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 and Viet Nam, where data are provided by the WHO Country Offices. For the Pacific Island Countries, syndromic surveillance data are provided by the WHO 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

There is no update for this reporting period. From 1 January to 31 December 2024, the National Dengue Surveillance System reported a total of 18 983 cases with 46 deaths (Case Fatality Rate (CFR) 0.24%) (Figure 1). This is lower than the number of cases and deaths reported in 2023: 35 390 cases and 90 deaths.

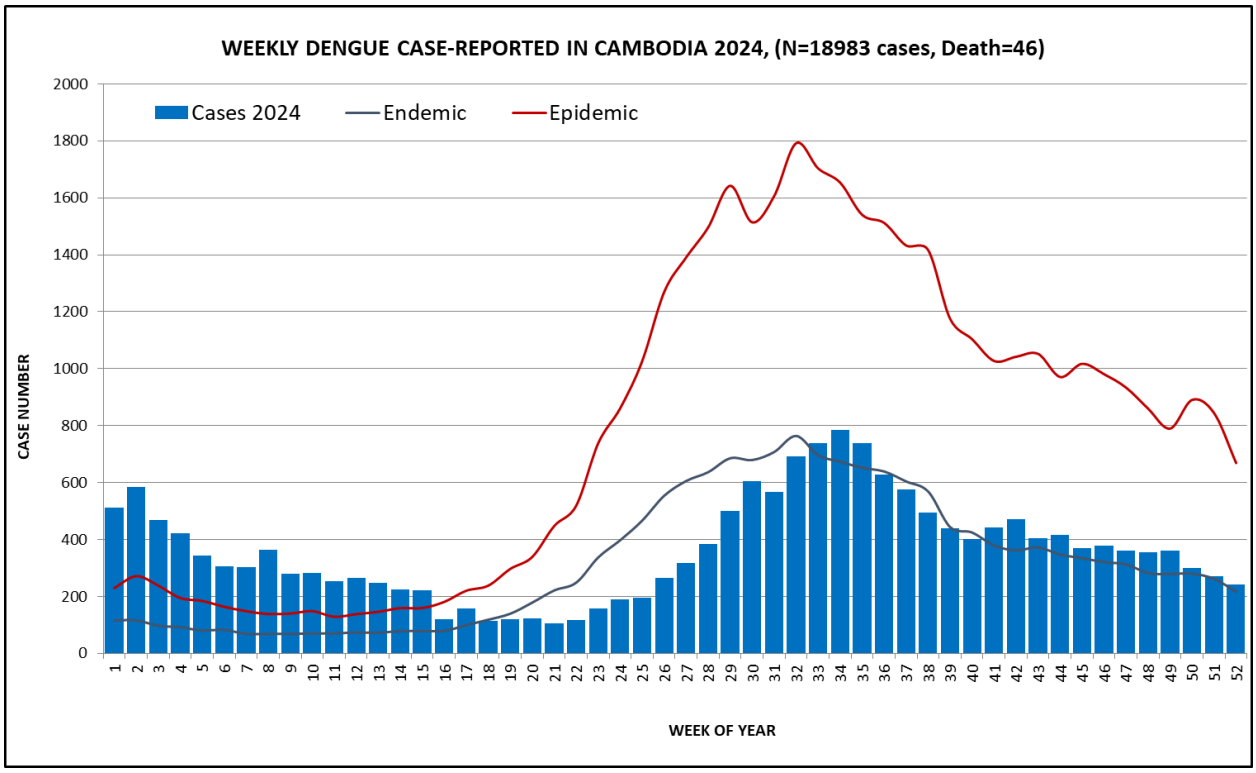


Figure 1: Weekly dengue cases in 2024 with endemic and epidemic alert thresholds in Cambodia

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

China

In December 2024, a total of 442 dengue cases were reported in China, a decrease from 5 201 cases reported in November 2024. There have been a total of 24 330 dengue cases and no deaths reported since the beginning of 2024 (Figure 2).

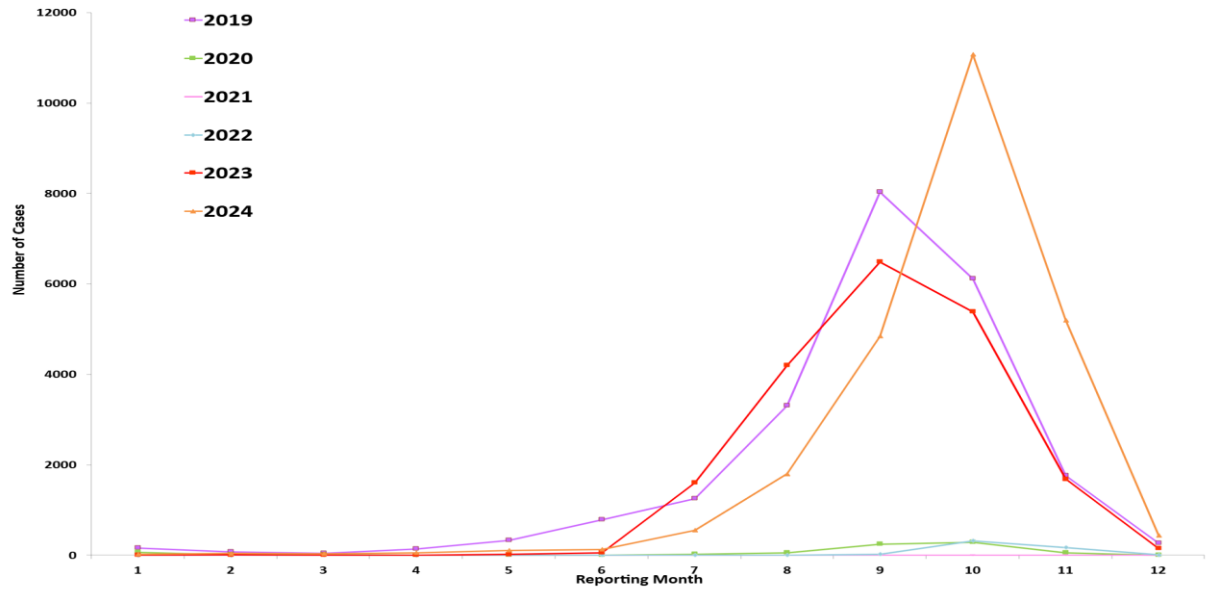


Figure 2: Dengue cases reported monthly from 2019-2024 (as of December 2024) in China
Source: National Disease Control and Prevention Administration, China

Lao People's Democratic Republic

In epidemiological week 2 of 2025 (6 to 12 January 2025) there were 51 dengue cases and no deaths reported. (Figure 3). The number of reported cases is slightly higher than the number of cases reported in epidemiological week 1 (30 December 2024 to 5 January 2025). The cumulative number of cases reported in 2025 (as of epidemiological week 2) is 100, which is lower than during the same period in 2024 (n=191).

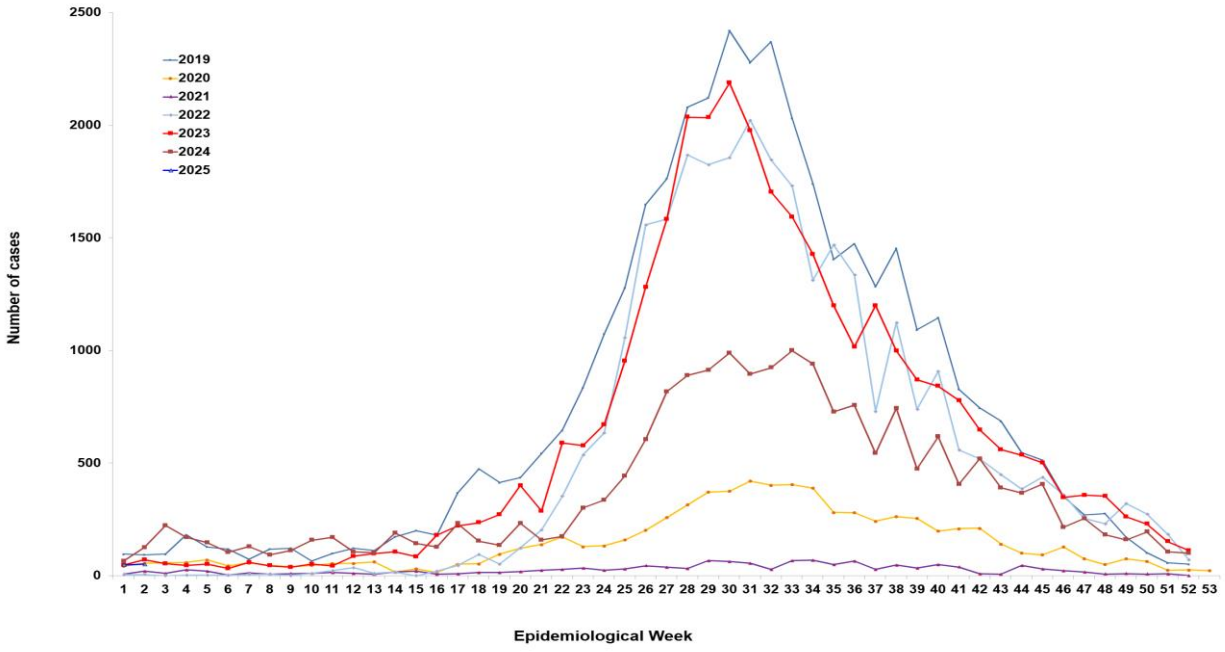


Figure 3: Dengue cases reported weekly from 2019-2025 in Lao PDR
Source: National Centre for Laboratory and Epidemiology, Ministry of Health, Lao PDR

Malaysia

There is no update for this reporting period. In epidemiological week 52 of 2024 (22 to 28 December 2024), a total of 1 341 cases were reported, a decrease compared to1 407 cases in week 51. The cumulative year-to-date number of dengue cases reported as of week 52 is 122 423 cases, which is lower than during the same period in 2023 (n=123 133). One additional dengue-related death was reported in week 52, bringing the cumulative number in 2024 to 117 deaths, a 17% higher than the number recorded in 2023 (n=100).

*Figure 4 is based on the data updated as of 31 October 2024. No updates have been available since then.

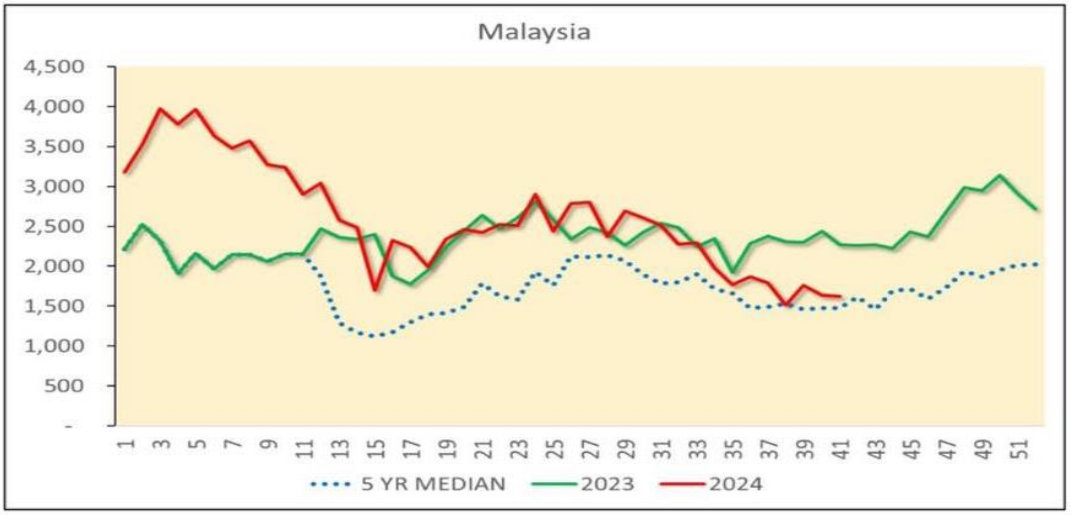


Figure 4: Dengue cases reported weekly from 2023, 2024 and median 2019-2023 in Malaysia

Source: Department of Health, Malaysia

(Note: Last updated as of 31 October 2024. Data is subject to change.

Singapore

There is no update for this reporting period. In epidemiological week 52 of 2024 (22 to 28 December 2024), a total of 74 dengue cases including one dengue haemorrhagic fever case, were reported in Singapore. Cumulatively, a total of 13 655 cases (Figure 5) have been reported this year, a 37.2% increase compared to the same period in 2023 (n=9 949). Preliminary results of all positive dengue samples serotyped in December 2024 showed DEN-1, DEN-2, DEN-3 and DEN-4 at 6.8%, 63.2%, 26.3% and 3.8%, respectively.

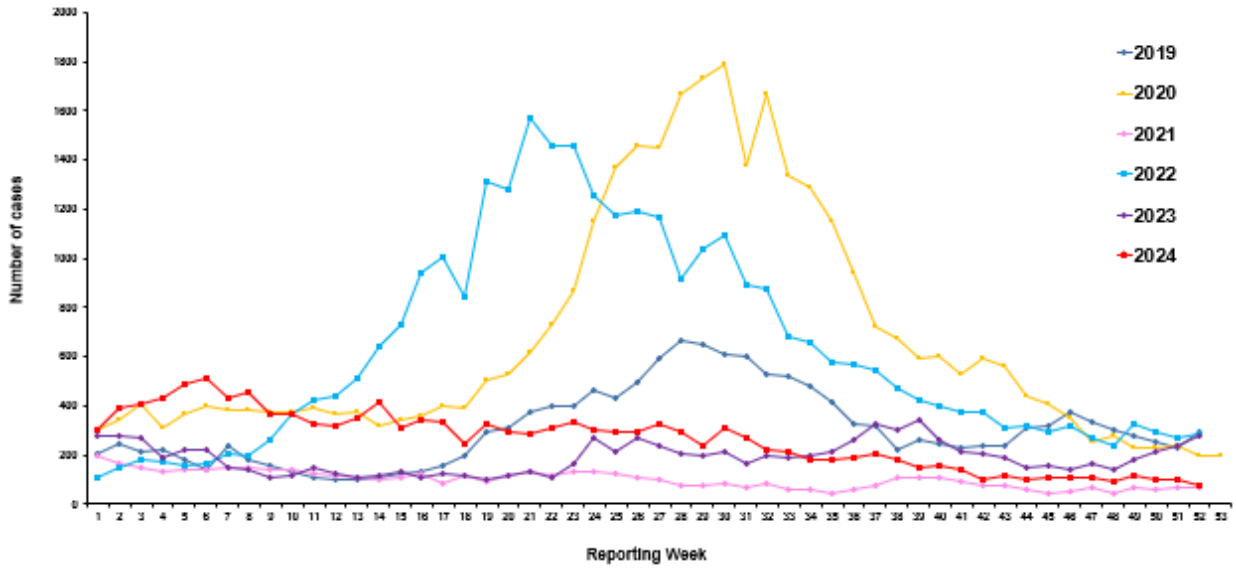


Figure 5: Dengue cases reported weekly from 2019-2024 (as of 28 December 2024) in Singapore

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 51 (9 to 15 December 2024), a total of 2 790 cases were reported, with one death. Compared to the previous week (5 244 cases), the number of cases has decreased by 15.5%. As of 15 December 2024, there have been 108 433 cases including 28 deaths reported this year, which is a 17.4% decrease in cases and a 43.5% decrease in deaths compared to the same period in 2024 (167 437 cases and 46 deaths). During epidemiological week 50, 3 374 cases were hospitalized (76.1%), marking a 14% decrease compared to the previous week (Figure 6).

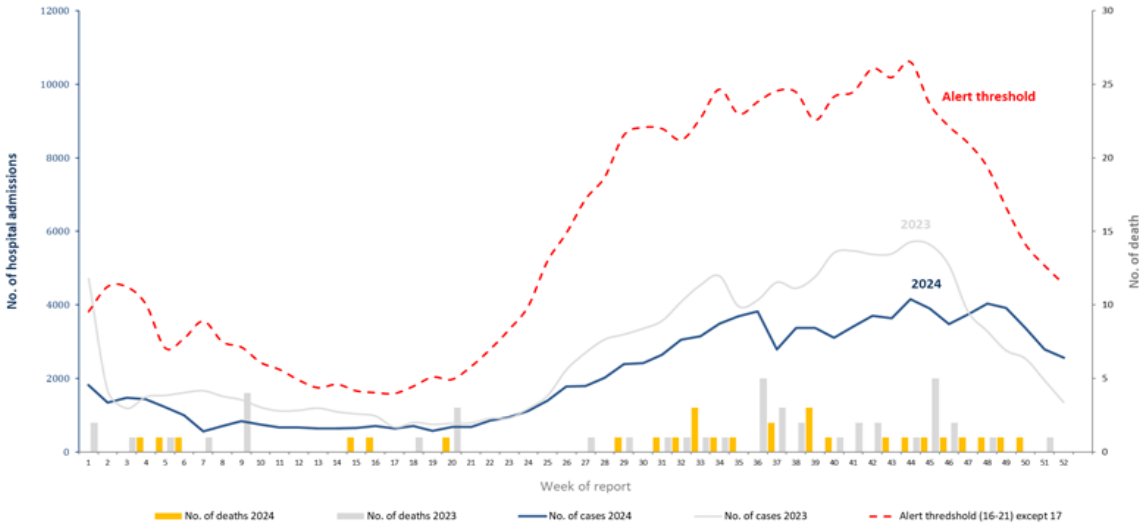


Figure 6: Number of dengue hospital admissions and deaths by weeks in 2024 compared to 2023, as of week 51, 2024, Viet Nam

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

There is no update for this reporting period. From 1 to 31 December 2024, a total of 102 dengue cases were reported in Australia. Cumulatively, a total of 2 298 dengue cases have been reported in 2024, which is more than double the number of cases reported during the same period in 2023 (1 122 cases) (Figure 7).

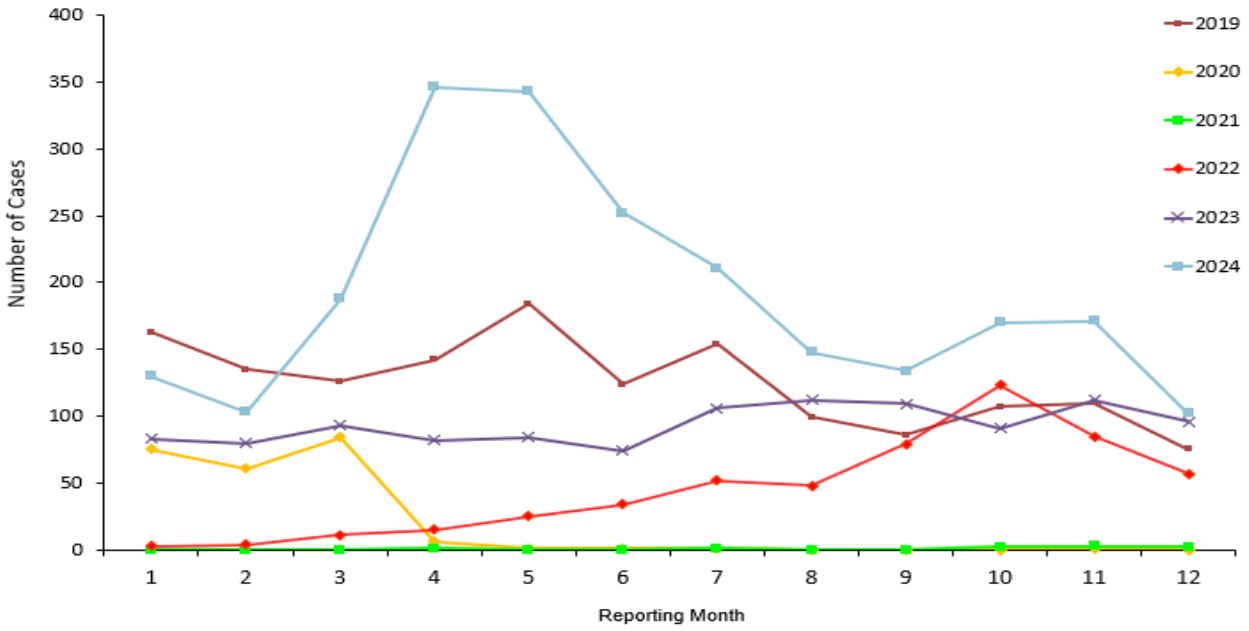


Figure 7: Laboratory-confirmed dengue cases reported monthly from 2019-2024 in Australia

Source: Department of Health, Australia

Note: The graph was updated as of 31 December 2024. Data is subject to change.

Pacific Islands Countries

New Caledonia

There is no update for this reporting period. A total of 11 dengue cases have been reported in 2024 in New Caledonia (Figure 8). Of those 11 cases, three were locally acquired confirmed cases (DENV-1 and DENV-2), six were imported from Indonesia, Bali, Tahiti and Fiji (DENV-1 and DENV-2), and the rest were probable local cases. Currently, there is no ongoing dengue outbreak in New Caledonia.

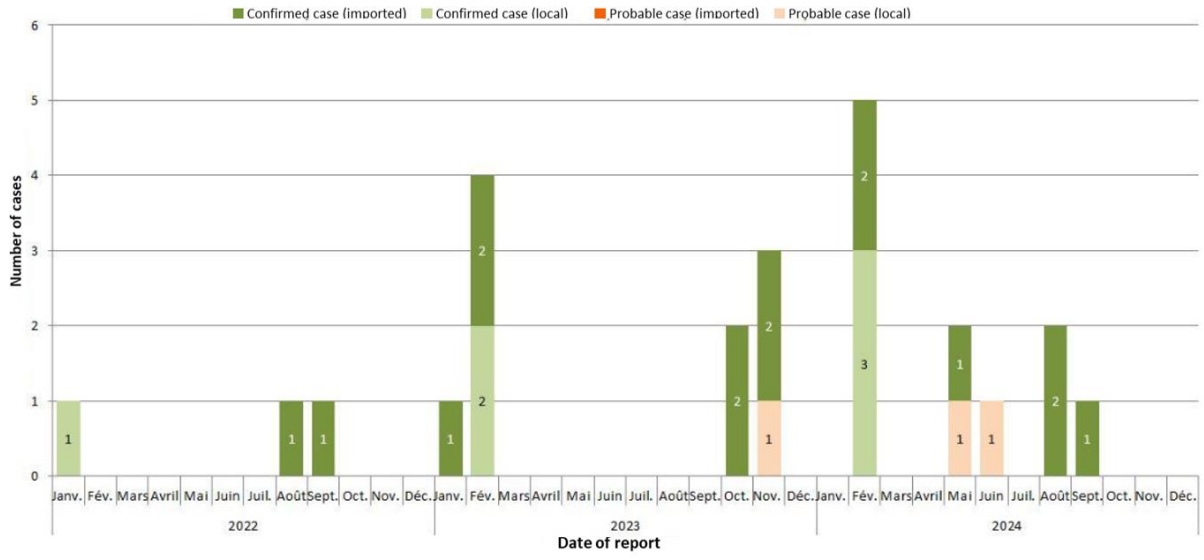


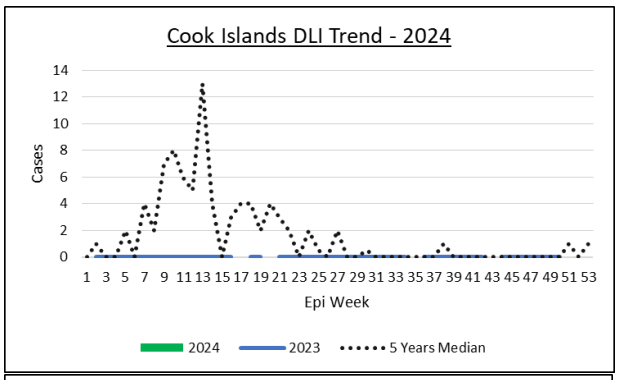
Figure 8: Dengue cases reported by month from 1 January 2022 to 31 December 2024 in New Caledonia

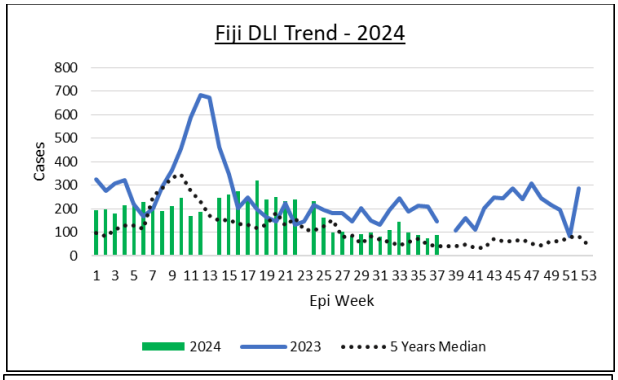
Source: Network of sentinel physicians, New Caledonia

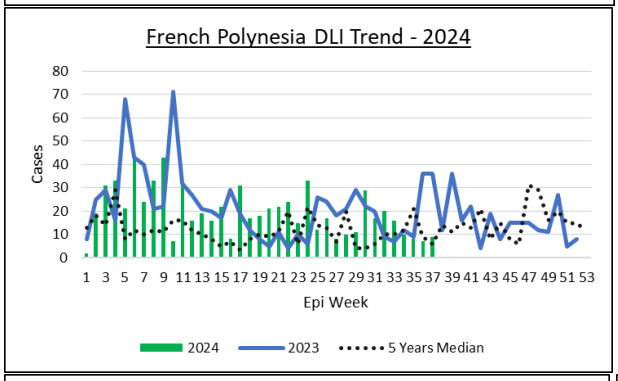
Pacific Island Countries and Areas (PICs) – Dengue-like illness (DLI) Surveillance

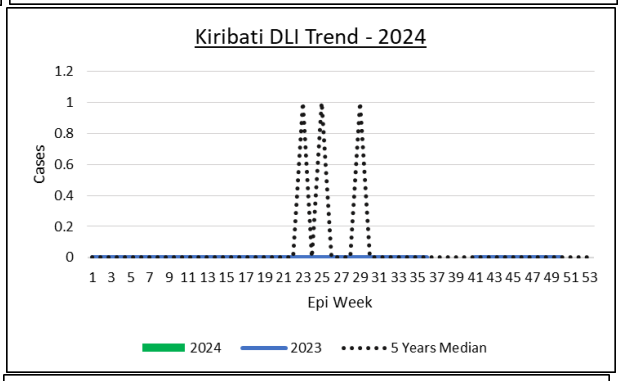
There is no update for this reporting period. Among the PICs with available surveillance data (18/21 PICs), an upward trend of DLI cases was reported in Fiji, French Polynesia and Solomon Islands in week 38 (ending 23 September), and a downward trend of DLI cases was reported in Micronesia, Federated States

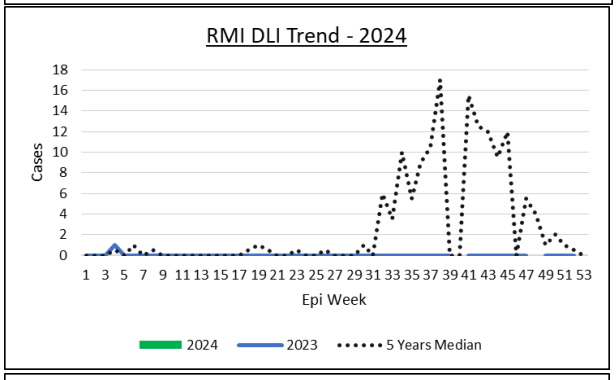
of (FSM). The remaining PICs reported either no or low numbers of DLI cases or provided no updates (Figure 9).

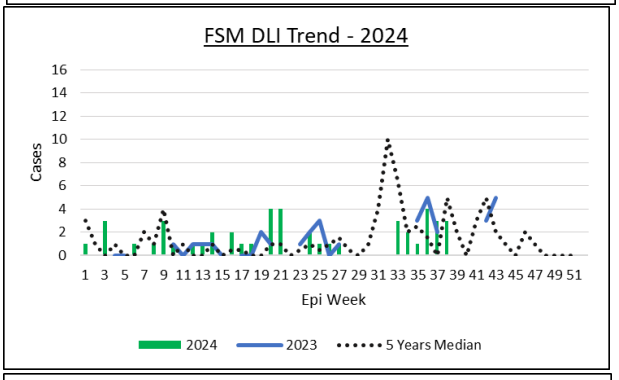


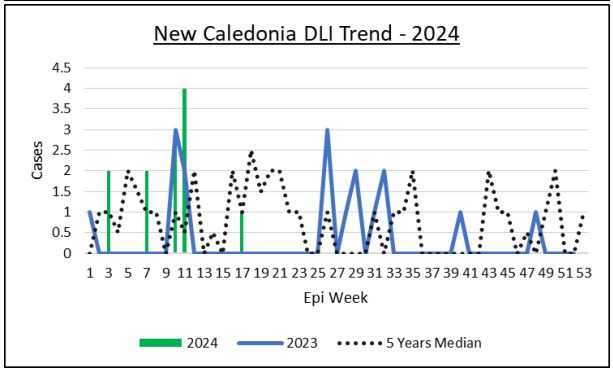


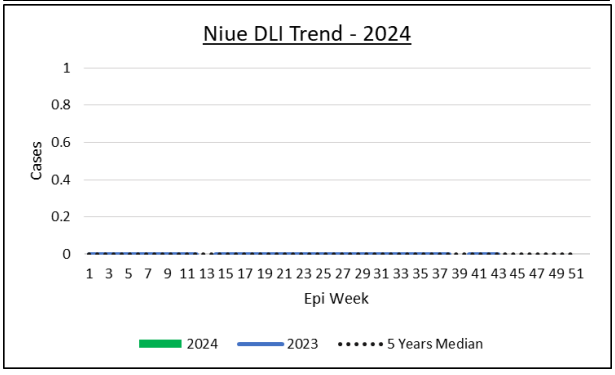












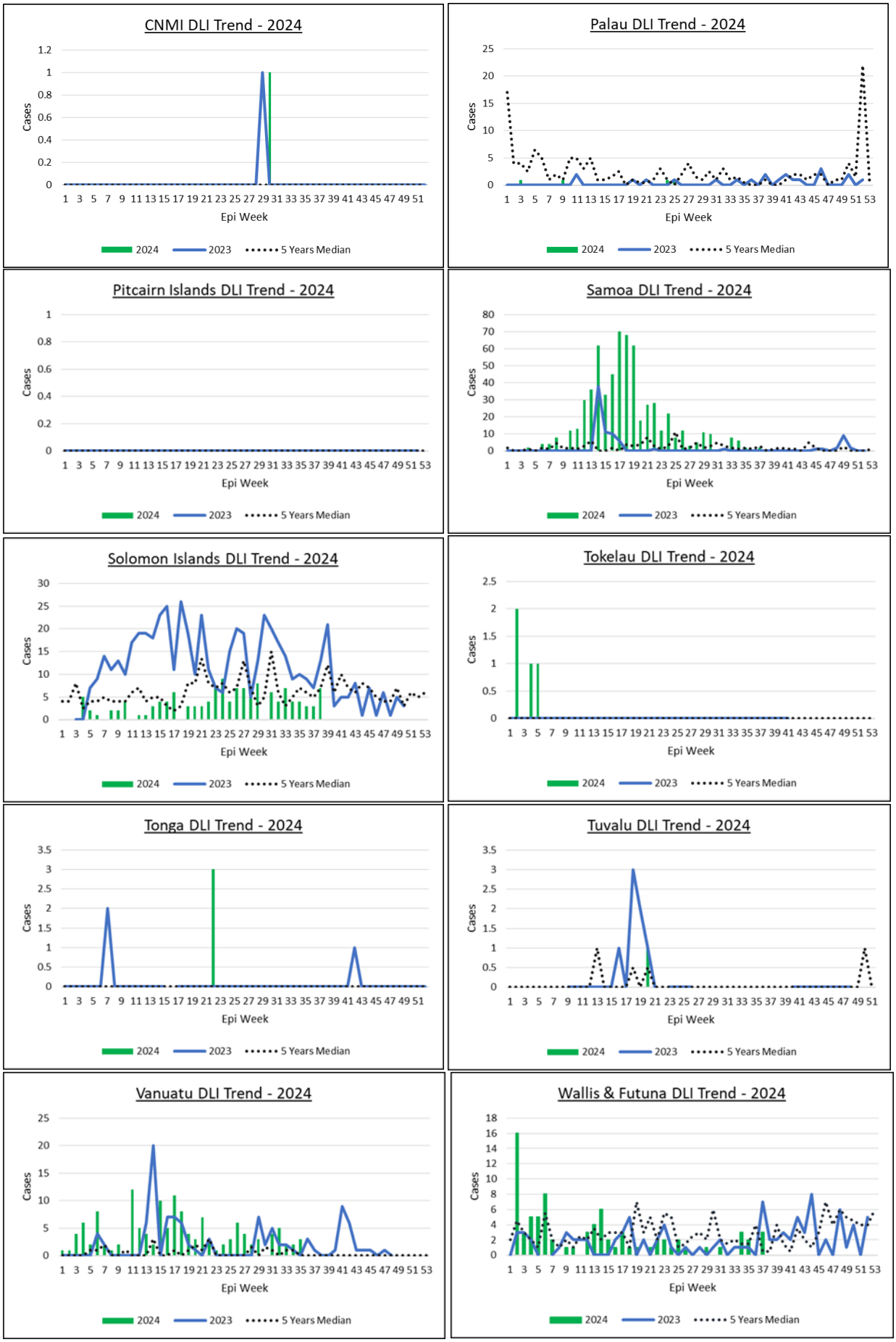


Figure 9. Reported cases of dengue-like illness in Pacific Islands Countries and Areas

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.	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. Laboratory definitive evidence: - Isolation of dengue virus, or - Detection of dengue virus by nucleic acid testing, or - Detection of NS1 antigen in the blood by EIA, or - IgG seroconversion or significant increase in antibody levelor fourfold or greater rise in titre to dengue virus (proof by neutralization or another specific test) - 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. Laboratory suggestive evidence: - Detection of NS1 antigen in blood by rapid antigen test, or - Detection of dengue virus-specific IgM in blood Epidemiological evidence: - 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.	1

				Household epidemiological evidence: - Living in the same house as a locally-acquired case in a dengue-receptive area of Australia within a month of onse in the case and at least one case in the chain of epidemiologically linked cases is laboratory confirmed.	
Cambodia	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/arthralgia, cutaneous rash, haemorrhagic signs (petechiae, positive tourniquet test), and leucopenia. 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.	Yes	National Dengue Control Program (NDCP) enhanced sentinel surveillance system Communicable Disease Control (CDC) syndromic surveillance system (CamEWARN). Health Management Information System (HMIS) collects data on confirmed cases and deaths.	Data collected for Cambodia Laboratory Information System (CamLIS), comprised of 32 participating hospital laboratories where NS1 detection is conducted. Laboratory testing: Antibody HI>= 1/1280 or IgM/IgG positive by ELISA test in convalescence serum	2
China	1) Typical dengue fever can be diagnosed with any of the following conditions: - 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 100x10^9/L) - No epidemiological history, but with a rash, bleeding tendency, and positive IgG or IgM antibodies in a single serum sample.	No	Reported to the Chinese Centre for Disease Control and Prevention (China CDC) through the Chinese National Notifiable Infectious Disease Reporting Information System (CNNDS).	A clinically diagnosed case with any of the of the following laboratory findings: - Isolation of the dengue virus from the serum, cerebrospinal fluid, blood cells, or tissues of an acute-phase patient - Detection of dengue virus gene sequence by RT-PCR or real-time fluorescent quantitative PCR - Detection of dengue virus NS1 antigen in serum from an acute-phase patient - A fourfold or greater increase in specific antibody titer in the convalescent phase compared to the acute phase.	3, WHO internal communication

	2) Dengue Hemorrhagic Fever can be diagnosed when accompanied by any of the following clinical symptoms: - Bleeding tendency, significant bleeding manifestations (such as gastrointestinal bleeding or hemorrhage in the chest, abdomen, or cranium), hepatomegaly, and ascites; and - Laboratory findings including thrombocytopenia (platelet count below 100x10^9/L), hemoconcentration (an increase in hematocrit of more than 20% above normal levels or a decrease of more than 20% after fluid resuscitation), and hypoalbuminemia. 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.				
Lao People's Democratic Republic	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
Malaysia	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
Philippines	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

Singapore (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
Viet Nam (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
Pacific Island Countries	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.[10]

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