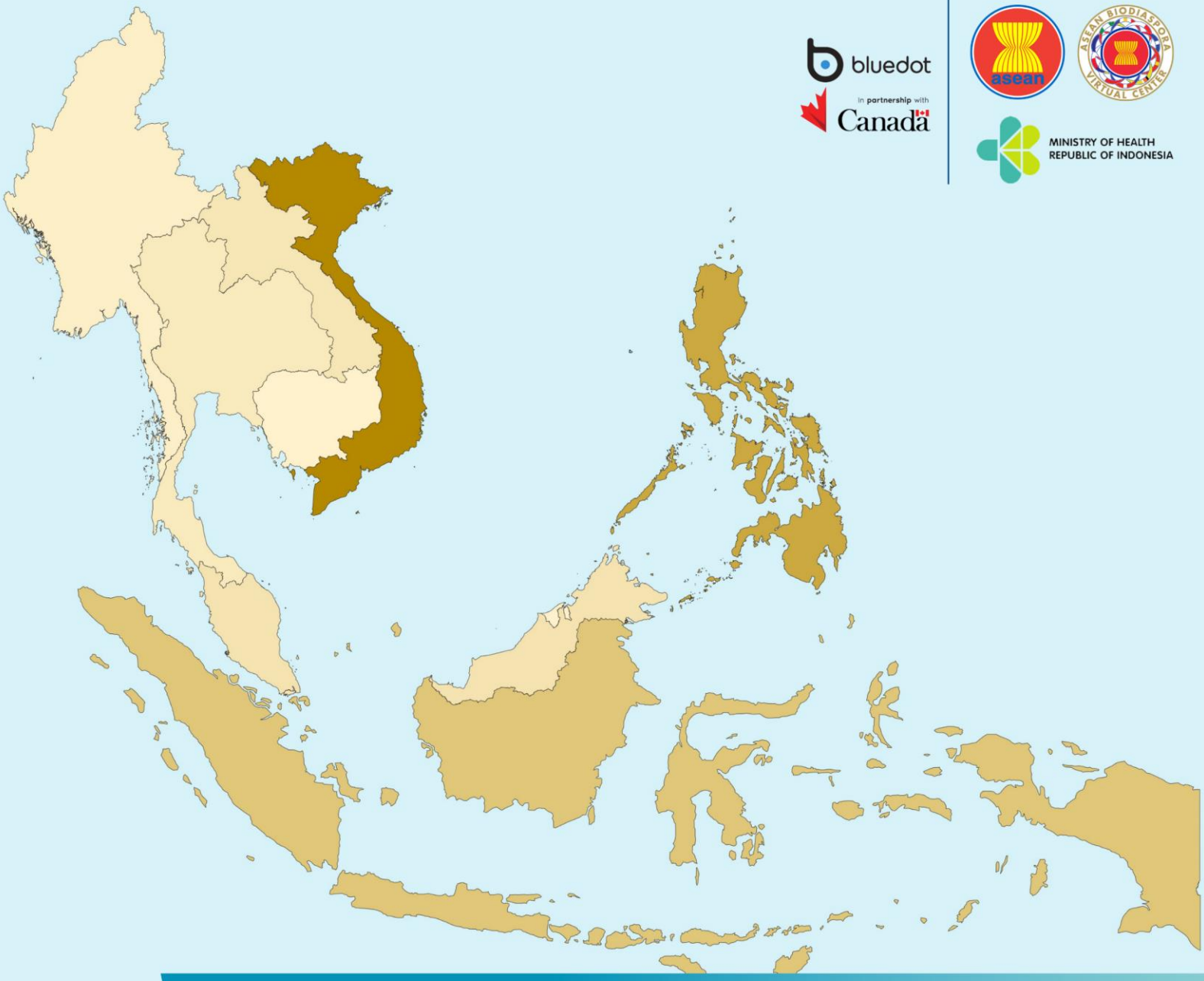

Situational Report in the ASEAN Region

ASEAN BioDiaspora Virtual Center (ABVC)

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ASSOCIATION OF SOUTHEAST ASIAN NATIONS

ASEAN BIODIASPORA VIRTUAL CENTER

MINISTRY OF HEALTH
REPUBLIC OF INDONESIA

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Table of Contents

COVID-19: Highlights and Situation Overview

Global Update

- **Worldwide**, over 689 million cases and over 6 million deaths have been attributed to COVID-19.

Vaccine Update

- The **Philippine** government received a significant boost in its COVID-19 response when the Lithuanian government donated nearly 400,000 doses of Pfizer bivalent COVID-19 vaccines which arrived in the country last June 3.[1] Healthcare workers and senior citizens will be the priority beneficiaries of these vaccines.[1] [Full article]

Research Update (Published and peer-reviewed studies)

- The study ***Neuroinflammation after COVID-19 With Persistent Depressive and Cognitive Symptoms*** found that patients with persistent symptoms of depression and cognitive impairment after a mild to moderate COVID-19 infection had elevated levels of a protein indicating inflammation of the brain.[2] The study, conducted by researchers at the University of Toronto, used positron emission tomography (PET) to compare levels of translocator protein, a marker for gliosis (inflammation of the brain), in 20 participants with persistent symptoms of depression and cognitive impairment with those of 20 healthy controls.[2] The results of the study showed that translocator protein volume in the brain regions of interest was significantly higher in participants with depressive and cognitive symptoms than in controls.[2] The difference was most pronounced in two regions of the brain: the ventral striatum and dorsal putamen.[2] The ventral striatum is involved in motivation and reward, while the dorsal putamen is involved in movement.[2] The researchers believe that gliosis may be consequent to inflammation, injury, or both, particularly in the ventral striatum and dorsal putamen.[2] They suggest that this inflammation may explain some of the persistent depressive and cognitive symptoms experienced by patients with long COVID, such as slowed motor speed, low motivation or energy, and anhedonia.[2] The study's findings provide further evidence that COVID-19 can have a long-term impact on the brain.[2] They also suggest that gliosis may be a key mechanism underlying some of the persistent symptoms of long COVID.[2] [Full text]

- The study ***Estimates of SARS-CoV-2 Seroprevalence and Incidence of Primary SARS-CoV-2 Infections among Blood Donors, by COVID-19 Vaccination Status — United States, April 2021–September 2022*** estimated that 96.4% of US blood donors had antibodies against COVID-19 from a previous infection or vaccination, including 22.6% from infection alone and 26.1% from vaccination alone, with 47.7% having both (hybrid immunity).[3] From April to June 2021, an estimated 68.4% of blood donors had SARS-CoV-2 antibodies from previous infection or vaccination, including 47.5% from vaccination alone, 12.0% from infection alone, and 8.9% from both.[3] From January to March 2022, 93.5% of donors had antibodies from previous infection or vaccination, including 39.0% from vaccination alone, 20.5% from infection alone, and 34.1% from both.[3] From July to September 2022, 96.4% of participants had antibodies from previous infection or vaccination, including 26.1% from vaccination alone, 22.6% from infection alone, and 47.7% from both.[3] From July to September 2022, the prevalence of infection-induced immunity was 85.7% among unvaccinated participants and 64.3% among their vaccinated peers.[3] From July to September 2022, donors aged 65 years and older had the lowest prevalence of hybrid immunity (36.9%), and those aged 16 to 29 years had the highest (59.6%).[3] From January through June 2022, COVID-19 incidence among unvaccinated participants was 21.7%, compared with 13.3% among the vaccinated.

And from April to September 2022, the incidence among unvaccinated donors was 28.3%, compared with 22.9% among their vaccinated peers.[3] According to researchers, lower prevalences of infection-induced and hybrid immunity could further increase the risk for severe disease in this group, highlighting the importance for adults aged ≥65 years to stay up to date with COVID-19 vaccination and have easy access to antiviral medications.[3] [Full text]

- The study ***Recovery and symptom trajectories up to two years after SARS-CoV-2 infection: population-based, longitudinal cohort study*** found that up to 18% of unvaccinated COVID-19 survivors have persistent symptoms as long as 2 years after infection.[4] Researchers surveyed participants at eight time points about 23 long-COVID symptoms, their severity, and their perceived relevance to their infection.[4] They compared 1,106 unvaccinated adults 6, 12, 18, and 24 months after COVID-19 infection with 628 uninfected controls.[4] 55.3% reported a return to health within 1 month after infection, and 17.6% said they had recovered within 1 to 3 months.[4] At 6 months, 22.9% of participants said they hadn't recovered, declining to 18.5% at 12 months and 17.2% at 24 months.[4] Those reporting symptoms at 6 months said their symptoms had mild (16.2%), moderate (3.6%), or severe (2.7%) effects on their health.[4] At 24 months, the severity of health impairment declined, with 10.4% reporting mild, 3.9% reporting moderate, and 1.9% experiencing severe health impairment.[4] Most participants reported that they continued to recover (68.4%) or had better overall health (13.5%) over time.[4] But 5.2% said their health worsened, and 4.4% had periods of both recovery and regression.[4] A total of 8.9% of participants said they had symptoms at all four follow-up times, and 12.5% reported alternating symptomatic and symptom-free periods.[4] Participants who reported symptoms or worsened symptoms at all follow-up points tended to be 65 or older (45.7% vs 34.1%) or have underlying medical conditions (58.8% vs 27.5%).[4] The excess risk for some symptoms in infected participants was 2% to 10%, with the greatest excess risks for altered taste or smell (9.8%), post-exertion malaise (9.4%), fatigue (5.4%), shortness of breath (7.8%), and impaired concentration (8.3%) and memory (5.7%).[4] According to the authors, their findings imply that a sizable number of people might be affected by post–COVID-19 conditions and have protracted health issues for many months after infection.[4] [Full text]

- A 14-year-old Japanese girl received a third dose of the BNT1262b2 mRNA COVID-19 vaccine/Pfizer (Comirnaty) on 10th August 2022.[5] Despite her history of orthostatic dysregulation, she was healthy by nature and was active in her middle school athletic team.[5] She died unexpectedly 2 days after receiving the third dose of the BNT1262b2 mRNA COVID-19 vaccine, a report of ***A Case of Fatal Multi-Organ Inflammation following COVID-19 Vaccination*** Autopsy findings showed congestive edema of the lungs, T-cell lymphocytic and macrophage infiltration in the lungs, pericardium, and myocardium of the left atria and left ventricle, liver, kidneys, stomach, duodenum, bladder, and diaphragm.[5] Since there was no preceding infection, allergy, or drug toxicity exposure, the patient was diagnosed with post-vaccination pneumonia, myopericarditis, hepatitis, nephritis, gastroenteritis, cystitis, and myositis.[5] Although neither type of inflammation is fatal by itself, arrhythmia is reported to be the most common cause of death in patients with atrial myopericarditis.[5] In the present case, arrhythmia of atrial origin was assumed as the cause of cardiac failure and death.[5] In sudden post-vaccination deaths, aggressive autopsy systemic search and histological examination involving extensive sectioning of the heart, including the atrium, are indispensable.[5] [Full text]

- This cohort study, ***Smart Thermometer–Based Participatory Surveillance to Discern the Role of Children in Household Viral Transmission During the COVID-19 Pandemic***, described the children's role in household viral transmission during the pandemic when

enveloped viruses were at historic lows and the predominance of viral illnesses was attributed to COVID-19.[6] This study tracked data from participatory surveillance using commercially available thermometers with a companion smartphone app from October 2019 to October 2022.[6] Eligible participants were individuals with temperature measurements in households with multiple members between October 2019 and October 2022 who opted into data sharing.[6] The proportion of household transmissions with a pediatric index case and changes in transmissions during school breaks were assessed using app and thermometer data.[6] A total of 862,577 individuals from 320,073 households with multiple participants (462,000 female [53.6%] and 463,368 adults [53.7%]) were included.[6] The number of febrile episodes forecasts new COVID-19 cases. The within-household transmission was inferred in 54,506 (15.4%) febrile episodes and increased from the fourth pandemic period, March to July 2021 (3263 of 32 294 [10.1%]) to the Omicron BA.1/BA.2 wave (16 516 of 94 316 [17.5%]; P < .001).[6] Among 38,787 transmissions in 166,170 households with adults and children, a median (IQR) of 70.4% (61.4%-77.6%) had a pediatric index case; proportions fluctuated weekly from 36.9% to 84.6%.[6] A pediatric index case was 0.6 to 0.8 times less frequent during typical school breaks.[6] The winter break decrease was from 68.4% (95% CI, 57.1%-77.8%) to 41.7% (95% CI, 34.3%-49.5%) at the end of 2020 (P < .001).[6] At the beginning of 2022, it dropped from 80.3% (95% CI, 75.1%-84.6%) to 54.5% (95% CI, 51.3%- 57.7%) (P < .001).[6] During summer breaks, rates dropped from 81.4% (95% CI, 74.0%-87.1%) to 62.5% (95% CI, 56.3%-68.3%) by August 2021 (P = .02) and from 83.8% (95% CI, 79.2%-87.5) to 62.8% (95% CI, 57.1%-68.1%) by July 2022 (P < .001).[6] These patterns persisted over 2 school years. In this cohort study using participatory surveillance to measure within-household transmission at a national scale, we discerned an important role for children in the spread of viral infection within households during the COVID-19 pandemic, heightened when schools were in session, supporting a role for school attendance in COVID-19 spread.[6] [Full text]

Cases and Deaths as of 05 June 2023

- As of 05 June 2023 (1PM, GMT+7), worldwide, there were **689,867,579** confirmed cases, including **6,887,130** deaths. Globally, the Case Fatality Rate (CFR) was **1.0%.**
- **36,186,719 confirmed cases** of COVID-19 have been reported in the **ASEAN Region**.
- The Case Fatality Rate in the **ASEAN** Region is range between **0.1 to 3.1%**

COVID-19 cases in ASEAN region

REGION	COUNTRY	FIRST CONFIRMED CASE(S)	LATEST REPORT ON CONFIRMED CASE(S)	TOTAL CONFIRMED CASES	NEW CASES	TOTAL DEATHS	NEW DEATHS	CUMULATIVE CASES/ 100,000	CUMULATIVE VACCINATED	CUMULATIVE FULLY VACCINATED	CUMULATIVE BOOSTED	FULLY VACCINATED/ 100
ASEAN REGION	Brunei Darussalam	10 Mar 20	31-May-23	306,333	-	225	-	64,053	450,404	445,929	338,987	99.3
	Cambodia	27 Jan 20	04-Jun-23	138,803	-	3,056	-	841	15,244,858	14,609,937	10,433,215	87.1
	Indonesia	02 Mar 20	05-Jun-23	6,808,581	44	161,792	3	2,490	203,657,535	172,693,321	67,952,274	62.7
	Lao PDR	24 Mar 20	05-Jun-23	218,265	3	758	-	3,041	5,888,649	5,222,417		69.4
	Malaysia	25 Jan 20	28-May-23	5,100,249		37,087		15,788	28,125,245	27,536,657	17,056,957	81.1
	Myanmar	23 Mar 20	04-Jun-23	639,175	-	19,494	-	1,173	34,777,314	27,545,329	2,227,351	50.8
	Philippines	30 Jan 20	04-Jun-23	4,148,401	-	66,476	-	3,771	78,369,243	73,937,435	21,341,197	64.0
	Singapore	23 Jan 20	30-May-23	2,472,873	-	1,727	-	39,049	5,161,990	5,120,768	4,440,289	90.8
	Thailand	13 Jan 20	22-May-23	4,738,988	-	34,053	-	6,791	57,005,497	53,486,086	32,143,431	74.6
	Vietnam	23 Jan 20	04-Jun-23	11,615,051	-	43,206	-	11,950	90,450,881	85,848,363	57,452,750	87.4
			ASEAN COUNTRIES	**36,186,719**	**47**	**367,874**	**3**	**148,946**	**519,131,616**	**466,446,242**	**213,386,451**	

*There have been no tests reported in the last 14 days in the **ASEAN** Region.

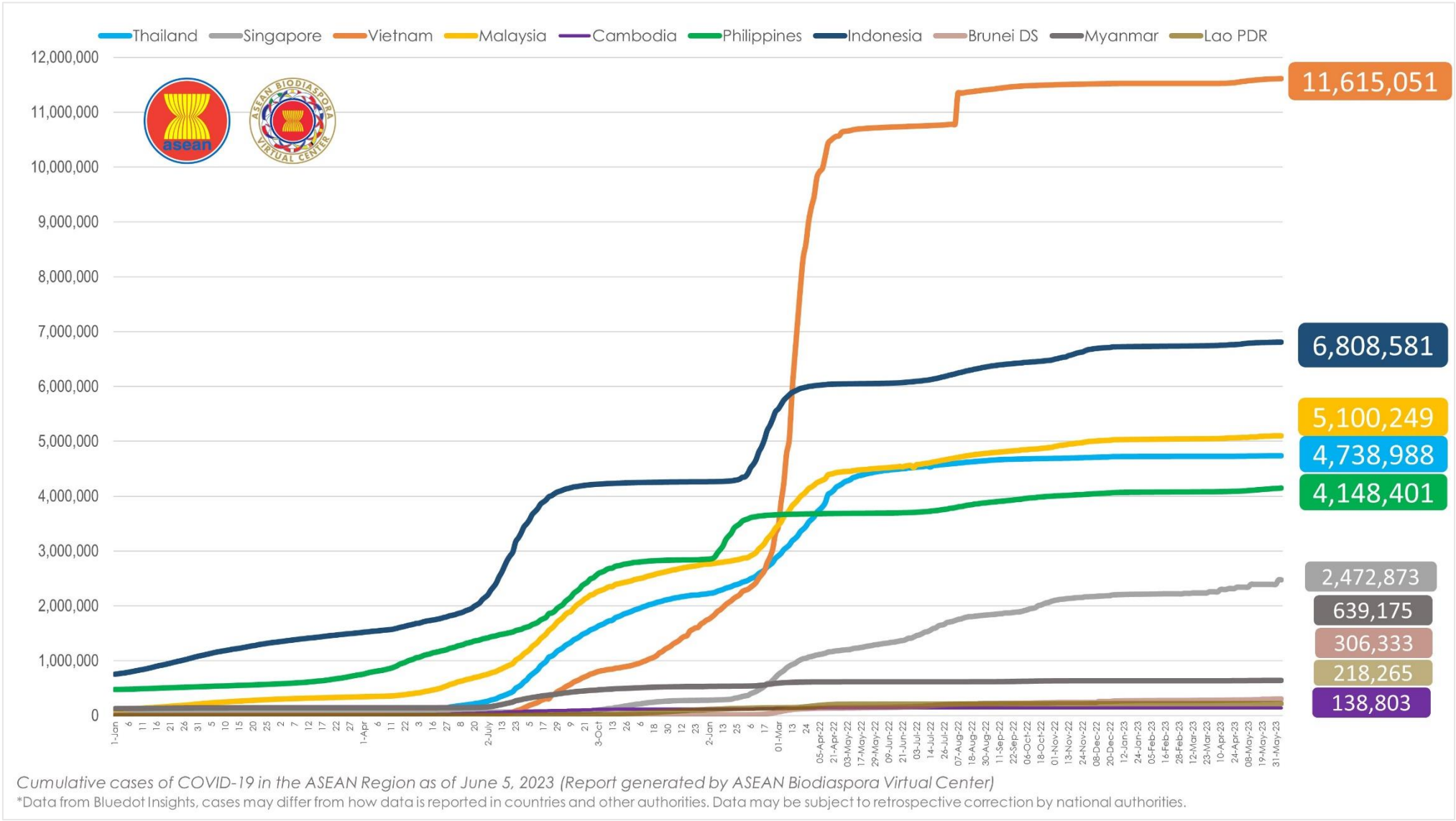
REGION	TOTAL CONFIRMED CASES	NEW CASES	TOTAL DEATHS	NEW DEATHS
ASIA	195,877,892		1,206,978	
AFRICA	12,823,945		258,778	
AMERICAS	195,505,928		2,990,470	
EUROPE	249,473,095		2,063,030	-
TOTAL	**653,680,860**	-	**6,519,256**	-

**Data References: Andra Farm, Worldometer, DOH Philippines, and the WHO

Return to table of contents

COVID-19 Epi curve among ASEAN Countries:

From January 1, 2022 to June 5, 2023



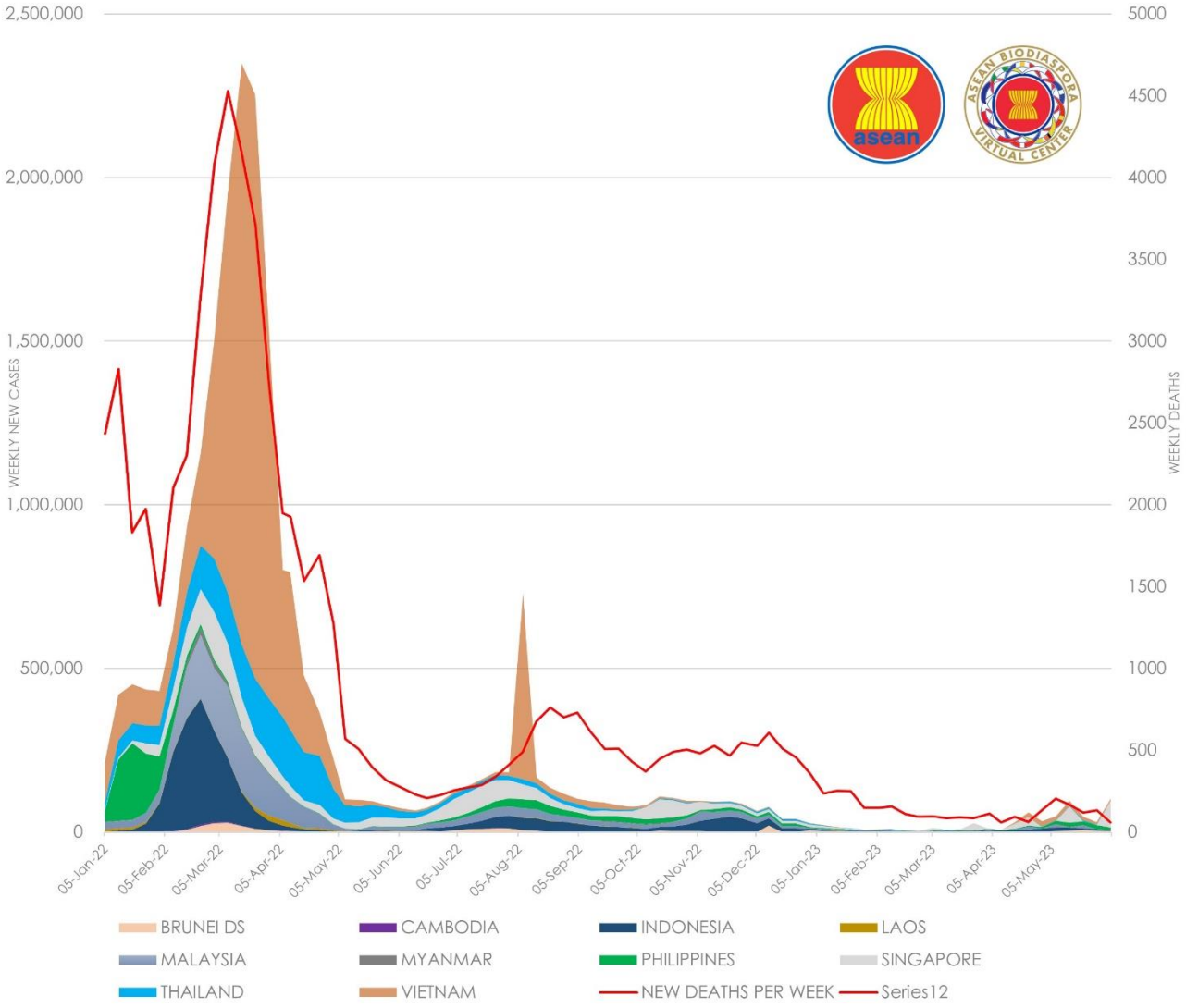
Cumulative cases of COVID-19 in the ASEAN Region as of June 5, 2023 (Report generated by ASEAN Biodiaspora Virtual Center)

*Data from Bluedot Insights, cases may differ from how data is reported in countries and other authorities. Data may be subject to retrospective correction by national authorities.

Return to table of contents

ASEAN Weekly COVID-19 New Cases and Deaths

From January 1, 2022 to June 4, 2023

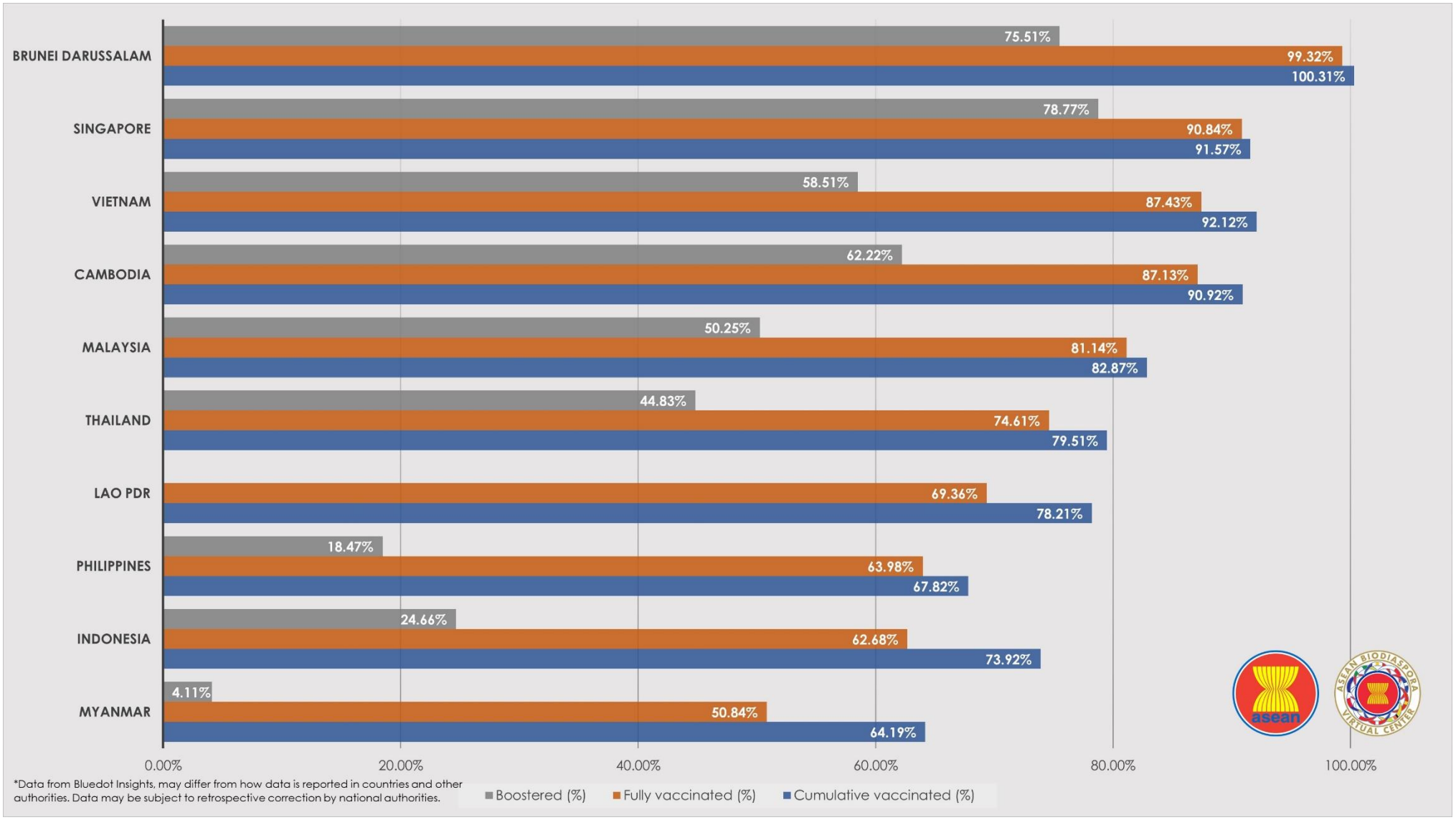


ASEAN Country	Weekly New Cases May 29-June 4, 2023	Weekly Deaths May 29-June 4, 2023
Brunei Darussalam	2,614	0
Cambodia	36	0
Indonesia	2,249	50
Lao PDR	37	0
Malaysia	0	0
Myanmar	454	0
Philippines	9,106	10
Singapore	81,625	0
Thailand	0	0
Vietnam	5,173	0

Return to table of contents

ASEAN COVID-19 Vaccination Status

as of 09 March 2023

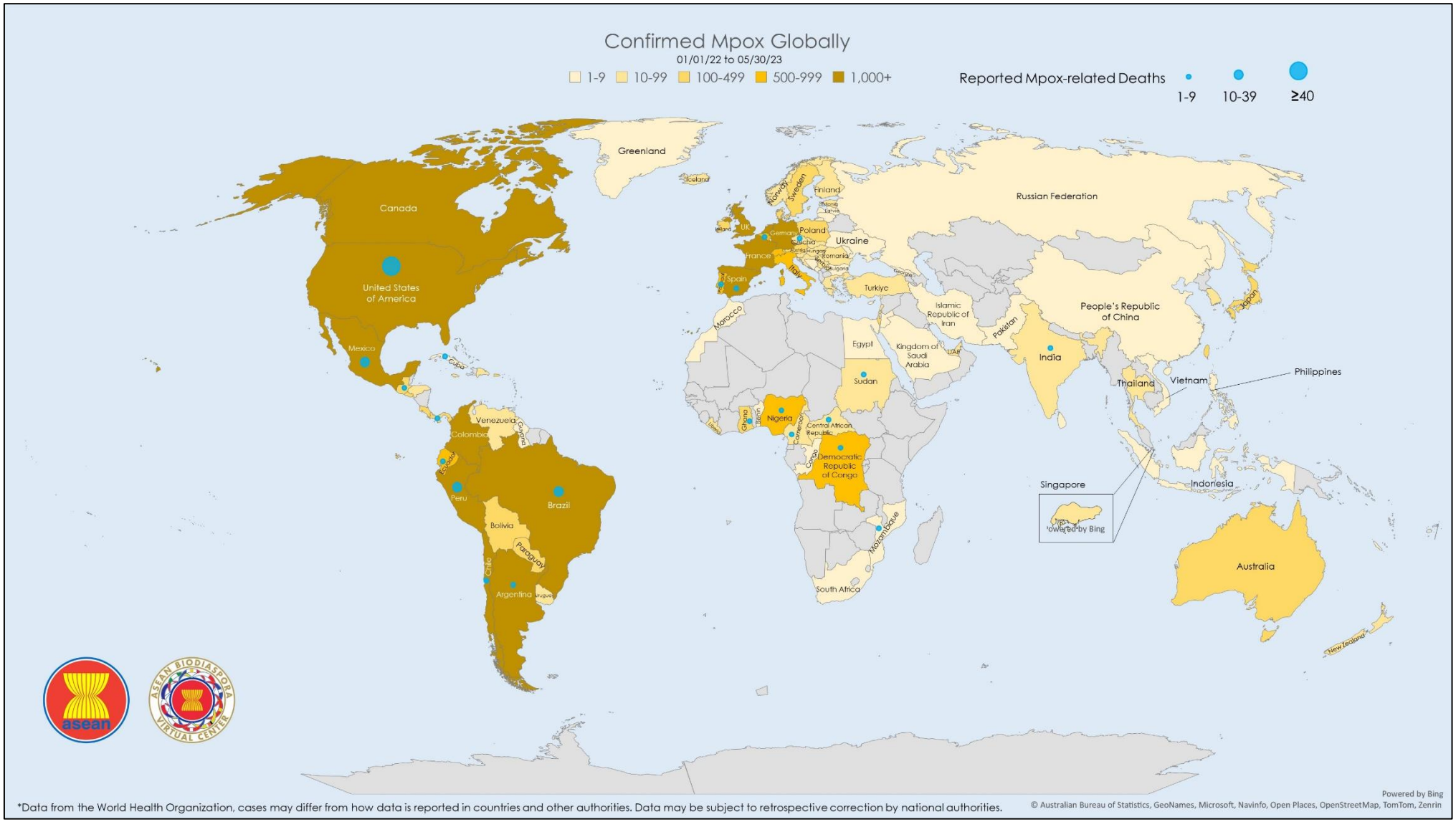


*Last update on COVID-19 vaccination status in ASEAN was on March 9, 2023.

Return to table of contents

Mpox Cases Reported Globally

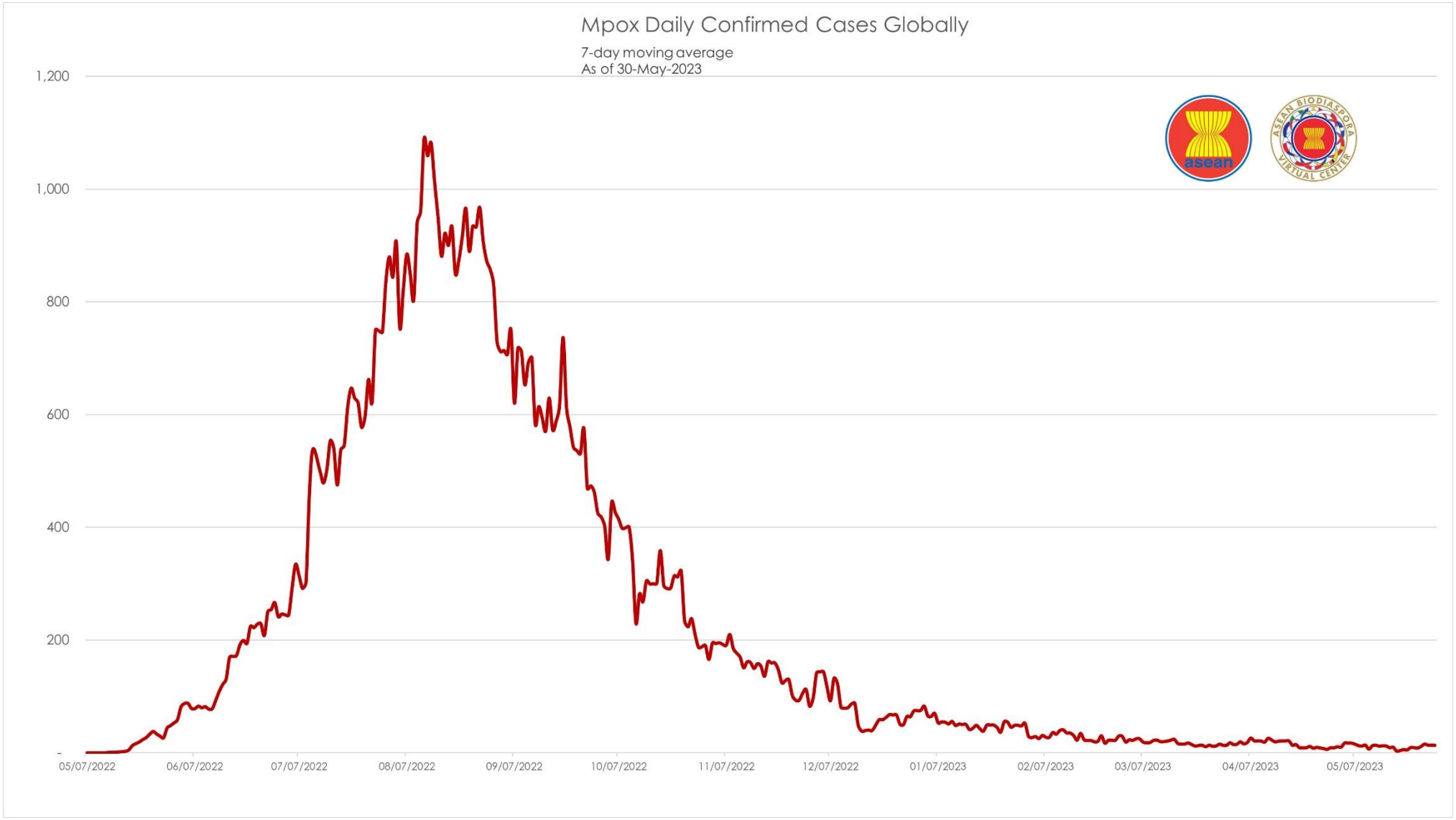
as of May 30, 2023



Return to table of contents

Mpox Daily Trend Globally

as of May 30, 2023



Return to table of contents

Mpox: Highlights and Situation Overview

- As of 30 May 2023 (1PM, GMT+7), there were **87,858** confirmed cases worldwide, including **143** deaths. Globally, the Case Fatality Rate (CFR) was **0.16%.**
- **59 confirmed cases** in the ASEAN region, with a CFR of **0%.**
- **87,799 confirmed cases** of Mpox have been reported in other **5 regions** (other than the ASEAN region):

Mpox cases in the ASEAN region

Country	Total Cases	New Cases	Deaths	Case Fatality Rate (CFR)
Indonesia	1	-	-	0.00%
Philippines	5	-	-	0.00%
Singapore	25	-	-	0.00%
Thailand	26	-	-	0.00%
Vietnam	2	-	-	0.00%
ASEAN Total	**59**	**-**	**-**	**0.00%**

Mpox cases in the Asia-Pacific region

Country/Territory	Total Cases	New Cases	Deaths	Case Fatality Rate (CFR)
Australia	145	-	-	0.00%
India	22	-	1	4.55%
Japan	163	-	-	0.00%
New Caledonia	1	-	-	0.00%
New Zealand	41	-	-	0.00%
People's Republic of China*	8	-	-	0.00%
The Republic of China*	128	-	-	0.00%
The Republic of Korea*	89	-	-	0.00%
Sri Lanka	2	-	-	0.00%
Asia-Pacific Total	**599**	**-**	**1**	**0.19%**

*People's Republic of China – China, Hong Kong (SAR), and Macao (SAR); Republic of China – Taiwan, Republic of Korea – South Korea

Top 5 countries with the most mpox cases globally

Country	Total Cases	New Cases	Deaths	Case Fatality Rate (CFR)
United States of America	30,225	-	42	0.14%
Brazil	10,941	-	16	0.15%
Spain	7,555	-	3	0.04%
France	4,146	-	-	0.00%
Colombia	4,090	-	-	0.00%

Return to table of contents

Mpox cases per region

REGION	TOTAL CONFIRMED CASES SINCE JANUARY 1, 2022	NEW CASES SINCE THE PREVIOUS REPORT	TOTAL DEATHS	CASE FATALITY RATE
AFRICA	1,828	-	21	1.15%
AMERICAS	59,371	-	114	0.19%
ASEAN	59	-	-	0.00%
ASIA PACIFIC	599	-	1	0.17%
EUROPE	25,617	-	7	0.03%
MIDDLE EAST	327	-	-	0.00%
TOTAL	**87,858**	**-**	**143**	**0.16%**

Research Update (Published and peer-reviewed studies)

- The 2022 mpox (monkeypox) outbreak has been surprisingly large and has raised several novel questions about this disease.[6] New information, such as atypical clinical manifestations and transmission via sexual activities, have been identified.[6] These pose a potential risk of widespread outbreaks due to unusual clinical manifestations and failure to consider mpox as a diagnosis by physicians and the sexual behaviours of some tourists in Southeast Asia.[6] Since Southeast Asia is a popular tourist destination, there is substantial potential for the silent spread of mpox in this region.[6] Southeast Asia nations should prioritize measures to increase awareness, manage risk perception, maintain trust, and pro-actively assist vulnerable individuals in making informed decisions.[6] The development of national guidelines should include recommendations on identifying and communicating with travellers and critical audiences and avoiding stigma.[6] The authorities should prepare mpox vaccine policy and prioritize vulnerable populations.[6] At popular tourist destinations where gatherings and events are frequent, key messages should be disseminated, such as the symptoms of mpox, transmission information, and prevention measures.[6] [Full text]

- Mpox is a rare zoonotic disease caused by the Mpox virus. On May 21, 2022, WHO announced the emergence of confirmed Mpox cases in countries outside the endemic areas in Central and West Africa.[8] This multicentre study, ***Features of Mpox infection: The analysis of the data submitted to the ID-IRI network***, was performed through the Infectious Diseases International Research Initiative network.[8] Nineteen collaborating centers in 16 countries participated in the study.[8] Consecutive cases with positive Mpoxv-DNA results by the polymerase chain reaction test were included in the study.[8] The mean age of 647 patients included in the study was 34.5. 98.6% of cases were males, 95.3% were homosexual-bisexual, and 92.2% had a history of sexual contact.[8] History of smallpox vaccination was present in 3.4% of cases.[8] The median incubation period was 7.0 days.[8] The most common symptoms and signs were rashes in 99.5%, lymphadenopathy in 65.1%, and fever in 54.9%.[8] HIV infection was present in 93.8% of cases, and 17.8% were followed up in the hospital for further treatment.[8] In the two weeks before the rash, prodromal symptoms occurred in 52.8% of cases.[8] The incubation period was 3.5 days shorter in HIV-infected Mpox cases with CD4 count <200/μL, presence of lymphadenopathy was observed, a characteristic finding for Mpox, accompanied the disease to a lesser extent in cases with smallpox vaccination.[8] Mpox disseminates globally, not just in endemic areas.[8] Knowledge of clinical features, disease transmission kinetics, and rapid and effective implementation of public health measures are paramount, as reflected by the findings in this study.[8] [Full text]

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