

## Update on the Dengue situation in the Western Pacific Region

This report describes the epidemiology of dengue in the World Health Organization Western Pacific Region. Data are compiled from open sources (national indicator-based surveillance systems) with the exception of Cambodia, Lao People's Democratic Republic, Viet Nam, and the Philippines, where data are provided by the WHO Country Offices. For the Pacific Island Countries, syndromic surveillance data are provided by the Division of Pacific Technical Support. Information is reported based on countries' standard dengue case definitions, summary of these definitions and countries' dengue surveillance systems - included as an annex to this report. Due to differences in surveillance methods and reporting practices, a comparison of trends between countries and areas is not possible, however, national trends can be observed over time.

### Northern Hemisphere

#### Cambodia

As of epidemiological week 30 of 2024, the National Dengue Surveillance System reported a total of 8 497 cases with 25 deaths (Case Fatality Rate (CFR) 0.29%) since 1 January 2024 (Figure 1). This is lower compared to the number reported in 2023 for the same period, with 11 833 cases and 32 deaths.

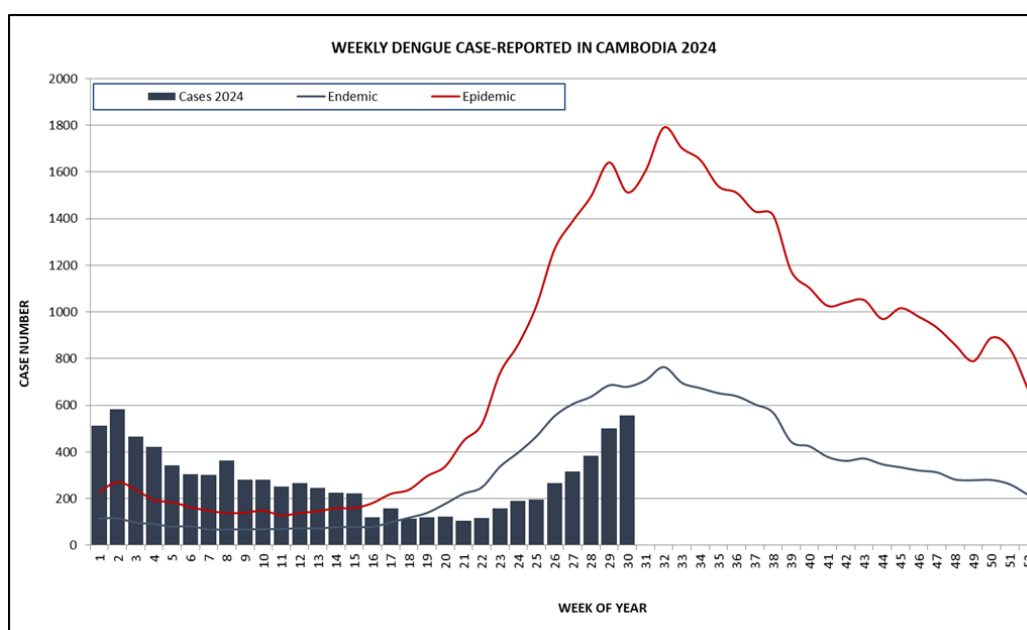


Figure 1: Dengue cases reported weekly in 2024 vs endemic and epidemic alert lines in Cambodia;

Source: National Dengue Surveillance System (NDSP/CNM/MOH)

## China

There has been a total of 404 dengue cases and no death reported since the beginning of 2024 (Figure 2).

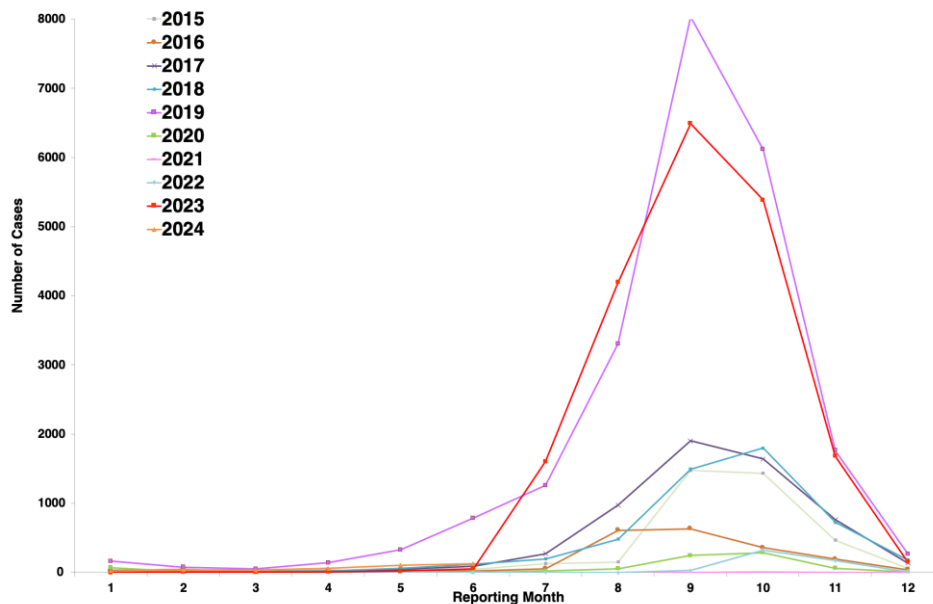


Figure 2: Dengue cases reported monthly from 2015-2024 (as of May) in China

Source: [National Disease Control and Prevention Administration, China](#)

## Lao People's Democratic Republic

In epidemiological week 30 of 2024 (22 to 28 July 2024), 990 dengue cases and two deaths were reported (Figure 3). The number of reported cases is higher than the numbers reported in epidemiological week 29 (914 cases with no death), and lower than those in week 30 of 2023 (2 189 cases with no death). The cumulative number of cases reported in 2024 (as of epidemiological week 30) is 8 557. This is a 40.7% decrease compared to the 14 436 cases reported during the same period in 2023.

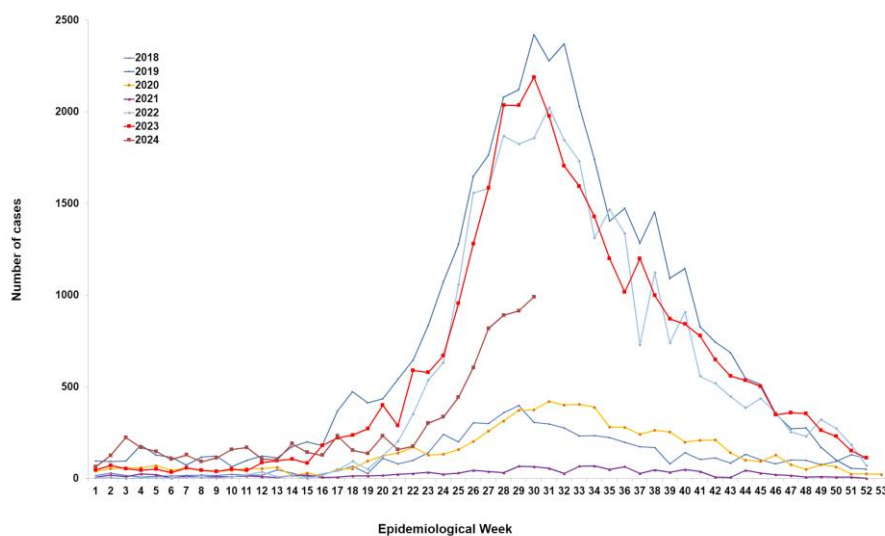


Figure 3: Dengue cases reported weekly from 2018-2024 in Lao PDR

Source: [National Centre for Laboratory and Epidemiology, Ministry of Health, Lao PDR](#)

## Malaysia

During epidemiological week 29 of 2024 (14 to 20 July 2024), an increase of 317 cases (13.4%) was reported with 2 690 cases as compared to 2 373 cases reported in the previous week (Figure 4). The cumulative number of dengue cases reported up to week 29 of 2024 is 83 131 cases, which is an increase of 25.5% compared to 66 224 cases for the same period in 2023. 69 dengue-related deaths were reported up to week 29 of 2024, compared to 47 deaths for the same period in 2023.

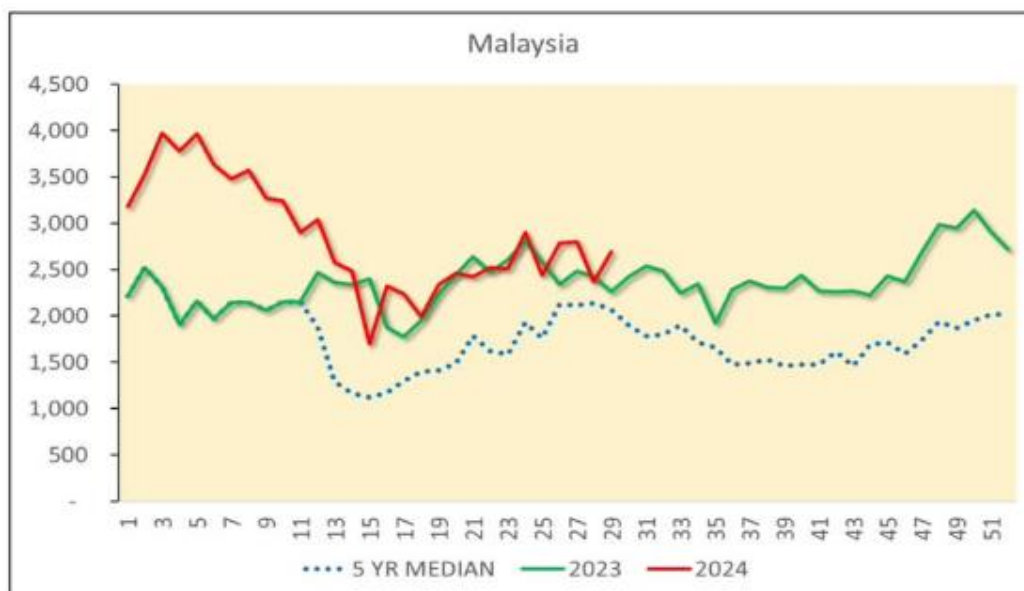


Figure 4: Dengue cases reported weekly from 2023, 2024 and median 2019-2023 in Malaysia

Source: Department of Health, Malaysia

## Philippines

There is no update for this reporting period. During epidemiological Week 48 (26 November to 2 December 2023), there were 2 607 new dengue cases reported, a 41% decrease compared to the same period in 2022 (n=4 415 cases) (Figure 5). As of 2 December 2023, a total of 195 603 dengue cases have been reported. The number of cases is 23% lower compared to the same period in 2022 (n=252 700). From 1 January to 2 December 2023, there have been 657 deaths (CFR 0.34%) as compared to 894 deaths (CFR 0.35%;) reported in the same period in 2022.

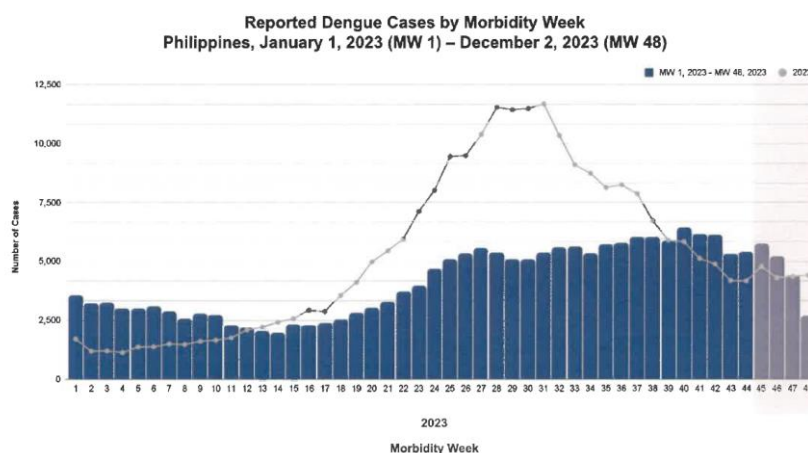


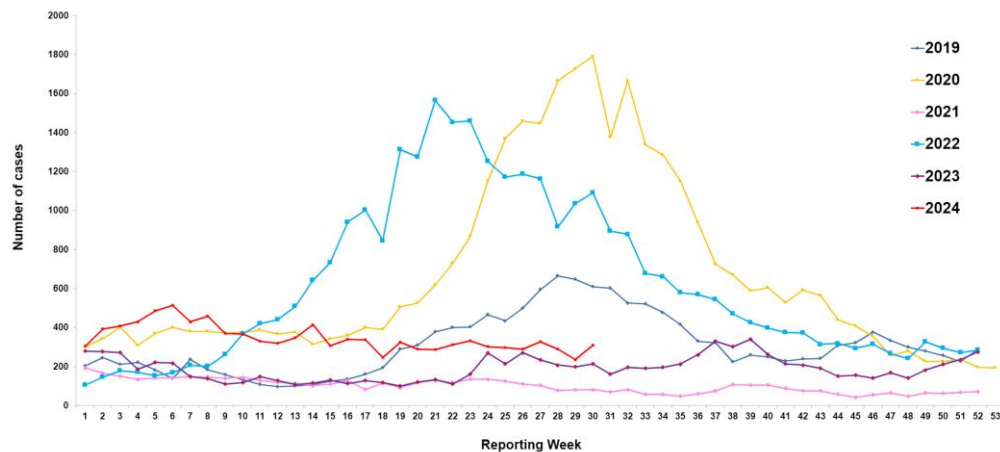
Figure 5: Dengue cases reported weekly from 2022 and 2023 in the Philippines

Source: Department of Health, the Philippines

(Note: there is a 3-4 week systematic delay in reporting and numbers should be interpreted with caution)

## Singapore

In epidemiological week 30 (21 to 27 July 2024), a total of 311 dengue cases were reported in Singapore. Cumulatively, a total of 10 421 cases (Figure 6) have been reported as of 27 July 2024. When compared to the same period in 2023 (5 206 cases), there has been a 100% increase in cases reported in 2024. Preliminary results of all positive dengue samples serotyped in July 2024 showed DEN-1, DEN-2, DEN-3 and DEN-4 at 6.6%, 59.2%, 23.9% and 10.2% respectively.



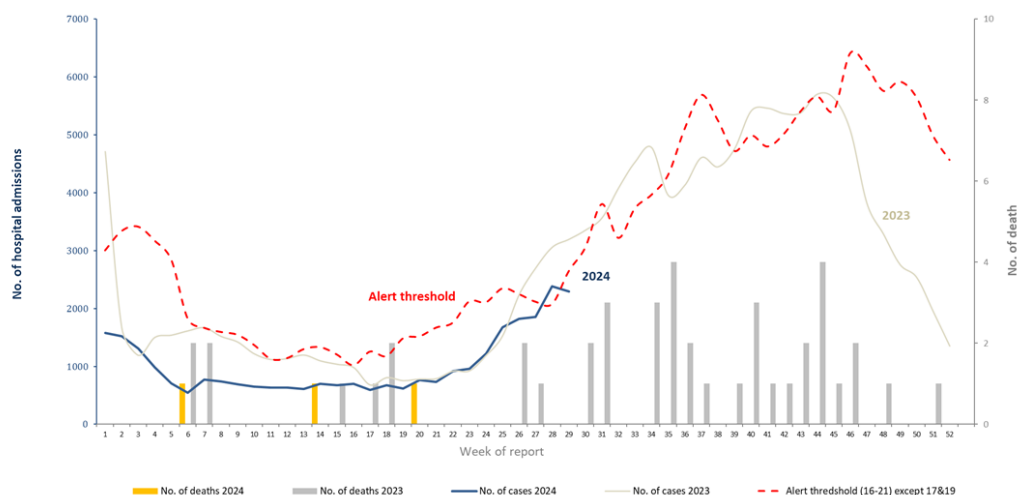
**Figure 6: Dengue cases reported weekly from 2019-2024 (as of 27 July 2024) in Singapore**

*Source: Communicable Diseases Division, Ministry of Health, Singapore*

(Note: Case numbers are derived from the MOH Singapore's weekly-infectious-disease-bulletin-year-2024\_upload as available from [MOH | Weekly Infectious Diseases Bulletin](#))

## Viet Nam

In epidemiological week 31 (29 July to 4 August 2024), a total of 2 147 cases and no deaths were reported in Viet Nam, a decrease by 38.6% compared to 3 498 cases in the previous week. Cumulatively, 49 187 dengue cases including five deaths have been reported as of 4 August 2024. Compared to the same period in 2023, the number of cumulative cases decreased by 15.4%, and the number of deaths decreased by 11 cases.



**Figure 7: Number of dengue hospital admissions and deaths by week in 2024 compared to 2023, as of week 31, 2024, Viet Nam**

*Source: General Department of Preventive Medicine, Ministry of Health, Viet Nam*

Note hospitalizations include inpatients and outpatients

The alert threshold is a 5-year mean plus 2 standard deviations.

## Southern Hemisphere

## Australia

In July 2024, a total of 154 dengue cases were reported in Australia. As of 31 July 2024, the cumulative number of dengue cases is 1 493, which is about 2.5 times higher than the same period in 2023 (601 cases). (Figure 7).

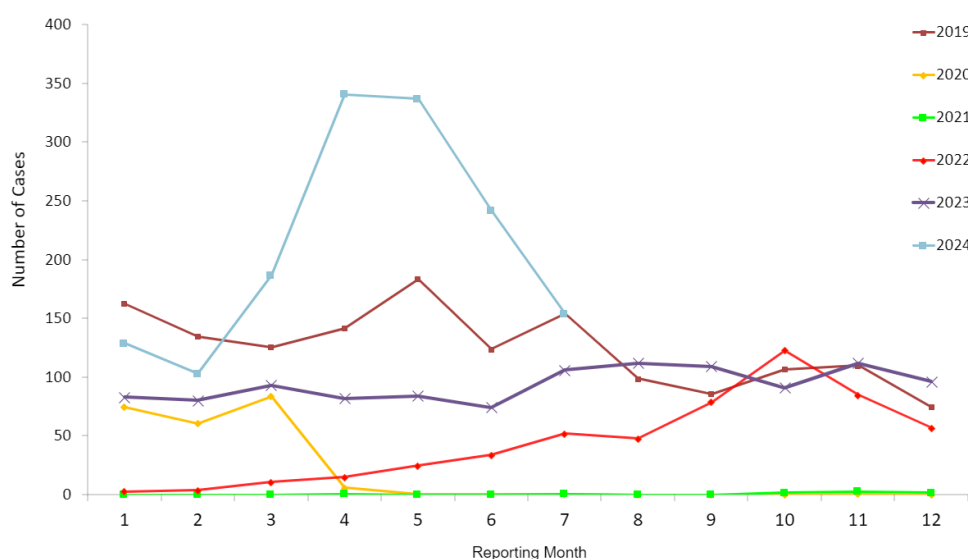


Figure 7: Laboratory-confirmed dengue cases reported monthly from 2016-2024 in Australia

[Source: Department of Health, Australia](#)

*Note: Graph was updated as of 31 July 2024*

## Pacific Islands Countries

### New Caledonia

There is no update for this reporting period. From 1 January to 30 June 2024, eight confirmed dengue cases were reported in New Caledonia (Figure 8). This is higher compared to the same period in 2023, when a total of five dengue cases were reported. Of the eight dengue cases in 2024, two were locally acquired confirmed cases, and the serotypes of the cases were DENV-1 and DENV-2, respectively. There is no ongoing epidemic.

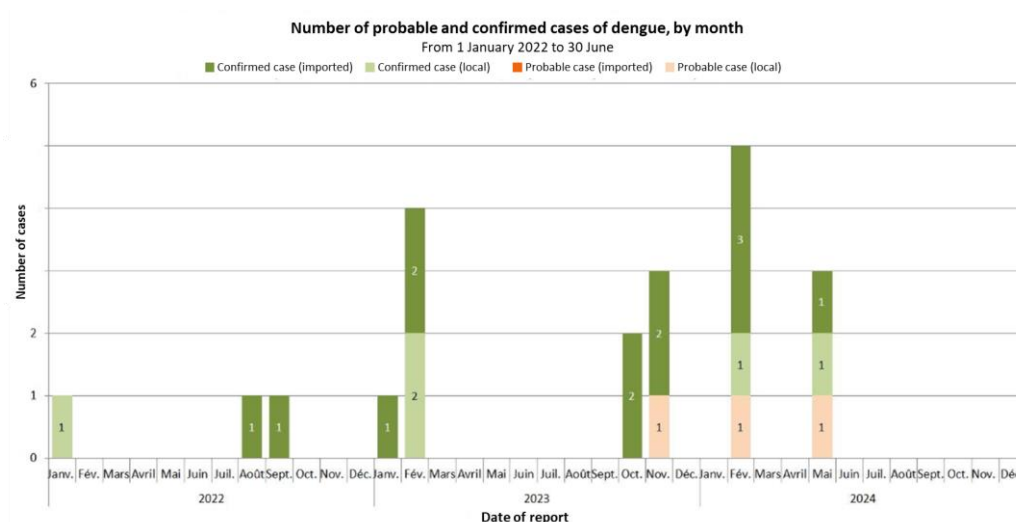


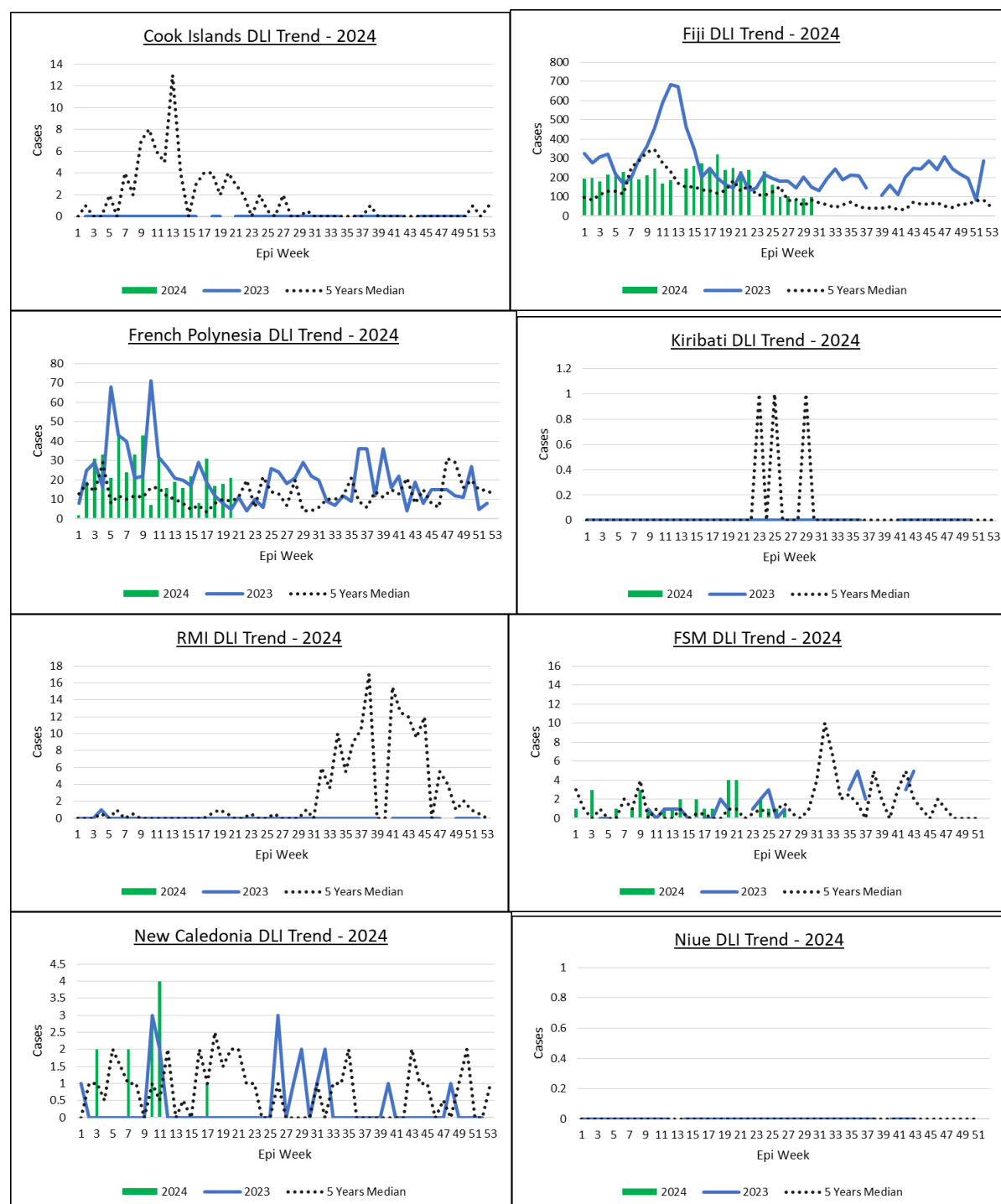
Figure 8: Dengue cases reported by month from 2022 to 2024 in New Caledonia

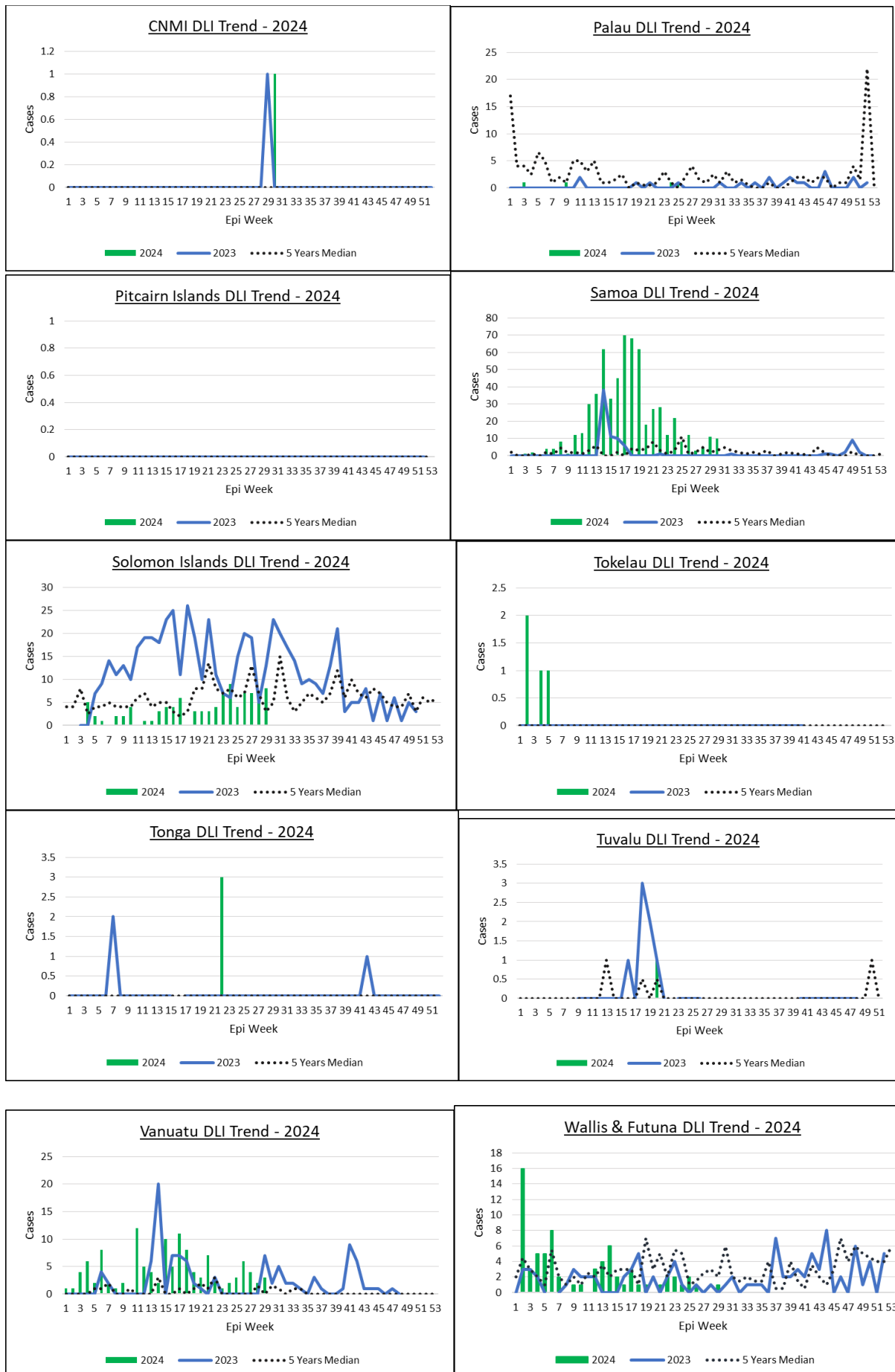
[Source: Network of sentinel physicians, New Caledonia](#)

## Pacific Island Countries and Areas (PICs) – Dengue-like illness (DLI) Surveillance

Among the PICs with available surveillance data (18/21 PICs), an upward trend of DLI cases was reported in Fiji, Northern Mariana Islands, Solomon Islands, Wallis and Futuna in week 29 (ending 21 July), and a

downward trend of DLI cases was reported in Samoa and Vanuatu. The remaining PICs reported either no or low numbers of DLI cases or provided no updates (Figure 9).





**Figure 9. Reported cases of dengue-like illness in Pacific Islands Countries and Areas**

*Source: WHO Division of Pacific Technical Support*

Note: Caution should be taken in interpreting these data as there may be changes in the number of sentinel sites reporting to the Pacific Syndromic Surveillance System (PSSS). Furthermore, the syndromic case definition of DLI may capture cases with non-dengue acute febrile illnesses (AFI) with similar clinical manifestations to dengue. This includes AFI such as chikungunya, influenza, hantavirus, leptospirosis, malaria, measles, paratyphoid and typhoid fevers, scrub typhus, yellow fever, zika, other diseases. The PSSS may also capture dengue cases under 'prolonged fever' surveillance. Alert threshold for DLI is twice the average number of cases seen in the previous 3 weeks.



## Annex 1. Summary of dengue case definitions, laboratory sampling and testing methods used for surveillance in Member States

Country	Case definition		Surveillance system	Laboratory sampling and testing method	Reference
	Clinically confirmed case	Laboratory confirmation required	Description		
Australia	Fever, headache, arthralgia, myalgia, rash, nausea and vomiting	Yes	Dengue is a nationally notifiable disease and cases are monitored through the National Notifiable Diseases Surveillance System (NNDSS) indicator-based surveillance system.	<p>Both confirmed and probable cases are nationally notifiable. A confirmed case requires both laboratory definitive evidence and clinical evidence. A probable case requires either laboratory suggestive evidence and clinical evidence and epidemiological evidence, or clinical evidence and household epidemiological evidence.</p> <p>Laboratory definitive evidence:</p> <ul style="list-style-type: none"> <li>- Isolation of dengue virus, or</li> <li>- Detection of dengue virus by nucleic acid testing, or</li> <li>- Detection of NS1 antigen in the blood by EIA, or</li> <li>- IgG seroconversion or significant increase in antibody level or fourfold or greater rise in titre to dengue virus (proof by neutralization or another specific test)</li> <li>- Detection of dengue virus-specific IgM in cerebrospinal fluid, in the absence of IgM to Murray valley encephalitis, West Nile virus/Kunjin, or Japanese encephalitis viruses.</li> </ul> <p>Laboratory suggestive evidence:</p> <ul style="list-style-type: none"> <li>- Detection of NS1 antigen in blood by rapid antigen test, or</li> <li>- Detection of dengue virus-specific IgM in blood</li> </ul> <p>Epidemiological evidence:</p> <ul style="list-style-type: none"> <li>- Exposure between 3 – 14 days prior to onset either in a country with known dengue activity or in a dengue-receptive area in Australia where a locally-acquired or imported case has been documented with onset within a month.</li> </ul>	1

				Household epidemiological evidence: <ul style="list-style-type: none"> <li>- Living in the same house as a locally-acquired case in a dengue-receptive area of Australia within a month of onset in the case and at least one case in the chain of epidemiologically linked cases is laboratory confirmed.</li> </ul>	
<b>Cambodia</b>	<p>Suspected dengue: very high fever at 39-40 degrees celcius for 2-7 days (usually 3-4 days), with 2 or more of the following signs: flushed face, headache, retro-orbital pain, myalgia/arthritis, cutaneous rash, haemorrhagic signs (petechiae, positive tourniquet test), and leucopenia.</p> <p>Probable dengue: signs of suspected dengue plus laboratory test results (see right column) or that the case occurred in an area where the dengue case has been confirmed.</p>	Yes	<p>National Dengue Control Program (NDCP) enhanced sentinel surveillance system</p> <p>Communicable Disease Control (CDC) syndromic surveillance system (CamEWARN).</p> <p>Health Management Information System (HMIS) collects data on confirmed cases and deaths.</p>	<p>Data collected for Cambodia Laboratory Information System (CamLIS), comprised of 32 participating hospital laboratories where NS1 detection is conducted.</p> <p>Laboratory testing: Antibody HI<math>\geq</math> 1/1280 or IgM/IgG positive by ELISA test in convalescence serum</p>	2
<b>China</b>	<p>1) Typical dengue fever can be diagnosed with any of the following conditions:</p> <ul style="list-style-type: none"> <li>- General clinical symptoms of dengue fever, with an epidemiological history (having been to an area where dengue fever is prevalent within 14 days before onset), or living or working in an area where dengue fever cases have occurred within the past month, and with reduced white blood cell count and platelet count (below <math>100 \times 10^9/L</math>)</li> <li>- No epidemiological history, but with a rash, bleeding tendency, and positive IgG or IgM antibodies in a single serum sample.</li> </ul>	No	Reported to the Chinese Centre for Disease Control and Prevention (China CDC) through the Chinese National Notifiable Infectious Disease Reporting Information System (CNNDS).	<p>A clinically diagnosed case with any of the of the following laboratory findings:</p> <ul style="list-style-type: none"> <li>- Isolation of the dengue virus from the serum, cerebrospinal fluid, blood cells, or tissues of an acute-phase patient</li> <li>- Detection of dengue virus gene sequence by RT-PCR or real-time fluorescent quantitative PCR</li> <li>- Detection of dengue virus NS1 antigen in serum from an acute-phase patient</li> <li>- A fourfold or greater increase in specific antibody titer in the convalescent phase compared to the acute phase.</li> </ul>	3, WHO internal communication

	<p>2) Dengue Hemorrhagic Fever can be diagnosed when accompanied by any of the following clinical symptoms:</p> <ul style="list-style-type: none"> <li>- Bleeding tendency, significant bleeding manifestations (such as gastrointestinal bleeding or hemorrhage in the chest, abdomen, or cranium), hepatomegaly, and ascites; and</li> <li>- Laboratory findings including thrombocytopenia (platelet count below <math>100 \times 10^9/L</math>), hemoconcentration (an increase in hematocrit of more than 20% above normal levels or a decrease of more than 20% after fluid resuscitation), and hypoalbuminemia.</li> </ul> <p>3) Dengue Shock Syndrome: Patients with dengue hemorrhagic fever presenting with cold and clammy skin, restlessness, rapid and weak pulse, low blood pressure with a narrow pulse pressure (less than 20mmHg or 2.7kPa), and reduced urine output.</p>				
<b>Lao People's Democratic Republic</b>	WHO dengue case classification (2009) †	No	National Surveillance System for Notifiable Selected Diseases, indicator-based surveillance system that consists of passive weekly reports of clinically suspected cases, on admission, from all health-care facilities across the country.		4
<b>Malaysia</b>	WHO dengue case classification (2009) †	Yes	National Dengue Surveillance System, indicator-based surveillance system	All suspected cases are to be tested by the following laboratory tests: Rapid Combo Test (RCT) (NS1, IgM, IgG), Dengue Antigen and Serology tests by ELISA, Dengue Viral RNA Detection (Real time RT-PCR), Viral Isolation	5
<b>Philippines</b>	WHO dengue case classification (2009) †	Yes	Philippine Integrated Disease Surveillance and Response (PIDSR), indicator-based surveillance system. Reporting delays of 2-3 weeks, making comparison of current weekly and cumulative figures with previous years difficult.	Confirmed dengue is a suspect case with positive (+) viral culture isolation and/or PCR. NS1 (+), IgM is used to identify probable dengue.	6, 7, 8

<b>Singapore</b> (endemic)	Fever, headache, backache, myalgia, rash, abdominal discomfort and thrombocytopenia and laboratory testing (see right column)	Yes	Dengue is a legally notifiable disease in Singapore and notifying the Ministry of Health should not be later than 24 hours from the time of diagnosis.	Laboratory confirmation is done using standard diagnostic tests for the detection of dengue NS1 antigen, IgM and IgG, or RT-PCR.	9, 10
<b>Viet Nam</b> (endemic)	Acute onset of fever continuously lasting from 2-7 days AND at least 2 of the following: haemorrhagic manifestation /presentation; headache, loss of appetite, nausea, vomiting; rash; muscle pain, joint pain, orbital pain; lethargy; abdominal pain.	No		As per the MOH dengue surveillance guideline, in routine surveillance MAC-ELISA is conducted for at least 7% and virus isolation is conducted for at least 3% of clinical cases. In an outbreak, at least 5 to 10 suspected cases are tested.	11
<b>Pacific Island Countries</b>	WHO dengue case classification (2009) †	No	Pacific Syndromic Surveillance System	Confirmed case: Isolation of dengue virus or detection of dengue-specific antigen or antibodies in tissue, blood, CSF or other body fluid by an advanced laboratory test	12

Only the minimum criteria required for fulfilling a clinical dengue case definition are included here; additional signs and symptoms required for more severe forms are not listed.

† **A probable dengue case** is defined as any case living in or travel to dengue endemic area with fever and two or more of the following: nausea, vomiting, rash, aches and pains, positive tourniquet test, leucopenia and any warning sign. A case with warning signs is defined as a clinically diagnosed case with any of the following: abdominal pain or tenderness, persistent vomiting, clinical fluid accumulation, mucosal bleed, lethargy, restlessness, liver enlargement > 2 cm and increase in haematocrit concurrent with rapid decrease in platelet count. **Severe dengue** is defined as severe plasma leakage leading to any of the following: shock, fluid accumulation with respiratory distress OR severe bleeding as evaluated by clinician OR severe organ involvement of liver (aspartate amino transferase or alanine amino transferase ≥ 1000), central nervous system (impaired consciousness) or heart and other organs.<sup>10</sup>

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