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Morbidity and Mortality Weekly Report in the ASEAN Region

— Infectious Diseases

November 7, 2023 | MMWR 2023-44
Epidemiological Week 44



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Weekly Issue





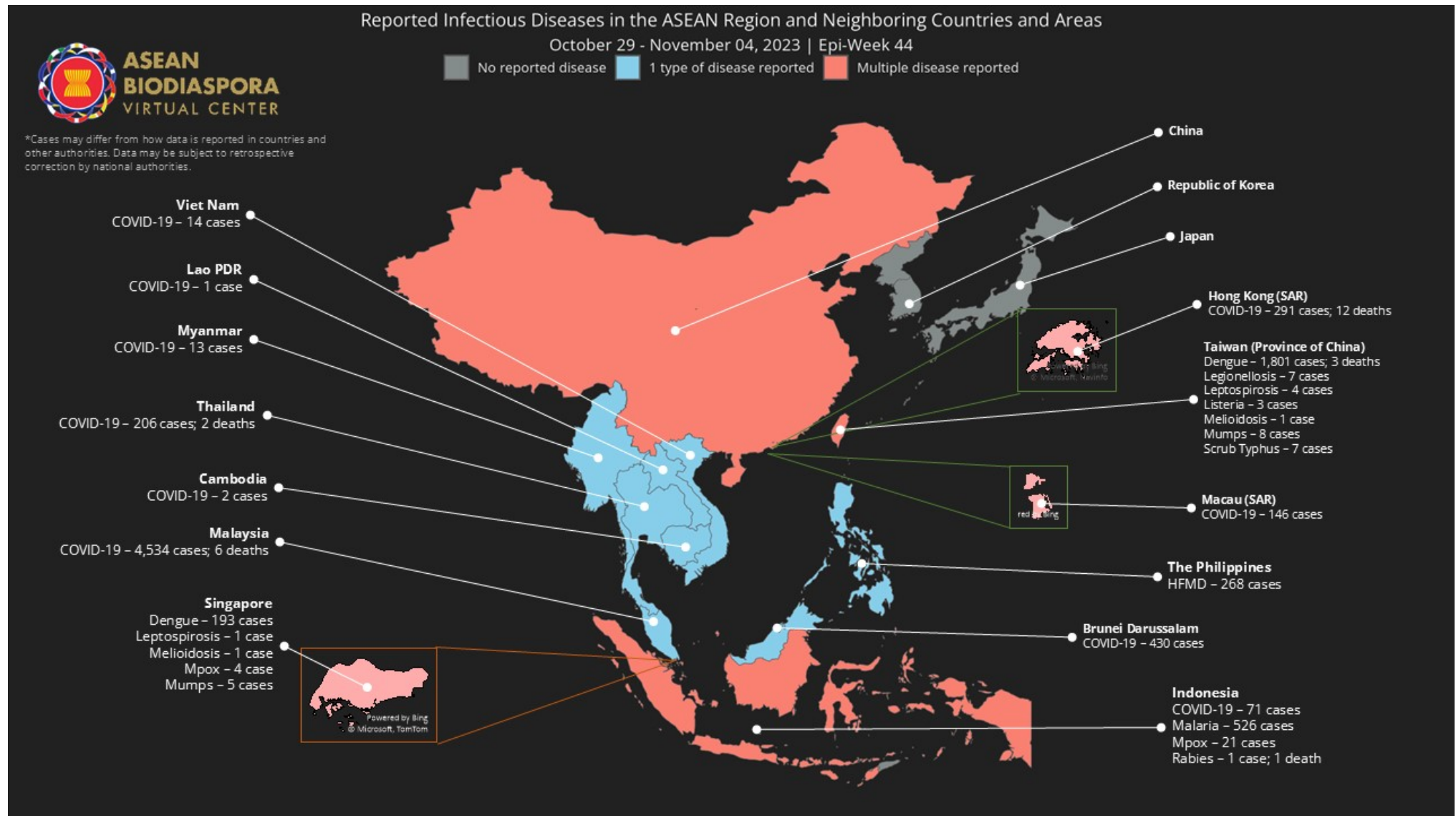
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Reported Infectious Diseases in the ASEAN Region and Neighboring Countries

Epidemiological Week 44 | October 29 – November 4, 2023



1. Ministry of Health Singapore, "Weekly Infectious Diseases Bulletin," Ministry of Health, <https://www.moh.gov.sg/resources-statistics/infectious-disease-statistics/2023/weekly-infectious-diseases-bulletin>.



Reported Infectious Diseases

Epidemiological Week 44 | October 29 to November 4, 2023

Infectious Disease Global Updates

DengueS

- **Bangladesh** has recorded 1,393 dengue deaths from January 1 to November 4 this year, with 13 deaths and 1,638 admissions to hospitals (BSS, 2023). The highest death toll since 2000 was reported in 2000. The country recorded 21 dengue deaths in a single day on September 20 with a total of 277,801 cases this year. Out of the total patients, 269,772 were discharged from hospitals this year. [\[Full article\]](#)
- **Pakistan:** Dengue fever continues to rise in Punjab, with 190 new cases reported on November 4 (Desk, 2023). The Health Department reports 10,052 confirmed cases across 36 districts this year, with Lahore leading with 4,316 cases. The situation remains critical, with 92 new cases reported in Lahore district hospitals. 160 patients are receiving treatment in various hospitals. [\[Full article\]](#)
- **Sri Lanka:** The National Dengue Control Unit reported a rise in dengue cases to 69,231 in 2023, with 33,139 cases in the Western Province and 14,634 in the Colombo district (Virakesari, 2023). The number of dengue cases increased from 4,010 in October to 7,338 in November, with 39 deaths reported in 2023. The unit urges the public to maintain cleanliness to prevent dengue spread due to inclement weather. [\[Full article\]](#)
- **The United States (US):** Two people in Southern California have contracted dengue fever without traveling outside the US, a rare mosquito-borne illness in the country (News, 2023). A Pasadena resident was confirmed to have dengue in October but is recovering. The case is the first confirmed dengue in California not associated with travel. Long Beach officials announced another domestically contracted dengue case and said that person has recovered. Several related viruses cause dengue and are common in tropical areas. The infection rate worldwide is rising, prompting new efforts to fight the transmission of the vector-borne virus. [\[Full article\]](#)

Malaria

- **Ethiopia:** The World Health Organization (WHO) reported Ethiopia has recorded the highest number of malaria cases in seven years, with a 25% increase in cases within a month (Huaxia, 2023). As of October 29, 901 districts reported at least one confirmed case, with over 50% from Oromia's largest region. The WHO cited security challenges for the lack of comprehensive data on cases in northern Ethiopia. [\[Full article\]](#)
- **Republic of Korea** has recorded its highest number of malaria cases in 12 years, with 719 confirmed from January to October (Kyung-don, 2023). This marks the first time the annual malaria cases have topped 700 in a single year since 2011. [\[Full article\]](#)

Measles

- **Pakistan:** Three more children have died from measles in Noor Khan Mazari village of Kashmir (Desk, 2023). The children, aged three to four, were killed due to a lack of attention from the district administration of the health department. The measles epidemic has spread rapidly in the city, increasing public fear. Many children in Kashmir are currently suffering from measles. [\[Full article\]](#)
- **The United Kingdom (UK):** A measles outbreak has been declared in Cardiff, with seven children confirmed over the last six weeks (Stephens, 2023). Public Health Wales (PHW) is urging parents to ensure their children are up to date with the Measles, Mumps, Rubella (MMR) vaccine,



as the outbreak is affecting "young children". Parents of children not yet reaching the second dose do not need to take action. [\[Full article\]](#)

Diphtheria

- **Nigeria:** Borno State Primary Healthcare Development Agency (BSPHCDA) reported 653 cases of diphtheria outbreak in the state, with one death recorded (Abubakar, 2023). The state collected 407 samples, with 274 positive and 233 negative. One death was recorded among confirmed cases, indicating the implementation of the Diphtheria OBR Campaign in four high-risk LGAs out of 27 LGAs in Borno state. Humans are the only natural hosts for diphtheria, which can be transmitted directly through respiratory droplets or indirect contact with skin or contaminated clothing. Death rates can reach up to 10% in outbreaks. [\[Full article\]](#)

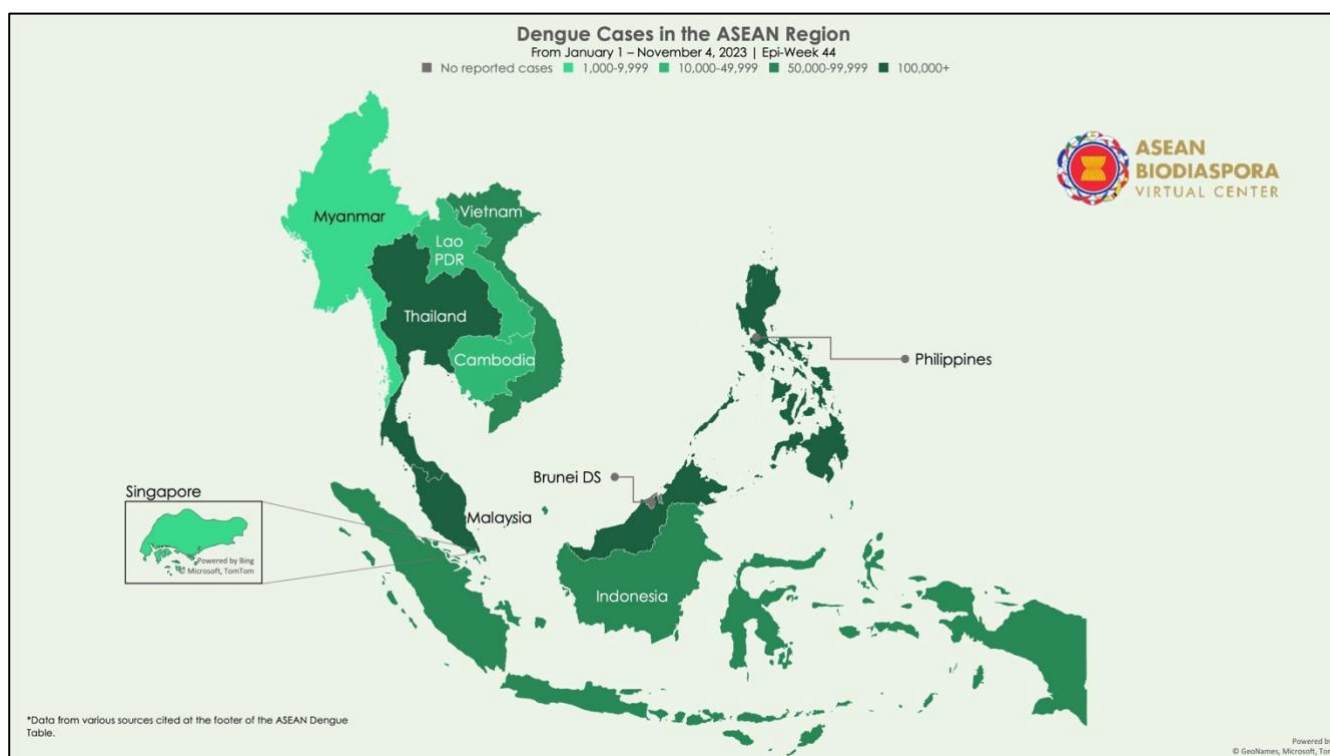
Vector-Borne Diseases



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Dengue Cases in the ASEAN Region From January 1 to November 4, 2023 (Epi-Week 44)



Dengue cases in the ASEAN region

Country	Epi-Week Reported	Cumulative Dengue Cases	New Cases Since the Previous Report	Cumulative Deaths	New Deaths	CFR
Brunei Darussalam	-	-	-	-	-	-
Cambodia ¹	Week 36	20,327	-	37	-	0.18%
Indonesia ²	Week 40	68,996	-	498	-	0.72%
Lao PDR ¹	Week 37	24,556	-	17	5	0.07%
Malaysia ³	Week 44	100,579	2,435	73	-	0.07%
Myanmar ⁴	Week 28	6,685	-	30	-	0.45%
Philippines ⁵	Week 41	155,823	6,694	543	12	0.35%
Singapore ⁶	Week 44	8,401	306	-	-	0.00%
Thailand ⁷	Week 43	123,081	3,616	130	8	0.11%
Vietnam ¹	Week 37	87,719	-	24	-	0.03%
Total		596,167	13,051	1,352	25	0.23%

1. WHO WPRO, "Dengue," World Health Organization, accessed November 06, 2023, <https://www.who.int/westpacific/emergencies/surveillance/dengue>
 2. Ministry of Health, Republic of Indonesia
 3. Disease Control Division, Ministry of Health Malaysia, accessed November 06, 2023, iDengue, <https://idengue.mysa.gov.my/did/>
 4. BlueDot Developer Portal, accessed November 06, 2023, <https://developer-portal.bluedot.global/>
 5. Department of Health Website, accessed November 06, 2023 "Statistics", <https://doh.gov.ph/statistics>.
 6. National Environment Agency (NEA), accessed November 06, 2023, <https://www.nea.gov.sg/dengue-zika/dengue/dengue-cases>.
 7. Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health Thailand, accessed November 06, 2023, <http://doe.moph.go.th/surdata/index.php>
- *Data were updated and collected from official sources, which may have a 2-8 weeks delay in reporting. Data must be interpreted cautiously. For Thailand, the data were accumulated from dengue fever, DHF, and DSS.

- The ASEAN region reported **13,051** new dengue cases in Malaysia, the Philippines, Singapore, and Thailand and **25** new deaths in Lao PDR, the Philippines, and Thailand since the previous report. The region reported **596,167** total cases and **1,352** total deaths in 2023 with **0.23%** Case Fatality Rate (CFR).



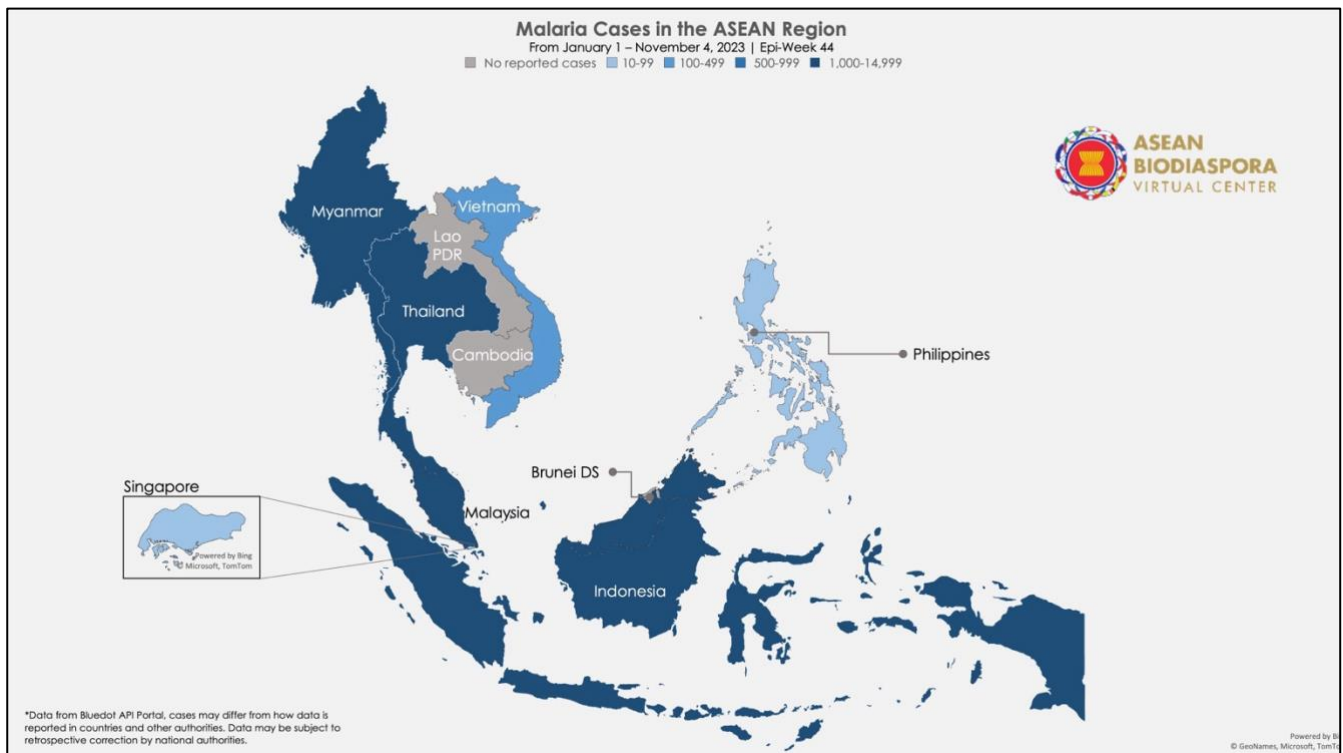
Dengue Regional Update

- Indonesia:** Dengue hemorrhagic fever (DHF) has killed dozens of patients in Probolinggo Regency, mainly due to delayed consultation and treatment (Arianto, 2023). DHF, caused by the bite of the *Aedes aegypti* mosquito, is similar to the common cold and requires early treatment to prevent complications. Early symptoms include sudden high fever, muscle pain, severe headaches, nausea and vomiting, and fatigue. As of September, there were 596 cases of DHF, with 18 dying due to late treatment. It is recommended that patients with symptoms like high fever should immediately seek early medical attention. The number of cases has reached 596, with 18 dying due to late treatment. [\[Full article\]](#)
- Malaysia:** Dengue cases in Malaysia increased by 0.4% during the 43rd Epidemiological Week (EW43) to 2,272 cases, compared to 2,262 cases in the previous week (Jaya, 2023). The cumulative number of cases this year reached 98,715, an increase of 99.1% over the 49,569 recorded in the same period last year. No deaths due to dengue fever complications were reported in EW43. Dengue hotspots dropped to 68 localities. [\[Full article\]](#)
- Philippines:** Six people have died in Quezon City due to the bite of a mosquito carrying the dengue virus (Manila, 2023). The most cases were in District 1 with 569 cases, while District 2 had the lowest with 296. However, the City Epidemiology and Disease Surveillance Unit recorded a 9.04% decrease in cases compared to last year. [\[Full article\]](#)
- Vietnam:** Dengue cases in Hanoi have increased compared to 2022, with some outbreaks with prolonged developments resulting in more patients (Chau, 2023). The Hanoi Department of Health reported 25,893 dengue cases in 2023, including four deaths. The city has 2,579 cases in 30 districts/towns, with Thanh Oai having the most cases. 100 outbreaks were recorded in 21 districts/towns decrease of 3 compared to the previous week. Inspection and surveillance results indicate that the index of treated insects exceeds the risk threshold, and the epidemic situation may intensify in the coming weeks. [\[Full article\]](#)



Malaria Cases in the ASEAN Region

From January 1 to November 4, 2023 (Epi-Week 44)



Malaria cases in the ASEAN region

Country	Epi-Week Reported	Cumulative Malaria Cases	New Cases Since the Previous Report	Cumulative Deaths	CFR
Brunei Darussalam	-	-	-	-	-
Cambodia	-	-	-	-	-
Indonesia ¹	Week 44	1,899	526	0	0.00%
Lao PDR	-	-	-	-	-
Malaysia ¹	Week 39	1,081	0	0	0.00%
Myanmar ¹	Week 23	4,510	0	0	0.00%
Philippines ¹	Week 28	31	0	0	0.00%
Singapore ²	Week 43	20	0	0	0.00%
Thailand ³	Week 43	4,550	49	3	0.07%
Vietnam ¹	Week 42	349	0	0	0.00%
Total		12,440	575	3	0.02%

1. BlueDot Developer Portal, accessed November 06, 2023, <https://developer-portal.bluedot.global/>.
2. Ministry of Health Singapore, accessed November 06, 2023, <https://www.moh.gov.sg/resources-statistics/infectious-disease-statistics/2023/weekly-infectious-diseases-bulletin>
3. Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health Thailand, accessed November 06, 2023, <http://doe.moph.go.th/surdata/index.php>

- The ASEAN region reported **575** new malaria cases in Singapore since the previous report. The region reported **12,440** total cases and **3** total deaths in 2023 with **0.02%** CFR.



Malaria Regional Update

- **Indonesia:** Malaria cases in Pohuwato Regency, Gorontalo, are increasing due to mosquito bites (Halid, 2023). The most severe cases occur in five sub-districts, with an average of 4-5 cases reported per day. The Pohuwato District Health Service has taken countermeasures, such as spraying adult mosquitoes and sida larvae, to prevent the increase in population. They also provide health education about prevention and treatment, outreach, screening, and distribution of mosquito nets. The highest malaria cases in Gorontalo are in Pohuwato Regency, with "Bumi Panua" having 311 cases. The lowest cases are in Bone Bolango Regency, with only five cases detected. The Gorontalo Provincial Health Service reported 526 malaria cases until August 2023, with the highest cases in Pohuwato Regency. Only Gorontalo Regency has not yet received malaria elimination certification, and if the number of cases cannot be eliminated within three years, the certification will be revoked by the Indonesian Ministry of Health. The party is now starting a guerrilla campaign to free Gorontalo from malaria cases. [\[Full article\]](#)

Vaccine- Preventable Diseases

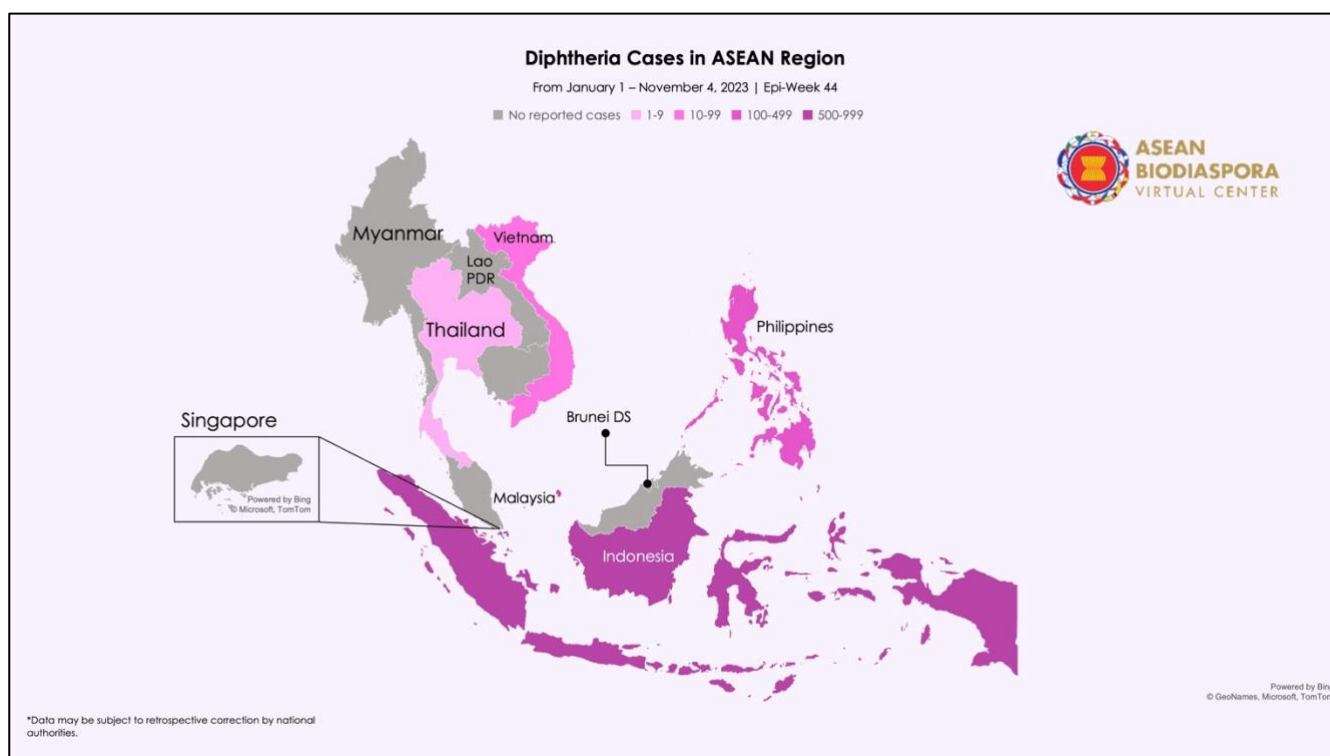


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Diphtheria Cases in the ASEAN Region

From January 1 to November 4, 2023 (Epi-Week 44)



Diphtheria cases in the ASEAN region

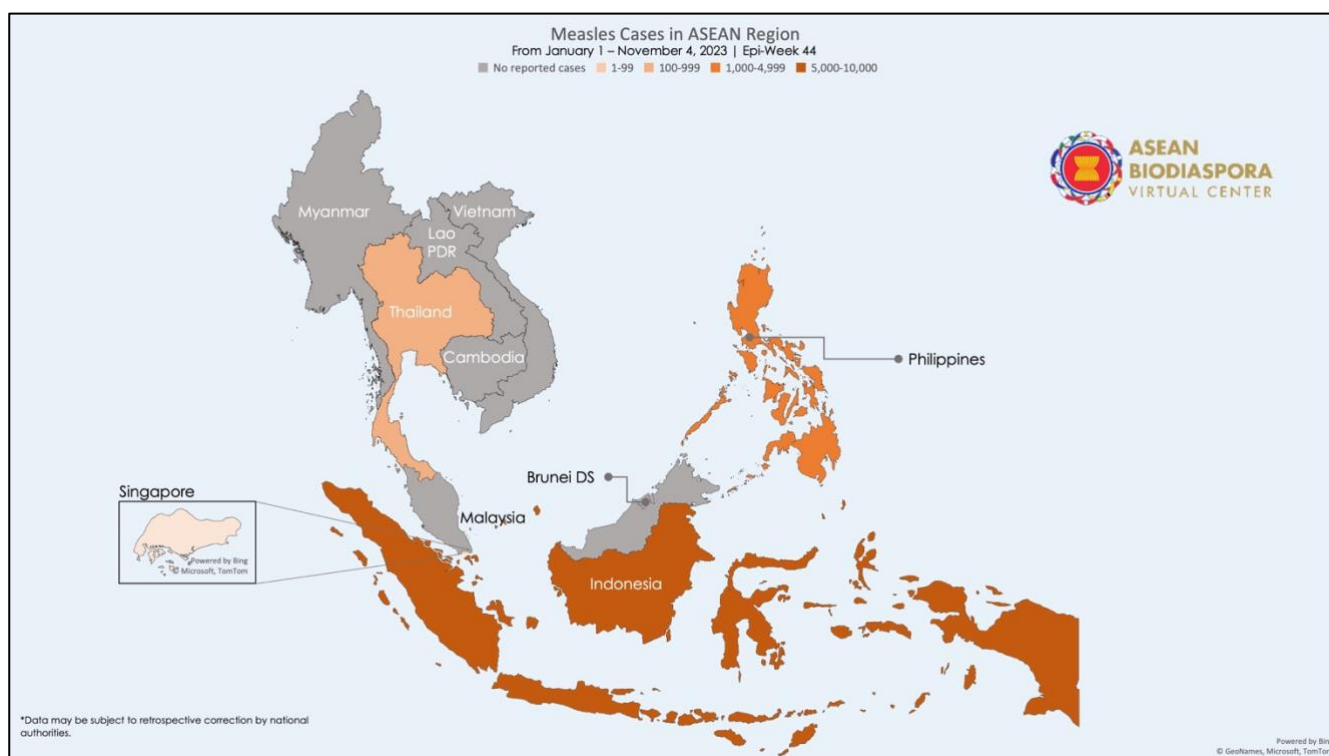
Country	Epi-Week Reported	Cumulative Diphtheria Cases	New Cases Since the Previous Report	Cumulative Deaths	CFR
Brunei Darussalam	-	-	-	-	-
Cambodia	-	-	-	-	-
Indonesia ¹	Week 43	775	113	29	3.74%
Lao PDR	-	-	-	-	-
Malaysia	-	-	-	-	-
Myanmar	-	-	-	-	-
Philippines ²	Week 41	157	5	34	21,66%
Singapore ³	Week 41	0	0	0	0.00%
Thailand ⁴	Week 43	5	0	0	0.00%
Vietnam ⁵	Week 38	41	0	3	7.32%
Total		948	118	66	6.96%

1. Ministry of Health, Republic of Indonesia
2. Department of Health Website, accessed November 06, 2023, "Statistics", <https://doh.gov.ph/statistics>
3. Ministry of Health Singapore, accessed November 06, 2023, <https://www.moh.gov.sg/resources-statistics/infectious-disease-statistics/2023/weekly-infectious-diseases-bulletin>
4. Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health Thailand, accessed November 06, 2023, <http://doe.moph.go.th/surdata/index.php>
5. BlueDot Developer Portal, accessed November 06, 2023, <https://developer-portal.bluedot.global/>

- The ASEAN region reported **118** new diphtheria cases in Indonesia and the Philippines since the previous report. The region reported **948** total cases and **66** total deaths in 2023 with **7.90%** CFR.



Measles Cases in the ASEAN Region From January 1 to November 4, 2023 (Epi-Week 44)



Measles cases in the ASEAN region

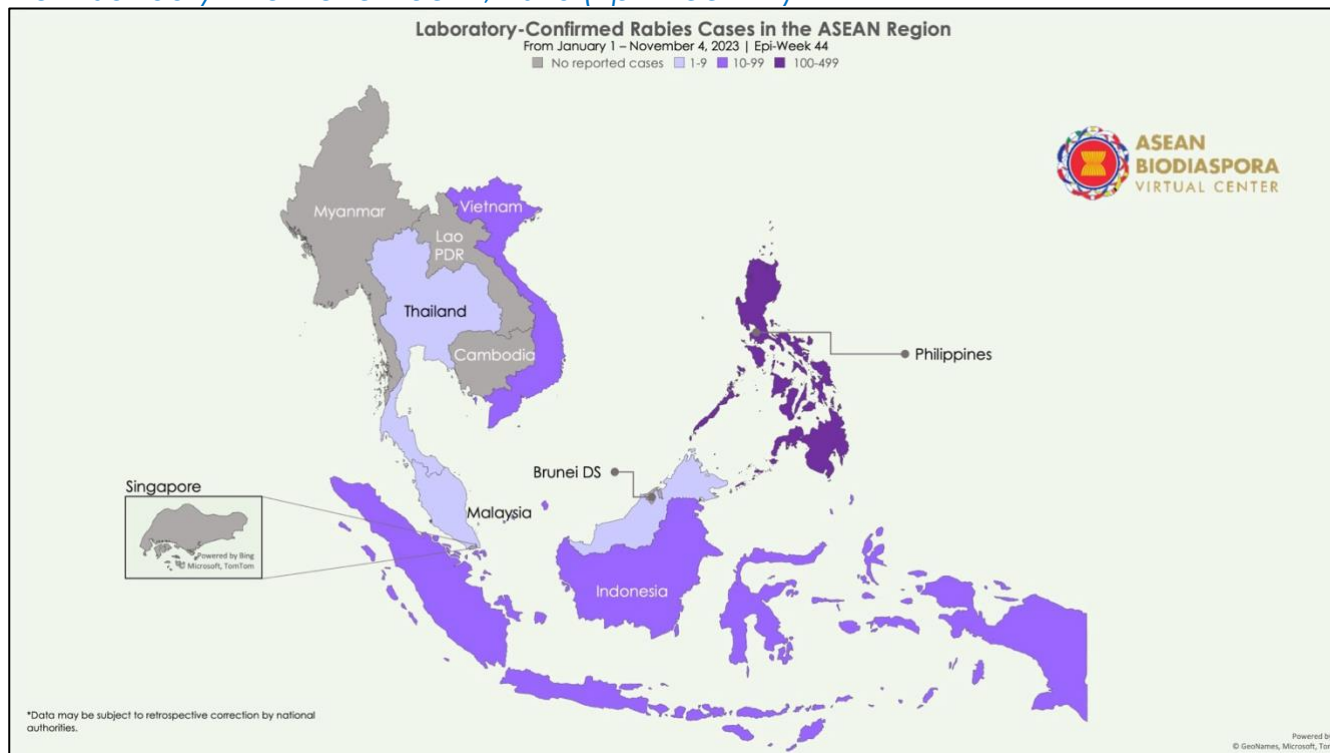
Country	Epi-Week Reported	Cumulative Measles Cases	New Cases Since the Previous Report	Deaths	CFR
Brunei Darussalam	-	-	-	-	-
Cambodia	-	-	-	-	-
Indonesia ¹	Week 42	7,018	0	17	0.24%
Lao PDR	-	-	-	-	-
Malaysia	-	-	-	-	-
Myanmar	-	-	-	-	-
Philippines ²	Week 41	1,829	98	6	0.33%
Singapore ³	Week 43	6	0	0	0.00%
Thailand ⁴	Week 43	288	12	0	0.00%
Vietnam	-	-	-	-	-
Total		9,141	110	23	0.25%

1. Ministry of Health, Republic of Indonesia
2. Department of Health Website, accessed November 06, 2023 "Statistics", <https://doh.gov.ph/statistics>
3. Ministry of Health Singapore, accessed November 06, 2023, <https://www.moh.gov.sg/resources-statistics/infectious-disease-statistics/2023/weekly-infectious-diseases-bulletin>
4. Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health Thailand, accessed November 06, 2023, <http://doe.moph.go.th/surdata/index.php>

- The ASEAN region reported **110** new measles cases in the Philippines and Thailand since the previous report. The region reported **9,141** total cases and **23** total deaths in 2023 with **0.25%** CFR.



Rabies Cases in the ASEAN Region From January 1 to November 4, 2023 (Epi-Week 44)



Rabies cases in the ASEAN region

Country	Epi-Week Reported	Cumulative Reported Rabies Cases	Laboratory-Confirmed Rabies Cases	Rabies-Related Deaths
Brunei Darussalam	-	-	-	-
Cambodia	-	-	-	-
Indonesia ¹	Week 41	318	21	49
Lao PDR	-	-	-	-
Malaysia ¹	Week 38	21	9	19
Myanmar	-	-	-	-
Philippines ²	Week 41	312	312	312
Singapore	-	-	-	-
Thailand ³	Week 43	5	5	5
Vietnam ¹	Week 39	64	33	64
Total		720	380	449

1. BlueDot Developer Portal, accessed November 06, 2023, <https://developer-portal.bluedot.global/>.
2. Department of Health Website, accessed November 06, 2023 "Statistics", <https://doh.gov.ph/statistics>.
3. Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health Thailand, accessed November 06, 2023, <http://doe.moph.go.th/surdata/index.php>

- The ASEAN region reported **720** rabies cases, **380** confirmed rabies cases, and **449** rabies-related deaths.



Rabies Regional Update

- **Indonesia:** Dr. Asep Purnama, an internal medicine specialist at TC Hillers Maumere Hospital, has called for large-scale vaccination of Rabies Infectious Animals in South Central Timor Regency (Mei, 2023). The outbreak began in May 2023 and has continued to increase, with an additional death on October 28, 2023. Asep emphasized the need for countermeasures to prevent the spread of the virus throughout the island of Timor. He emphasized the importance of HPR vaccination, especially for dogs, with a minimum coverage of over 70% and using quality anti-rabies vaccines. He emphasized the need for resources to support rabies control efforts in the region, as the virus is still localized in one district. He hoped that focusing on overcoming rabies in South Central Timor Regency would help prevent the virus from spreading to neighboring districts and cities. He urged vaccinators from all districts and cities to unite to achieve vaccination coverage of over 70% in a short time. [\[Full article\]](#)
- **Vietnam:** On November 3, the Vice Chairman of Phao Dai Ward People's Committee confirmed a death suspected of being bitten by a rabid dog (Dan, 2023). An adult male showed signs of disruptive behavior and biting another person. His family reported the incident to authorities for support and prevention. The working group of Phao Dai Ward mobilized and brought him back to work. On September 19, he was bitten by a dog and burned near his index finger but did not receive vaccinations. The dog was slaughtered. The patient had signs of rabies, but he refused to cooperate and died on November 2. [\[Full article\]](#)



References

- Abubakar, S. (2023) *Borno Records 653 cases of diphtheria outbreak, 1 death – official, National Accord Newspaper*. Available at: <http://www.nationalaccordnewspaper.com/borneo-records-653-cases-of-diphtheria-outbreak-1-death-official/> (Accessed: 06 November 2023).
- Arianto, A. (2023). *Pasien Meninggal Akibat DBD Mayoritas karena Telat Penanganan*. [online] Radar Bromo. Available at: <https://radarbromo.jawapos.com/kraksaan/1003171175/pasien-meninggal-akibat-dbd-mayoritas-karena-telat-penanganan> [Accessed 6 Nov. 2023].
- BSS (2023) *13 dengue patients die, 1,638 hospitalised in 24Hrs, The Business Standard*. Available at: <https://www.tbsnews.net/bangladesh/health/13-dengue-patients-die-1638-hospitalised-24hrs-733134> [Accessed: 06 November 2023].
- Chau, M. (2023). *Hà Nội: 4 trường hợp tử vong, gần 26.000 ca sốt xuất huyết*. [online] Việt Giải Trí. Available at: <https://vietgiaitri.com/ha-noi-4-truong-hop-tu-vong-gan-26000-ca-sot-xuat-huyet-2023103117016222/> [Accessed 6 Nov. 2023].
- Dan, C.A.N. (2023) *Người đàn ông phát bệnh dại Tử Vong Sau Hơn 1 tháng Bị Chó Cắn*, <https://baomoi.com>. Available at: <https://baomoi.com/nguoi-dan-ong-phat-benh-dai-tu-vong-sau-hon-1-thang-bi-cho-can-c47422204.epi> [Accessed: 06 November 2023].
- Desk, N. (2023) *Dengue outbreak continues, Pakistan Observer*. Available at: <https://pakobserver.net/dengue-outbreak-continues/> [Accessed: 06 November 2023].
- Desk, N. (2023) *Three more children die of measles in Kashmore, 24NEWS HD*. Available at: <https://www.24newshd.tv/31-Oct-2023/three-more-children-die-of-measles-in-kashmore> [Accessed: 06 November 2023].
- Halid, R. (2023) *5 kecamatan di Pohuwato Jadi Pusat Penyebaran malaria, 5 kasus per Hari, Tribun Gorontalo*. Available at: <https://gorontalo.tribunnews.com/2023/10/30/5-kecamatan-di-pohuwato-jadi-pusat-penyebaran-malaria-5-kasus-per-hari?page=2> [Accessed: 06 November 2023].
- Huaxia (2023). *Ethiopia records highest number of malaria cases in 7 years: WHO-Xinhua*. [online] english.news.cn. Available at: <https://english.news.cn/africa/20231103/93eb32690f9b4b87a404250d502f6d42/c.html> [Accessed 6 Nov. 2023].
- Jaya, P. (2023) *Health Ministry: Dengue Cases up in Week 43, no deaths reported, Malay Mail*. Available at: <https://www.malaymail.com/news/malaysia/2023/11/03/health-ministry-dengue-cases-up-in-week-43-no-deaths-reported/100032> [Accessed: 06 November 2023].
- Kyung-don, N. (2023) *[graphic news] S. Korea's malaria cases reach highest level in 12 years, The Korea Herald*. Available at: <https://www.koreaherald.com/view.php?ud=20231030000836> [Accessed: 06 November 2023].
- Manila, R. (2023) *Kaso ng Namatay Dahil Sa dengue SA QC Umabot na Sa Anim, RMN Networks*. Available at: <https://rmn.ph/kaso-ng-namatay-dahil-sa-dengue-sa-qc-umabot-na-sa-anim/> [Accessed: 06 November 2023].
- Mei, E.E. (2023) *Korban rabies timor tengah Selatan NTT meninggal Bertambah, Asep: Vaksinasi HPR Dalam Jumlah Besar, Pos-kupang.com*. Available at: <https://kupang.tribunnews.com/2023/11/04/korban-rabies-timor-tengah-selatan-ntt-meninggal-bertambah-asep-vaksinasi-hpr-dalam-jumlah-besar> [Accessed: 06 November 2023].



News, A. (2023) *California officials confirm 2 cases of dengue, a mosquito-borne illness rarely transmitted in US*, myMotherLode.com - The Mother Lode's Local News, Sports, Weather, Movies, Classifieds, Yellow Pages, Real Estate. Available at: <https://www.mymotherlode.com/news/local/3257948/california-officials-confirm-2-cases-of-dengue-a-mosquito-borne-illness-rarely-transmitted-in-us-2.html> [Accessed: 06 November 2023].

Stephens, L. (2023) Measles outbreak declared in Cardiff, Wales Online. Available at: <https://www.walesonline.co.uk/news/health/measles-outbreak-declared-in-cardiff-28024384> (Accessed: 06 November 2023).

TACC. (2023) Available at: <http://special.tass.ru/obschestvo/19151733> (Accessed: 06 November 2023).

Virakesari (2023) **டெங்கு நோயாளர்களின் எண்ணிக்கை 69 ஆயிரமாக அதிகரிப்பு**, Virakesari.lk. Available at: <https://www.virakesari.lk/article/168518> [Accessed: 06 November 2023].



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