa</u>
 - Solomon Islands
 - <u>Tokelau</u>
 - <u>Tonga</u>
 - <u>Tuvalu</u>
 - <u>Vanuatu</u>
 - Wallis and Futuna
- <u>Australia</u>
- New Zealand
- <u>Hawaii</u>
- Pacific Syndromic Surveillance System Report disseminated on PacNet by WHO

- NZ Arboviral Notifications by Country, Institute of Environmental Science and Research Limited (ESR), New Zealand
- Social media (Official country Facebook pages):
 - <u>American Samoa</u>
 - <u>Commonwealth of the Northern Mariana Islands</u>
 - <u>Cook Islands</u>
 - Federated States of Micronesia
 - <u>Fiji</u>
 - <u>French Polynesia</u>
 - <u>Guam</u>
 - <u>Kiribati</u>
 - <u>Nauru</u>
 - New Caledonia
 - <u>Niue</u>
 - <u>Palau</u>
 - Papua New Guinea
 - <u>Republic of Marshall Islands</u>
 - <u>Samoa</u>
 - Solomon Islands
 - <u>Tokelau</u>
 - <u>Tonga</u>
 - <u>Tuvalu</u>
 - <u>Vanuatu</u>
 - Wallis and Futuna

Event-based surveillance information

- The Disease Daily <u>Health Map</u>
- Google alerts
- Social media posts retrieved from the internet
- Online media items from the following companies as detailed below:

Country	Link
American Samoa	<u>https://www.samoanews.com/local-news</u> <u>https://www.talanei.com/category/news/</u>
Australia	https://www.abc.net.au/radio-australia/programs/pacificbeat/ http://outbreaknewstoday.com/category/australia/
Commonwealth of the Northern Mariana Islands	<u>https://www.mvariety.com/</u> <u>https://www.saipantribune.com/index.php/category/health-fitness/</u>
Cook Islands	http://www.cookislandsnews.com/national/health
FSM	https://apnews.com/hub/micronesia
Fiji	https://www.fijitimes.com/ https://www.fbcnews.com.fj/section/news/ https://fijivillage.com/
French Polynesia	https://www.tahiti-infos.com/Actualite-de-Tahiti-et-ses-iles_r14.html
Guam	https://www.guampdn.com/news/
Hawaii	https://www.hawaiinewsnow.com/
Kiribati	https://kiribatiupdates.com/category/health-care/
New Caledonia	https://www.lnc.nc/nouvelle-caledonie/sante https://la1ere.francetvinfo.fr/nouvellecaledonie/
New Zealand	https://www.rnz.co.nz/
Niue	https://tvniue.com/news/
Palau	https://islandtimes.org/
Papua New Guinea	<u>https://postcourier.com.pg/latest-news/page/2/</u> <u>https://news.pngfacts.com/</u>
Republic of Marshall Islands	https://marshallislandsjournal.com/category/news/
Samoa	https://www.samoaobserver.ws/ https://newslinesamoa.com/ https://www.samoanews.com/local-news
Solomon Islands	http://solomonstarnews.com/ https://www.solomontimes.com/
Tonga	https://matangitonga.to/
Vanuatu	https://dailypost.vu/
Wallis & Futuna	https://la1ere.francetvinfo.fr/wallisfutuna/
Other	https://www.rnz.co.nz/international/pacific-news https://www.theguardian.com/world/2020/may/27/coronavirus-in-the-pacific-weekly-briefing https://healthmap.org/en/



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