Risk Assessment for International Dissemination of COVID-19 to the ASEAN Region

ASEAN Biodiaspora Virtual Center (ABVC)

as of June 3, 2020 (2:00 PM GMT+8)

COVID-19: Highlights and Situation Overview

- World Health Organization's (WHO) has published a new operational guidance on maintaining essential health services, which provides recommendations for practical actions that countries can take at national, sub-regional and local levels to reorganize and safely maintain access to high-quality, essential health services during the pandemic.
- During the 1 June media briefing, WHO Director-General Dr Tedros highlighted that the COVID-19 pandemic has led to disruptions in services for treatment of non-communicable diseases in many countries. The COVID-19 response must be inclusive of the healthcare needs of people living with these diseases
- According to Indonesia's Religious Affairs Minister on June 2, Indonesia cancelled the haj pilgrimage this year for people in the world's largest Muslim-majority nation due to concerns over the coronavirus. Each year hundreds of thousands of Indonesians go on the haj to Saudi Arabia, where Islam's two holiest sites -- Mecca and Medina -- are located. In addition, commuter line operator PT Kereta Commuter Indonesia (KCI) has asserted that it will maintain COVID-19 health protocols as Jakarta and its satellite cities brace for the transition to the so-called "new normal" period. Wearing a mask in stations and inside trains will remain mandatory, as well as the physical distancing measures and body temperature checks. The KCI has also provided more hand-washing facilities in stations. Hand sanitizer will also be available both in stations and carried by officers on trains.
- 1.16 million doses of routine immunization vaccines funded by Myanmar's Ministry of Health and Sports and procured through UNICEF arrived at the Yangon International Airport on June 1 to support the resumption of immunization services across Myanmar. The UNICEF chartered cargo flight arranged with the cooperation of Scanned Global Logistics also brought the second batch of 10,000 COVID-19 test kits and other supplies as part of UNICEF's ongoing support to the Ministry of Health and Sports (MoHS) to scale up testing capacity and fight the pandemic.
- Japan is considering re-opening its borders to travelers from selected countries which have low levels of coronavirus infections, as it begins to ease restrictions put in place earlier this year to control the outbreak. As schools, cinemas, sports clubs and department stores reopened in the nation's capital Tokyo on Monday (June1), media have reported that the government is also planning to allow travelers from Thailand, Vietnam, Australia and New Zealand into the country in the coming months. However, there was no immediate comment from the foreign ministry.

Travel Advisories (new update/s)

- Brunei: Royal Brunei Airline's new temporary flying program will operate until 11:59 PM on June 30 directly connecting Brunei to Kuala Lumpur, Singapore, Melbourne, Hong Kong and Manila only.
- Cambodia: On June 2, according to the Cambodia's Prime Minister, Cambodian citizens would no longer be held to the same stringent entry requirements as foreigners trying to enter Cambodia, which requires a certificate granted up to 72 hours before entry and also medical insurance covering them for up to BND 50,000 in expenses.

- Myanmar: Myanmar's Foreign Affairs Ministry on June 1 announced extension of temporary entry restrictions for travellers from all countries until June 15, as part of measures to contain the spread of COVID-19 outbreak. The suspension period of all types of visas including social visit visas and visa exemption services has also been extended to June 15.
- Thailand: The Provincial Communicable Disease Committee announced on June 2 that domestic flights to and from Phuket will resume on June 15. The Civil Aviation Authority of Thailand (CAAT) has banned domestic flights to and from Phuket since April 10 due to the Covid-19 pandemic. The government plans to create so-called "travel bubbles" through bilateral agreements designed to keep the novel coronavirus in check when Thailand's borders will be reopened on July.
- Vietnam: Vietnamese carriers resumed all domestic operations with national carrier Vietnam Airlines launching six new domestic routes. However, no date has been set to resume normal international operations.

Cases and Deaths as of 03June 2020
- As of June 3 (2PM, GMT+8), worldwide, there were **6,379,913** confirmed cases, including **380,539** deaths. Globally, Case Fatality Ratio (CFR)* is **5.96.**
- In **China**, there were **84,604** confirmed cases with **4,645** deaths, including deaths in Hong Kong (4) and Taiwan (7). Confirmed cases in China include confirmed cases in Hong Kong (1,094), Macau (45), and Taiwan (443).
- **6,295,309 confirmed cases** of COVID-19 have been reported in **212 countries/states** (other than China, Hong Kong, Taiwan and Macau):

REGION	COUNTRY	FIRST CONFIRMED CASE(S)	LATEST CONFIRMED CASE(S)	CONFIRMED CASES/ (Deaths)	CASE FATALITY RATIO*
ASIA PACIFIC	Thailand	13 Jan 2020	02 Jun 2020	3,083 (58)	1.88
	Vietnam	23 Jan 2020	30 May 2020	328	
	Singapore	23 Jan 2020	02 Jun 2020	35,836 (24)	0.07
	Malaysia	25 Jan 2020	02 Jun 2020	7,877 (115)	1.46
	Cambodia	27 Jan 2020	30 May 2020	125	
	Philippines	30 Jan 2020	02 Jun 2020	18,997 (966)	5.09
	Indonesia	02 Mar 2020	02 Jun 2020	27,549 (1,663)	6.04
	Brunei	10 Mar 2020	27 May 2020	141 (2)	1.42
	Myanmar	23 Mar 2020	01 Jun 2020	228 (6)	2.63
	Lao PDR	24 Mar 2020	13 Apr 2020	19	
	Japan	16 Jan 2020	02 Jun 2020	17,590 (899)	5.11
	South Korea	20 Jan 2020	02 Jun 2020	11,541 (272)	2.36
	Nepal	24 Jan 2020	02 Jun 2020	2,099 (8)	0.38
	Australia	25 Jan 2020	02 Jun 2020	7,221 (102)	1.41

Sri Lanka	27 Jan 2020	02 Jun 2020	1,643 (11)	0.67
India	30 Jan 2020	02 Jun 2020	201,007 (5,628)	2.80
Afghanistan	24 Feb 2020	02 Jun 2020	16,492 (279)	1.69
Pakistan	26 Feb 2020	02 Jun 2020	76,398 (1,621)	2.12
New Zealand	28 Feb 2020	23 May 2020	1,504 (22)	1.46
Bhutan	05 Mar 2020	02 Jun 2020	47	
Maldives	07 Mar 2020	02 Jun 2020	1,829 (7)	0.38
Bangladesh	08 Mar 2020	02 Jun 2020	52,445 (709)	1.35
Mongolia	10 Mar 2020	02 Jun 2020	185	0.00
Turkey	10 Mar 2020	01 Jun 2020	163,942 (4,540)	2.77
French Polynesia	12 Mar 2020	06 May 2020	60	0.00
Guam	15 Mar 2020	01 Jun 2020	175 (5)	2.86
New Caledonia	17 Mar 2020	01 Jun 2020	20	
Fiji	18 Mar 2020	20 Apr 2020	18	
Papua New Guinea	21 Mar 2020	22 Apr 2020	8	
Timor Leste	21 Mar 2020	25 Apr 2020	24	
Northern Mariana Islands	28 Mar 2020	02 Jun 2020	23 (2)	8.70
AMERICAS USA	21 Jan 2020	02 Jun 2020	1,872,770 (107,775)	5.75
Canada	25 Jan 2020	02 Jun 2020	92,393 (7,447)	8.06
Brazil	26 Feb 2020	02 Jun 2020	531,768 (30,152)	5.67
Mexico	28 Feb 2020	02 Jun 2020	93,435 (10,167)	10.88
Saint Martin	01 Mar 2020	30 May 2020	41 (3)	7.32
Ecuador	01 Mar 2020	02 Jun 2020	39,994 (3,394)	8.49
Dominican Republic	01 Mar 2020	02 Jun 2020	17,572 (502)	2.86
Chile	03 Mar 2020	02 Jun 2020	105,159 (1,113)	1.06
Argentina	03 Mar 2020	02 Jun 2020	17,415 (560)	3.22
Peru	05 Mar 2020	02 Jun 2020	170,039 (4,634)	2.73
Costa Rica	06 Mar 2020	02 Jun 2020	1,084 (10)	0.92
Colombia	06 Mar 2020	02 Jun 2020	30,493 (969)	3.18
French Guiana	06 Mar 2020	01 Jun 2020	499 (1)	0.20
Martinique	06 Mar 2020	30 May 2020	200 (14)	7.00
Paraguay	07 Mar 2020	02 Jun 2020	995 (11)	1.11
Panama	10 Mar 2020	02 Jun 2020	13,837 (344)	2.49
Bolivia	10 Mar 2020	02 Jun 2020	10,531 (343)	3.26
Honduras	11 Mar 2020	02 Jun 2020	5,362 (217)	4.05
Cuba	11 Mar 2020	02 Jun 2020	2,092 (83)	3.97
Guyana	11 Mar 2020	01 Jun 2020	153 (12)	7.84
Jamaica	12 Mar 2020	02 Jun 2020	588 (9)	1.53
St Vincent and the Grenadines	12 Mar 2020	30 May 2020	26	
Saint Lucia	13 Mar 2020	04 May 2020	18	

Trinidad and Tobago	13 Mar 2020	31 May 2020	117 (8)	6.84
Venezuela	13 Mar 2020	02 Jun 2020	1,662 (15)	0.90
Guatemala	13 Mar 2020	02 Jun 2020	5,336 (116)	2.17
Uruguay	13 Mar 2020	02 Jun 2020	825 (23)	2.79
Curacao	13 Mar 2020	02 Jun 2020	20 (1)	5.00
Puerto Rico	13 Mar 2020	02 Jun 2020	3,935 (138)	3.51
Suriname	13 Mar 2020	02 Jun 2020	44 (1)	2.27
Antigua and Barbuda	13 Mar 2020	01 Jun 2020	26 (3)	11.54
Guadeloupe	13 Mar 2020	30 May 2020	162 (14)	8.64
Cayman Islands	13 Mar 2020	02 Jun 2020	150 (1)	0.67
Aruba	14 Mar 2020	13 May 2020	101 (3)	2.97
Bahamas	15 Mar 2020	30 May 2020	102 (11)	10.78
US Virgin Islands	16 Mar 2020	02 Jun 2020	70 (6)	8.57
Sint Maarten	17 Mar 2020	17 May 2020	77 (15)	19.48
Montserrat	17 Mar 2020	25 Apr 2020	11 (1)	9.09
Barbados	17 Mar 2020	24 May 2020	92 (7)	7.61
El Salvador	18 Mar 2020	02 Jun 2020	2,653 (46)	1.73
Nicaragua	18 Mar 2020	27 May 2020	759 (35)	4.61
Bermuda	18 Mar 2020	02 Jun 2020	141 (9)	6.38
Haiti	19 Mar 2020	02 Jun 2020	2,226 (45)	2.02
Dominica	22 Mar 2020	02 Jun 2020	18	
Grenada	22 Mar 2020	26 May 2020	23	
Belize	23 Mar 2020	14 Apr 2020	18 (2)	11.11
Turks and Caicos Islands	23 Mar 2020	28 Apr 2020	12 (1)	8.33
Saint Kitts and Nevis	24 Mar 2020	20 Apr 2020	15	
British Virgin Islands	25 Mar 2020	15 May 2020	8 (1)	12.50
Anguilla	26 Mar 2020	03 Apr 2020	3	
Caribbean Netherlands	01 Apr 2020	01 Jun 2020	7	
Falkland Islands	03 Apr 2020	24 Apr 2020	13	
Saint Pierre and Miquelon	05 Apr 2020	05 Apr 2020	1	
EUROPE **France**	24 Jan 2020	01 Jun 2020	189,220 (28,833)	15.24
Germany	27 Jan 2020	02 Jun 2020	183,820 (8,624)	4.69
Finland	29 Jan 2020	01 Jun 2020	6,885 (318)	4.62
Italy	30 Jan 2020	02 Jun 2020	233,515 (33,530)	14.36
Russian Federation	31 Jan 2020	02 Jun 2020	423,741 (5,037)	1.19
Spain	31 Jan 2020	02 Jun 2020	239,932 (27,127)	11.31
Sweden	31 Jan 2020	02 Jun 2020	38,589 (4,468)	11.58
United Kingdom of Great Britain	31 Jan 2020	02 Jun 2020	277,985 (39,369)	14.16
Belgium	05 Feb 2020	02 Jun 2020	58,615 (9,505)	16.22
Switzerland	25 Feb 2020	02 Jun 2020	30,874 (1,920)	6.22

Austria	25 Feb 2020	02 Jun 2020	16,759 (669)	3.99
Croatia	25 Feb 2020	30 May 2020	2,246 (103)	4.59
Norway	26 Feb 2020	02Jun 2020	8,452 (237)	2.80
Romania	26 Feb 2020	02 Jun 2020	19,517 (1,285)	6.58
Estonia	26 Feb 2020	01 Jun 2020	1,870 (68)	3.64
Georgia	26 Feb 2020	01 Jun 2020	794 (12)	1.51
North Macedonia	26 Feb 2020	01 Jun 2020	2,315 (140)	6.05
Greece	26 Feb 2020	02 Jun 2020	2,918 (179)	6.13
Denmark	27 Feb 2020	02 Jun 2020	11,734 (580)	4.94
San Marino	27 Feb 2020	02 Jun 2020	672 (42)	6.25
Lithuania	27 Feb 2020	02 Jun 2020	1,682 (71)	4.22
Netherlands	27 Feb 2020	02 Jun 2020	46,647 (5,967)	12.79
Azerbaijan	27 Feb 2020	02 Jun 2020	5,662 (68)	1.20
Belarus	28 Feb 2020	02 Jun 2020	44,255 (243)	0.55
Iceland	28 Feb 2020	30 May 2020	1,806 (10)	0.55
Ireland	28 Feb 2020	02 Jun 2020	25,062 (1,650)	6.58
Monaco	29 Feb 2020	31 May 2020	99 (4)	4.04
Czech Republic	01 Mar 2020	02 Jun 2020	9,308 (321)	3.45
Luxembourg	01 Mar 2020	02 Jun 2020	4,020 (110)	2.74
Armenia	01 Mar 2020	02 Jun 2020	10,009 (58)	1.58
Latvia	02 Mar 2020	02 Jun 2020	1,071 (24)	2.24
Portugal	02 Mar 2020	02 Jun 2020	32,895 (1,436)	4.37
Andorra	02 Mar 2020	02 Jun 2020	765 (51)	6.67
Liechtenstein	03 Mar 2020	27 Apr 2020	82 (1)	1.22
Ukraine	03 Mar 2020	02 Jun 2020	24,340 (727)	2.99
Slovenia	04 Mar 2020	02 Jun 2020	1,475 (109)	7.39
Hungary	04 Mar 2020	02 Jun 2020	3,921 (532)	13.57
Poland	04 Mar 2020	02 Jun 2020	24,395 (1,092)	4.48
Faroe Islands	04 Mar 2020	23 Apr 2020	187	
Bosnia and Herzegovina	05 Mar 2020	02 Jun 2020	2,535 (157)	6.19
Gibraltar	05 Mar 2020	02 Jun 2020	172	
Slovakia	06 Mar 2020	01 Jun 2020	1,522 (28)	1.84
Serbia	06 Mar 2020	01 Jun 2020	11,430 (244)	2.13
Vatican City	06 Mar 2020	08 May 2020	12	0.00
Malta	07 Mar 2020	02 Jun 2020	620 (9)	1.45
Moldova	07 Mar 2020	02 Jun 2020	8,360 (307)	3.67
Bulgaria	08 Mar 2020	02 Jun 2020	2,538 (144)	5.67
Albania	09 Mar 2020	02 Jun 2020	1,164 (33)	2.84
Cyprus	09 Mar 2020	02 Jun 2020	949 (17)	1.79
Channel Islands	09 Mar 2020	28 May 2020	560 (45)	8.04
Jersey	10 Mar 2020	27 May 2020	308 (29)	9.42
Kazakhstan	13 Mar 2020	02 Jun 2020	11,571 (44)	0.38
Kosovo	13 Mar 2020	02 Jun 2020	1,110 (30)	2.70
Uzbekistan	15 Mar 2020	02 Jun 2020	3,750 (15)	0.40
Greenland	16 Mar 2020	27 May 2020	13	

	Montenegro	17 Mar 2020	10 May 2020	324 (9)	2.78
	Kyrgyztan	18 Mar 2020	02 Jun 2020	1,845 (17)	0.92
	Isle of Man	19 Mar 2020	21 May 2020	336 (1)	0.30
	Tajikistan	30 Apr 2020	02 Jun 2020	4,013 (47)	1.17
MIDDLE EAST	**UAE**	29 Jan 2020	02 Jun 2020	35,788 (269)	0.75
	Iran	19 Feb 2020	02 Jun 2020	157,562 (7,942)	5.04
	Israel	21 Feb 2020	02 Jun 2020	17,219 (287)	1.67
	Lebanon	21 Feb 2020	02 Jun 2020	1,242 (27)	2.17
	Kuwait	24 Feb 2020	02 Jun 2020	28,649 (667)	2.33
	Oman	24 Feb 2020	02 Jun 2020	12,799 (59)	0.46
	Bahrain	24 Feb 2020	02 Jun 2020	11,871 (19)	0.16
	Iraq	24 Feb 2020	02 Jun 2020	6,868 (215)	3.13
	Qatar	29 Feb 2020	02 Jun 2020	60,259 (43)	0.07
	Saudi Arabia	02 Mar 2020	02 Jun 2020	89,011 (549)	0.62
	Jordan	02 Mar 2020	02 Jun 2020	755 (9)	1.19
	Palestine	05 Mar 2020	02 Jun 2020	630 (5)	0.79
	Syria	22 Mar 2020	02 Jun 2020	123 (6)	4.88
	Yemen	10 Apr 2020	02 Jun 2020	354 (84)	23.73
AFRICA	**Egypt**	14 Feb 2020	02 Jun 2020	26,384 (1,005)	3.81
	Algeria	25 Feb 2020	02 Jun 2020	9,626 (667)	6.93
	Nigeria	28 Feb 2020	02 Jun 2020	10,578 (299)	2.83
	Tunisia	02 Mar 2020	02 Jun 2020	1,086 (48)	4.42
	Morocco	02 Mar 2020	02 Jun 2020	7,859 (205)	2.61
	Senegal	02 Mar 2020	02 Jun 2020	3,836 (43)	1.12
	South Africa	05 Mar 2020	02 Jun 2020	35,812 (705)	1.97
	Cameroon	06 Mar 2020	02 Jun 2020	6,397 (199)	3.11
	Togo	06 Mar 2020	02 Jun 2020	443 (13)	2.93
	Burkina Faso	09 Mar 2020	02 Jun 2020	881 (53)	6.02
	Democratic Republic of Congo	10 Mar 2020	02 Jun 2020	3,326 (72)	2.16
	Ivory Coast	11 Mar 2020	02 Jun 2020	2,951 (33)	1.12
	Reunion	11 Mar 2020	02 Jun 2020	477 (1)	0.21
	Ghana	13 Mar 2020	02 Jun 2020	8,297 (38)	0.46
	Guinea	13 Mar 2020	02 Jun 2020	3,844 (23)	0.60
	Gabon	13 Mar 2020	31 May 2020	2,655 (17)	0.64
	Sudan	13 Mar 2020	02 Jun 2020	5,173 (298)	5.76
	Kenya	13 Mar 2020	02 Jun 2020	2,093 (71)	3.39
	Ethiopia	13 Mar 2020	02 Jun 2020	1,344 (14)	1.04
	Central African Republic	14 Mar 2020	02 Jun 2020	1,069 (4)	0.37
	Seychelles	14 Mar 2020	06 Apr 2020	11	
	Rwanda	14 Mar 2020	02 Jun 2020	377 (1)	0.27
	Namibia	14 Mar 2020	01 Jun 2020	25	
	Swaziland	14 Mar 2020	02 Jun 2020	293 (3)	1.02
	Mauritania	14 Mar 2020	02 Jun 2020	588 (23)	3.91
	Mayotte	14 Mar 2020	02 Jun 2020	1,986 (24)	1.21
	Equatorial Guinea	15 Mar 2020	29 May 2020	1,306 (12)	0.92
	Republic of Congo	15 Mar 2020	01 Jun 2020	611 (20)	3.27
	Benin	16 Mar 2020	02 Jun 2020	243 (3)	1.23
	Liberia	16 Mar 2020	02 Jun 2020	311 (28)	9.00
	Tanzania	16 Mar 2020	15 May 2020	509 (21)	4.13
	Somalia	16 Mar 2020	01 Jun 2020	2,023 (79)	3.91
	Gambia	17 Mar 2020	23 May 2020	25 (1)	4.00
	Zambia	17 Mar 2020	02 Jun 2020	1,089 (7)	0.64
	Mauritius	18 Mar 2020	30 May 2020	335 (10)	2.99

Djibouti	18 Mar 2020	02 Jun 2020	3,779 (25)	0.66
Niger	19 Mar 2020	02 Jun 2020	958 (65)	6.78
Chad	19 Mar 2020	02 Jun 2020	790 (66)	8.35
Zimbabwe	20 Mar 2020	02 Jun 2020	203 (4)	1.97
Cape Verde	20 Mar 2020	02 Jun 2020	458 (4)	0.87
Madagascar	20 Mar 2020	02 Jun 2020	845 (6)	0.71
Uganda	21 Mar 2020	02 Jun 2020	489	
Eritrea	21 Mar 2020	19 Apr 2020	39	
Angola	21 Mar 2020	01 Jun 2020	86 (4)	4.65
Mozambique	22 Mar 2020	31 May 2020	254 (2)	0.79
Libya	24 Mar 2020	02 Jun 2020	168 (5)	2.98
Guinea-Bissau	25 Mar 2020	02 Jun 2020	1,339 (8)	0.60
Mali	25 Mar 2020	01 Jun 2020	1,315 (78)	5.93
Botswana	30 Mar 2020	01 Jun 2020	38 (1)	2.63
Sierra Leone	31 Mar 2020	01 Jun 2020	865 (46)	5.32
Burundi	31 Mar 2020	31 May 2020	63 (1)	1.59
Malawi	02 Apr 2020	02 Jun 2020	336 (4)	1.19
South Sudan	05 Apr 2020	28 May 2020	994 (10)	1.01
Sao Tome and Principe	06 Apr 2020	02 Jun 2020	484 (12)	2.48
Lesotho	13 May 2020	23 May 2020	2	
			6,295,309 (375,894)	

The calculated CFR is based on reported deaths and reported case counts, and does not account for recovered cases over time or rate of testing in a particular region.
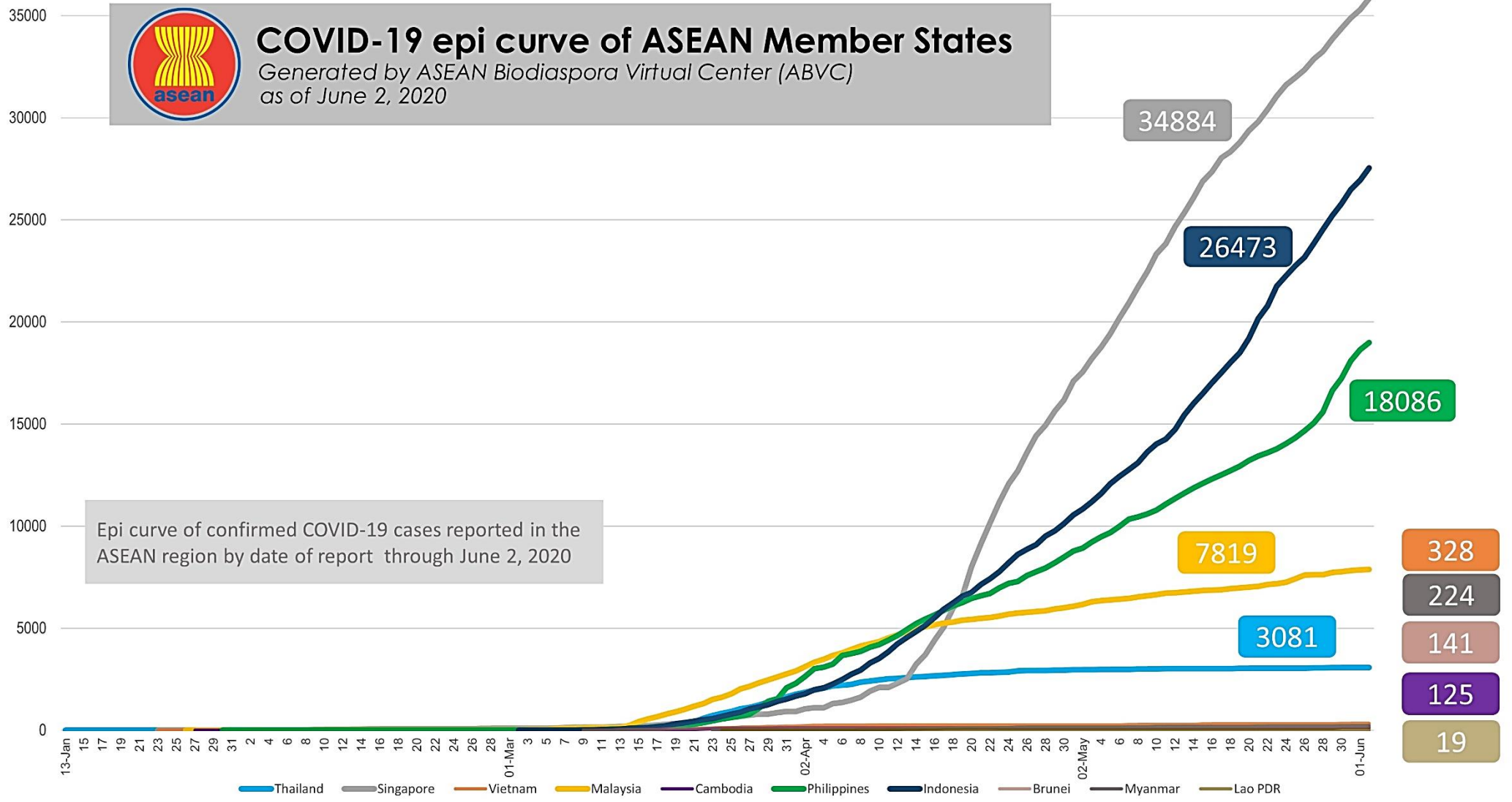***Adjusted cumulative count from last report*

Timeline of COVID-19: ASEAN *(continuation)*

Additional cases in
Indonesia (467),
Malaysia (38),
Myanmar (4),
Philippines (552),
Singapore (408)
Thailand (1)

JUNE	1		2	

Additional cases in
Indonesia (609),
Malaysia (20),
Philippines (359),
Singapore (544)
Thailand (1)
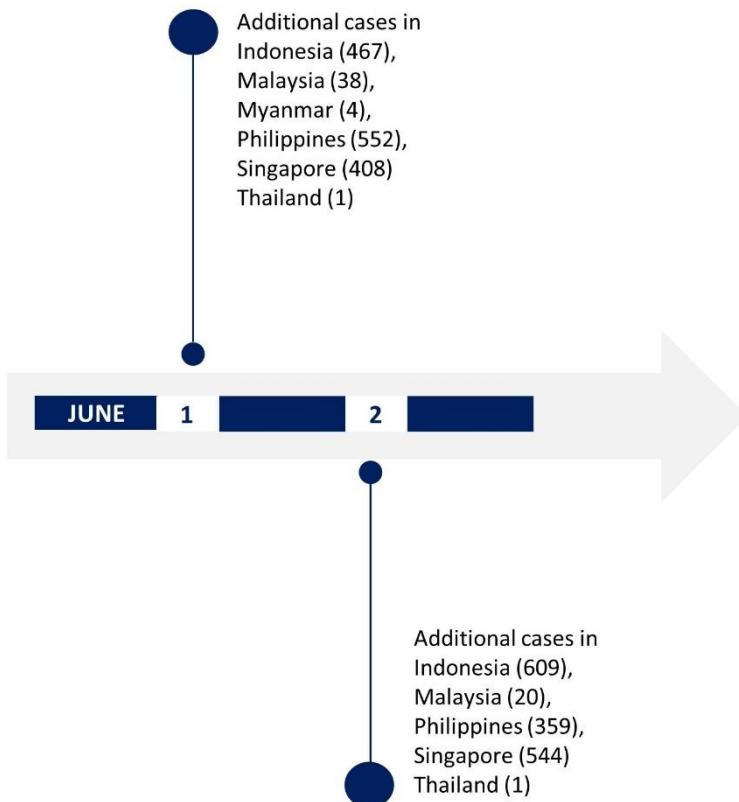
COVID-19 epi curve of ASEAN Member States
Generated by ASEAN Biodiaspora Virtual Center (ABVC)
as of June 2, 2020

Epi curve of confirmed COVID-19 cases reported in the ASEAN region by date of report through June 2, 2020

34884
26473
18086
7819
3081
328
224
141
125
19

Thailand — Singapore — Vietnam — Malaysia — Cambodia — Philippines — Indonesia — Brunei — Myanmar — Lao PDR

Transmission Category of COVID-19 Affected Countries

BlueDot has classified countries worldwide into categories based on the observed rate of COVID-19 transmission using data generated by Bluedot's global epidemic surveillance system, as of 9:00AM EST on 2 June 2020. To contextualize each country's current situation, Bluedot calculated: (1) each country's rate of change for COVID-19 case reports over 7 days, (2) case fatality ratios (CFR) for each country, (3) each country's COVID-19 case burden, per 1,000 population and (4) each country's case doubling time (in days). Bluedot also utilized the Infectious Disease Vulnerability Index as a measure of each country's public health capacity to detect, respond, and/or control a COVID-19 outbreak.

Surveillance Data

Utilizing BlueDot's up to date A.I.-driven surveillance data, cumulative case count and the number of new cases per day at a country level globally, and for the United States and Canada at a state and provincial/territorial level has been calculated respectively.

Using these surveillance data, Bluedot calculated:

- Total number of cases reported in the last 30 days per 1,000 population
- Doubling time (in days)
- Days since peak (i.e. days since the highest number of COVID-19 cases were reported in a single day).

To account for day-to-day variability in reporting within a country, it also calculated a 7-day moving average of new case reports per day. These data were used to model the rate of change in new COVID-19 case reports, as described below.

Rate of Change

Bluedot sought to identify areas in which new COVID-19 cases reported per day were increasing at a statistically significant rate. Using the 7-day rolling average of new case reports, Bluedot fit a linear regression model. From this model, the rate of change of the number of new COVID-19 cases over the course of a week has been quantified. Significance testing to assess whether the rate of change was significantly different than 0 was then performed.

Categorization Approach

Using both the modelled rate of change and associated measures of statistical significance, we categorized countries and regions (states and provinces/territories) into one of six categories:

A **Countries/regions reporting <100 cases of COVID-19**
• These countries have reported <100 cases of COVID-19, a CFR ≤4%, and have a favorable IDVI suggesting adequate capacity to detect, respond, and/or control an epidemic.

B **Countries reporting <100 cases and a _slowly increasing_ rate of COVID-19 transmission**
• These countries have reported <100 cases of COVID-19, a CFR ≤4%, and have a favorable IDVI suggesting adequate capacity to detect, respond, and/or control an epidemic.
• Interpretation: These countries may be in an early phase of the epidemic, with limited community-based transmission.

C **Countries reporting a _steadily increasing OR stabilizing_ rate of COVID-19 transmission**
• These countries have reported ≥100 cases of COVID-19 and have a steadily increasing OR stabilizing rate of COVID-19 transmission (i.e. the number of new cases reported each day is consistent, or increasing at a low rate).
• Interpretation: These countries may be in an early stage of the epidemic with either steadily increasing community-based transmission, OR demonstrating early evidence of effective epidemic control measures, OR have incomplete testing/reporting.

D **Countries reporting a rapidly increasing rate of COVID-19 transmission**
• These countries have reported ≥100 cases of COVID-19 and have a rapidly accelerating rate of COVID-19 transmission.

• Interpretation: These countries may be in the most aggressive stages of the epidemic and are experiencing widespread community-based transmission and likely have sufficient testing capacity.

E **Countries reported a negative rate of COVID-19 transmission**
• These countries have reported ≥100 cases of COVID-19 and have a decelerating rate of COVID-19 transmission.
• Interpretation: These countries may be in the mid- or later stages of the epidemic, with a negative rate of transmission (i.e. fewer new cases reported each day) due to robust and effective control measures.

F **Countries where insufficient information is available on COVID-19 transmission**
• These countries have not reported imported or local cases of COVID-19
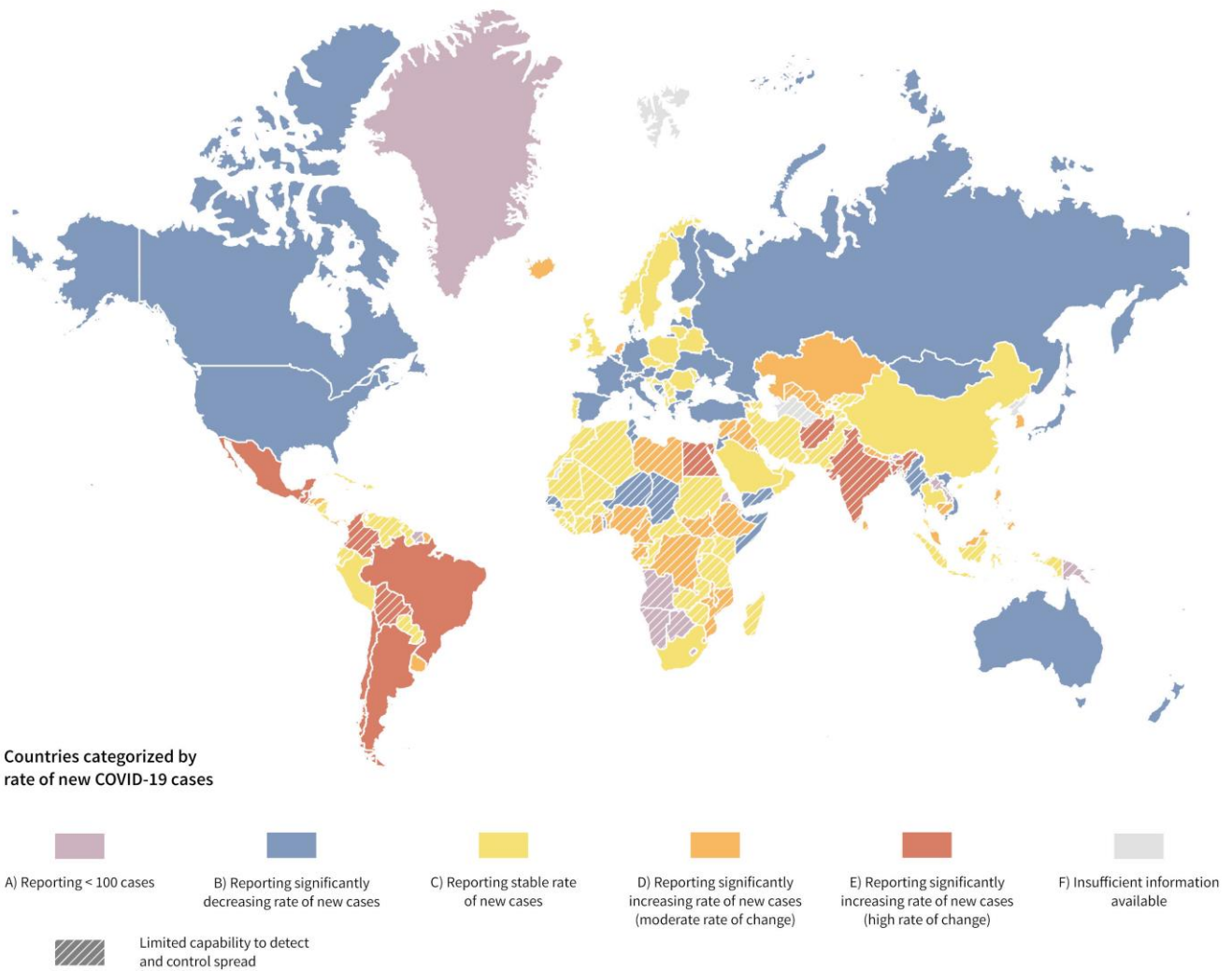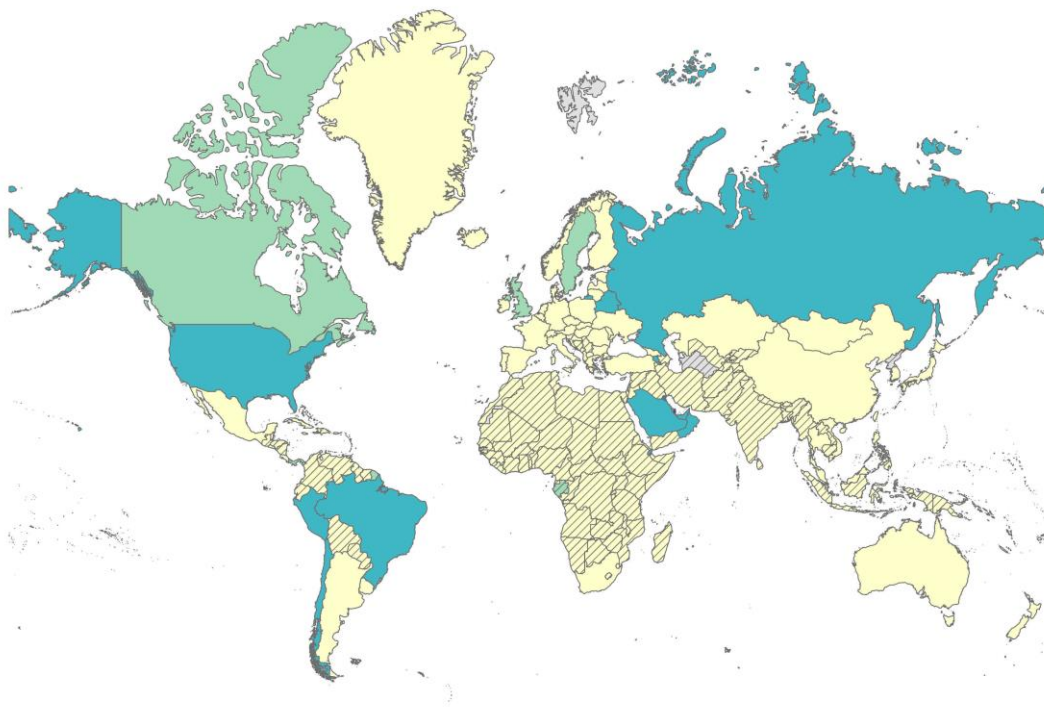

Figure 1. Map depicting countries by the corresponding COVID-19 transmission category

Reported cases over last 30 days per 1,000 population

| 1 | 2 | 5 | 10 | 52 |

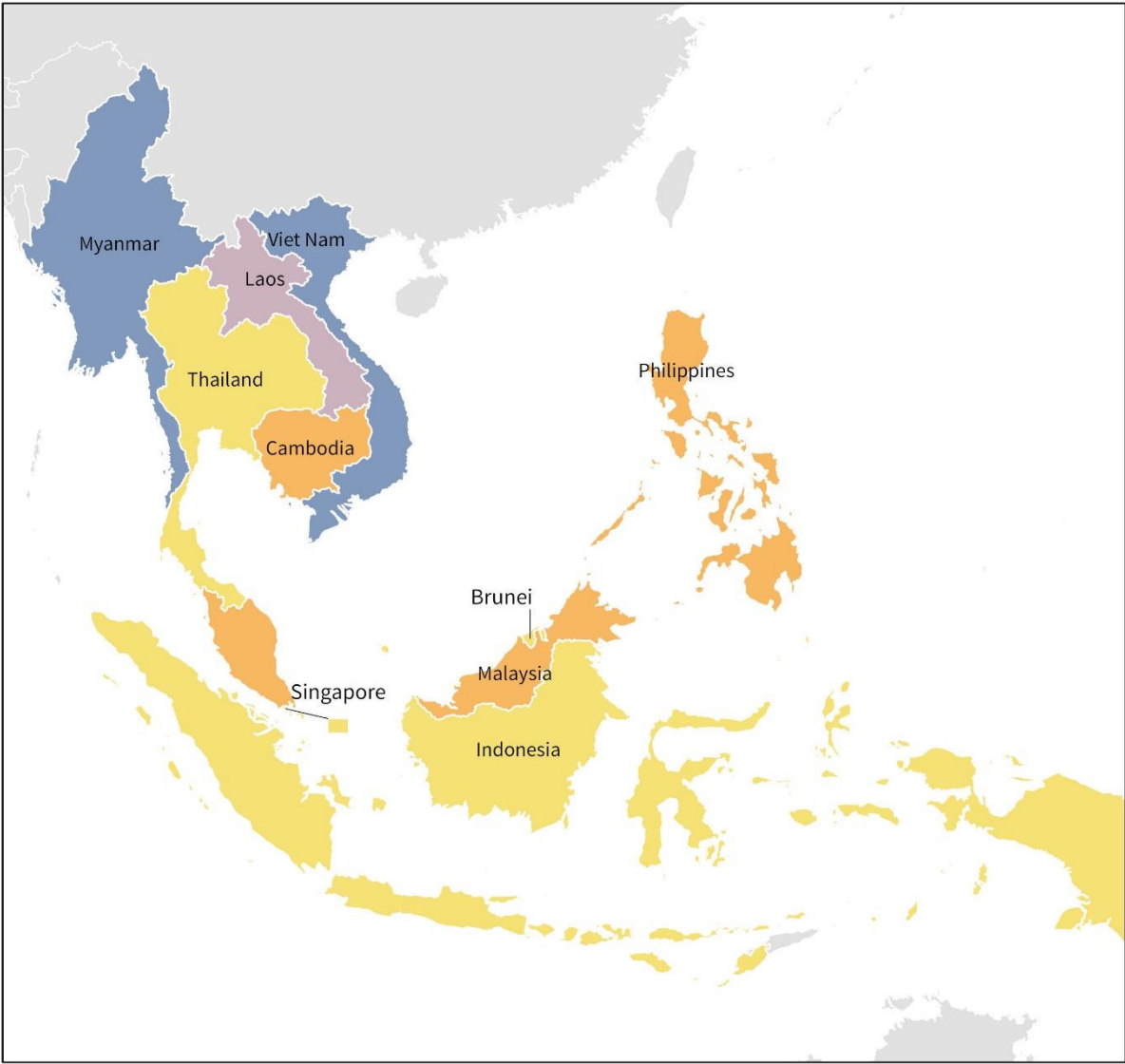Limited capability to detect and control spread

Figure 2. Map depicting the total number of COVID-19 cases reported per 1,000 population at a national level since the beginning of the pandemic. This include active cases, resolved cases, and fatalities

Reported cases over last 30 days per 1,000 population

| 0.001 | 0.002 | 0.005 | 0.1 | 5 |
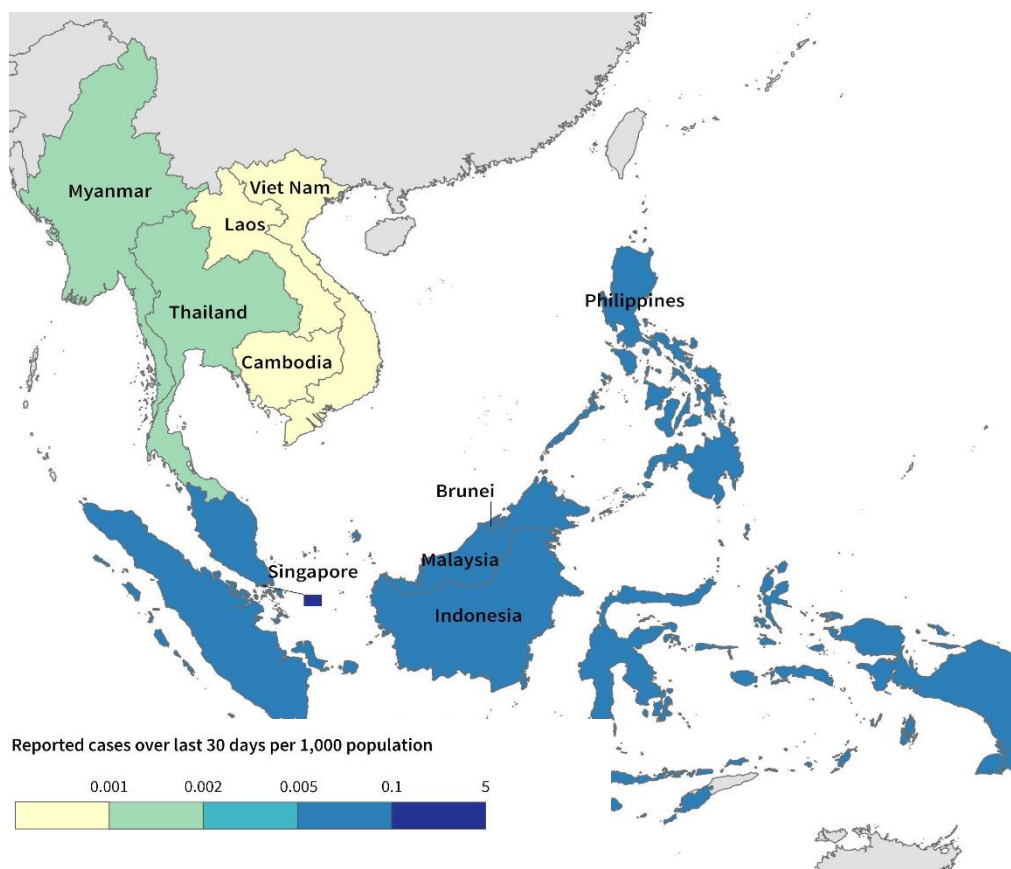
Figure 3. ASEAN map depicting the total number of COVID-19 cases reported per 1,000 population at a national level over the last 30 days. This include active cases, resolved cases, and fatalities

ASEAN member states categorized by rate of new COVID-19 cases

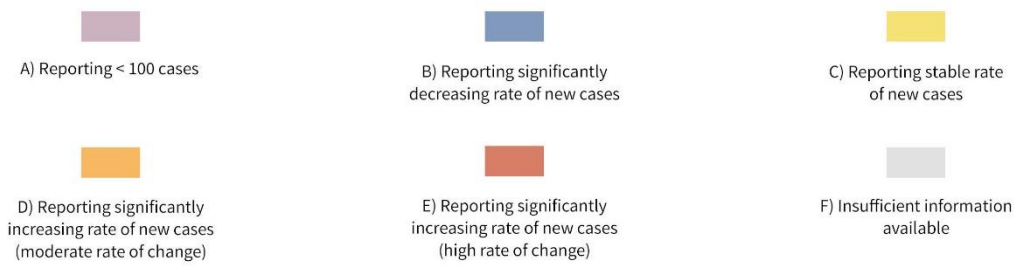|		
A) Reporting < 100 cases	B) Reporting significantly decreasing rate of new cases	C) Reporting stable rate of new cases
D) Reporting significantly increasing rate of new cases (moderate rate of change)	E) Reporting significantly increasing rate of new cases (high rate of change)	F) Insufficient information available

Figure 4. ASEAN map countries categorized by rate of COVID-19 new cases

Table 1. Summary of ASEAN Member States' country categorization, IDVI value, and COVID-19 cases per 1,000 population as of 12 May 2020

Country	COVID-19 Category As of May 26[1]	COVID-19 Category As of May 29[2]	COVID-19 Category As of June 2[2]	IDVI Score	Doubling Time (days)[3]	Confirmed COVID-19 cases per1,000 Population	Days since peak[4]
Brunei	E	C	C	0.763	70	0.005	39
Cambodia	E	C	D	0.355	69	0.0	70
Indonesia	B	C	C	0.563	24	0.066	11
Laos	A	A	A	0.355	13	0.000	67
Malaysia	B	B	B	0.761	56	0.059	67
Myanmar	B	B	B	0.448	43	0.001	56
Philippines	B	B	B	0.545	29	0.097	3
Singapore	B	C	C	0.878	30	5.001	42
Thailand	B	C	C	0.711	63	0.002	71
Vietnam	B	B	B	0.626	64	0.001	17

(refer to additional file for country categorization globally)
* Categorized based on suspected cases of COVID-19. Reported COVID-19 cases count & cases reported in last 30 days per 1,000 population are unavailable.
** Due to changes in national surveillance and reporting in Spain, COVID-19 cases reported in the last 30 days per 1,000 population is unavailable.
1 Categorization determined based on the linear line of best fit for the 7-day rolling average of new case reports. Country categorizations are not directly comparable to categorizations published on May 29 onward.
2 Categorization determined based on both the modelled rate of change and associated measures of statistical significance. Country categorizations are not directly comparable to categorizations from previous reports.
3 Doubling time calculated retrospectively based on cumulative case reports as of June 2, 2020 at 9:00AM EDT.
4 Days since peak represents the number of days since the maximum number of new cases reported in a single day was observed, as of June 2, 2020 at 9:00AM EDT. If a country reports more new cases in a given day than previously, the days since peak will remain at/return to 0.