

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

ASEAN Biodiaspora Virtual Center (ABVC)

as of April 22, 2020 (2:00 PM GMT+8)



## COVID-19: Highlights and Situation Overview

- World Health Organization (WHO) recently published an updated strategy to help guide the public health response to COVID-19. Please check this link for more details <https://www.who.int/publications-detail/covid-19-strategy-update---14-april-2020>
- According to WHO, over 100 countries have joined (as of April 21) the Solidarity Trial to evaluate therapeutics for COVID-19. "Solidarity" is an international clinical trial to help find an effective treatment for COVID-19, launched by the World Health Organization and partners. The Solidarity Trial will compare four treatment options against standard of care, to assess their relative effectiveness against COVID-19. By enrolling patients in multiple countries, the Solidarity Trial aims to rapidly discover whether any of the drugs slow disease progression or improve survival.
- Indonesia government will begin its ban on the Idul Fitri mudik (exodus) on April 24 to curb the spread of COVID-19 in the country.
- Singapore's Prime Minister extended the partial lockdown until June 1 to curb the sharp rise of COVID-19 in the city-state. The measures, which include the closures of most workplaces and schools and called as "circuit breaker" by authorities, were initially set to run until May 4. The Prime Minister stated that the extended lockdown period would help bring community cases down decisively and make sure infections in migrant dormitories do not spread into the wider community
- Indonesia received a shipment of 50,000 reagents from South Korea on April 20 to boost the number of PCR testing for COVID-19 in the country

### Travel Advisories (no new update/s)

### Cases and Deaths as of 22 April 2020

- As of April 22 (2PM, GMT+8), worldwide, there were **2,538,987** confirmed cases, including **176,446** deaths. Globally, Case Fatality Ratio (CFR)\* is **6.95**.
- In **China**, there were **84,258** confirmed cases with **4,642** deaths, including deaths in Hong Kong (4) and Taiwan (6). Confirmed cases in China include confirmed cases in Hong Kong (1,030), Macau (45), and Taiwan (425).
- **2,454,729 confirmed cases** of COVID-19 have been reported in **210 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	21 Apr 2020	2,811 (48)	1.71
	Vietnam	23 Jan 2020	16 Apr 2020	268	0.00
	Singapore	23 Jan 2020	21 Apr 2020	9,125 (11)	0.12

<b>Malaysia</b>	25 Jan 2020	21 Apr 2020	5,482 (92)	1.68
<b>Cambodia</b>	27 Jan 2020	12 Apr 2020	122	
<b>Philippines</b>	30 Jan 2020	21 Apr 2020	6,599 (437)	6.62
<b>Indonesia</b>	02 Mar 2020	21 Apr 2020	7,135 (616)	8.63
<b>Brunei</b>	10 Mar 2020	19 Apr 2020	138(1)	0.72
<b>Myanmar</b>	23 Mar 2020	21 Apr 2020	119 (5)	4.20
<b>Lao PDR</b>	24 Mar 2020	13 Apr 2020	19	
<b>Japan</b>	16 Jan 2020	21 Apr 2020	11,841 (270)	2.28
<b>South Korea</b>	20 Jan 2020	21 Apr 2020	10,683 (237)	2.22
<b>Nepal</b>	24 Jan 2020	21 Apr 2020	43	
<b>Australia</b>	25 Jan 2020	21 Apr 2020	6,645 (71)	1.07
<b>Sri Lanka</b>	27 Jan 2020	21 Apr 2020	310 (7)	2.26
<b>India</b>	30 Jan 2020	21 Apr 2020	18,985 (603)	3.18
<b>Afghanistan</b>	24 Feb 2020	21 Apr 2020	1,092 (36)	3.30
<b>Pakistan</b>	26 Feb 2020	21 Apr 2020	9,216 (192)	2.08
<b>New Zealand</b>	28 Feb 2020	21 Apr 2020	1,445 (13)	0.90
<b>Bhutan</b>	05 Mar 2020	21 Apr 2020	6	
<b>Maldives</b>	07 Mar 2020	21 Apr 2020	83	
<b>Bangladesh</b>	08 Mar 2020	21 Apr 2020	3,382 (110)	3.25
<b>Mongolia</b>	10 Mar 2020	21 Apr 2020	34	
<b>Turkey</b>	10 Mar 2020	21 Apr 2020	90,980 (2,140)	2.35
<b>French Polynesia</b>	12 Mar 2020	21 Apr 2020	56	
<b>Guam</b>	15 Mar 2020	17 Apr 2020	136 (5)	3.68
<b>New Caledonia</b>	17 Mar 2020	02 Apr 2020	18	
<b>Fiji</b>	18 Mar 2020	20 Apr 2020	18	
<b>Papua New Guinea</b>	21 Mar 2020	16 Apr 2020	7	
<b>Timor Leste</b>	21 Mar 2020	21 Apr 2020	23	
<b>Northern Mariana Islands</b>	28 Mar 2020	17 Apr 2020	14 (2)	14.29
<b>AMERICAS</b>				
<b>USA</b>	21 Jan 2020	21 Apr 2020	811,478 (44,752)	5.51
<b>Canada</b>	25 Jan 2020	21 Apr 2020	38,210 (1,884)	4.93
<b>Brazil</b>	26 Feb 2020	21 Apr 2020	40,814 (2,588)	6.34
<b>Mexico</b>	28 Feb 2020	21 Apr 2020	8,772 (712)	8.12
<b>Saint Martin</b>	01 Mar 2020	18 Apr 2020	37 (2)	5.41
<b>Ecuador</b>	01 Mar 2020	21 Apr 2020	10,128 (507)	5.01
<b>Dominican Republic</b>	01 Mar 2020	21 Apr 2020	4,964 (235)	4.73
<b>Chile</b>	03 Mar 2020	21 Apr 2020	10,832 (147)	1.36
<b>Argentina</b>	03 Mar 2020	21 Apr 2020	3,301 (145)	4.39
<b>Peru</b>	05 Mar 2020	21 Apr 2020	17,837 (484)	2.71
<b>Costa Rica</b>	06 Mar 2020	21 Apr 2020	662 (6)	0.91
<b>Colombia</b>	06 Mar 2020	21 Apr 2020	3,977 (189)	4.75
<b>French Guiana</b>	06 Mar 2020	20 Apr 2020	97	
<b>Martinique</b>	06 Mar 2020	21 Apr 2020	163 (14)	8.59
<b>Paraguay</b>	07 Mar 2020	20 Apr 2020	208 (8)	3.85

<b>Panama</b>	10 Mar 2020	21 Apr 2020	4,658 (136)	2.92
<b>Bolivia</b>	10 Mar 2020	21 Apr 2020	598 (34)	5.69
<b>Honduras</b>	11 Mar 2020	21 Apr 2020	494 (46)	9.31
<b>Cuba</b>	11 Mar 2020	21 Apr 2020	1,137 (38)	3.34
<b>Guyana</b>	11 Mar 2020	21 Apr 2020	66 (7)	10.61
<b>Jamaica</b>	12 Mar 2020	21 Apr 2020	223 (6)	2.69
<b>St Vincent and the Grenadines</b>	12 Mar 2020	09 Apr 2020	12	
<b>Saint Lucia</b>	13 Mar 2020	11 Apr 2020	15	
<b>Trinidad and Tobago</b>	13 Mar 2020	16 Apr 2020	114 (8)	7.02
<b>Venezuela</b>	13 Mar 2020	21 Apr 2020	285 (10)	3.51
<b>Guatemala</b>	13 Mar 2020	21 Apr 2020	294 (7)	2.38
<b>Uruguay</b>	13 Mar 2020	21 Apr 2020	535 (11)	2.06
<b>Curacao</b>	13 Mar 2020	09 Apr 2020	14 (1)	7.14
<b>Puerto Rico</b>	13 Mar 2020	20 Apr 2020	1,252 (63)	5.03
<b>Suriname</b>	13 Mar 2020	08 Apr 2020	10 (1)	10.00
<b>Antigua and Barbuda</b>	13 Mar 2020	16 Apr 2020	23 (3)	13.04
<b>Guadeloupe</b>	13 Mar 2020	19 Apr 2020	148 (8)	5.41
<b>Cayman Islands</b>	13 Mar 2020	21 Apr 2020	66 (1)	1.52
<b>Aruba</b>	14 Mar 2020	20 Apr 2020	97 (2)	2.06
<b>Bahamas</b>	15 Mar 2020	20 Apr 2020	60 (9)	15.00
<b>US Virgin Islands</b>	16 Mar 2020	20 Apr 2020	53 (3)	5.66
<b>Sint Maarten</b>	17 Mar 2020	20 Apr 2020	67 (10)	14.93
<b>Montserrat</b>	17 Mar 2020	13 Apr 2020	11	
<b>Barbados</b>	17 Mar 2020	16 Apr 2020	75 (5)	6.67
<b>El Salvador</b>	18 Mar 2020	21 Apr 2020	225 (7)	3.11
<b>Nicaragua</b>	18 Mar 2020	20 Apr 2020	10 (2)	20.00
<b>Bermuda</b>	18 Mar 2020	19 Apr 2020	86 (5)	5.81
<b>Haiti</b>	19 Mar 2020	21 Apr 2020	57 (3)	5.26
<b>Dominica</b>	22 Mar 2020	11 Apr 2020	16	
<b>Grenada</b>	22 Mar 2020	11 Apr 2020	14	
<b>Belize</b>	23 Mar 2020	14 Apr 2020	18 (2)	11.11
<b>Turks and Caicos Islands</b>	23 Mar 2020	17 Apr 2020	11 (1)	9.09
<b>Saint Kitts and Nevis</b>	24 Mar 2020	20 Apr 2020	15	
<b>British Virgin Islands</b>	25 Mar 2020	20 Apr 2020	5 (1)	20.00
<b>Anguilla</b>	26 Mar 2020	03 Apr 2020	3	
<b>Caribbean Netherlands</b>	01 Apr 2020	19 Apr 2020	5	
<b>Falkland Islands</b>	03 Apr 2020	15 Apr 2020	11	
<b>Saint Pierre and Miquelon</b>	05 Apr 2020	05 Apr 2020	1	
<b>EUROPE</b>				
<b>France</b>	24 Jan 2020	21 Apr 2020	158,050 (20,796)	13.16
<b>Germany</b>	27 Jan 2020	21 Apr 2020	147,786 (4,899)	3.31
<b>Finland</b>	29 Jan 2020	21 Apr 2020	4,014 (141)	3.51

<b>Italy</b>	30 Jan 2020	21 Apr 2020	183,957 (24,648)	13.40
<b>Russian Federation</b>	31 Jan 2020	21 Apr 2020	52,763 (456)	0.86
<b>Spain</b>	31 Jan 2020	21 Apr 2020	204,178 (21,282)	10.42
<b>Sweden</b>	31 Jan 2020	21 Apr 2020	15,322 (1,765)	11.52
<b>United Kingdom of Great Britain</b>	31 Jan 2020	21 Apr 2020	129,044 (17,337)	13.43
<b>Belgium</b>	05 Feb 2020	21 Apr 2020	40,956 (5,998)	14.64
<b>Switzerland</b>	25 Feb 2020	21 Apr 2020	28,063 (1,436)	5.12
<b>Austria</b>	25 Feb 2020	21 Apr 2020	14,873 (491)	3.30
<b>Croatia</b>	25 Feb 2020	21 Apr 2020	1,908 (48)	2.52
<b>Norway</b>	26 Feb 2020	21 Apr 2020	7,191 (182)	2.53
<b>Romania</b>	26 Feb 2020	21 Apr 2020	9,242 (498)	5.39
<b>Estonia</b>	26 Feb 2020	21 Apr 2020	1,552 (43)	2.77
<b>Georgia</b>	26 Feb 2020	21 Apr 2020	408 (4)	0.98
<b>North Macedonia</b>	26 Feb 2020	21 Apr 2020	1,231 (55)	4.47
<b>Greece</b>	26 Feb 2020	21 Apr 2020	2,401 (121)	5.04
<b>Denmark</b>	27 Feb 2020	21 Apr 2020	7,695 (370)	4.81
<b>San Marino</b>	27 Feb 2020	21 Apr 2020	476 (40)	8.40
<b>Lithuania</b>	27 Feb 2020	21 Apr 2020	1,350 (37)	2.74
<b>Netherlands</b>	27 Feb 2020	21 Apr 2020	34,134 (3,916)	11.47
<b>Azerbaijan</b>	27 Feb 2020	21 Apr 2020	1,480 (20)	1.35
<b>Belarus</b>	28 Feb 2020	21 Apr 2020	6,251 (51)	0.82
<b>Iceland</b>	28 Feb 2020	21 Apr 2020	1,778 (10)	0.56
<b>Ireland</b>	28 Feb 2020	21 Apr 2020	16,040 (730)	4.55
<b>Monaco</b>	29 Feb 2020	17 Apr 2020	94 (3)	3.19
<b>Czech Republic</b>	01 Mar 2020	21 Apr 2020	6,961 (201)	2.89
<b>Luxembourg</b>	01 Mar 2020	21 Apr 2020	3,618 (78)	2.16
<b>Armenia</b>	01 Mar 2020	21 Apr 2020	1,401 (24)	1.71
<b>Latvia</b>	02 Mar 2020	21 Apr 2020	748 (9)	1.20
<b>Portugal</b>	02 Mar 2020	21 Apr 2020	21,379 (762)	3.56
<b>Andorra</b>	02 Mar 2020	21 Apr 2020	717 (37)	5.16
<b>Liechtenstein</b>	03 Mar 2020	21 Apr 2020	81 (1)	1.23
<b>Ukraine</b>	03 Mar 2020	21 Apr 2020	6,125 (161)	2.63
<b>Slovenia</b>	04 Mar 2020	21 Apr 2020	1,334 (77)	5.77
<b>Hungary</b>	04 Mar 2020	21 Apr 2020	2,098 (213)	10.15
<b>Poland</b>	04 Mar 2020	21 Apr 2020	9,737 (385)	3.95
<b>Faroe Islands</b>	04 Mar 2020	19 Apr 2020	185	
<b>Bosnia and Herzegovina</b>	05 Mar 2020	21 Apr 2020	1,342 (51)	3.80
<b>Gibraltar</b>	05 Mar 2020	17 Apr 2020	132	
<b>Slovakia</b>	06 Mar 2020	21 Apr 2020	1,199 (14)	1.17
<b>Serbia</b>	06 Mar 2020	21 Apr 2020	6,890 (130)	1.89
<b>Vatican City</b>	06 Mar 2020	10 Apr 2020	9	
<b>Malta</b>	07 Mar 2020	21 Apr 2020	443 (3)	0.68

	<b>Moldova</b>	07 Mar 2020	21 Apr 2020	2,548 (72)	2.83
	<b>Bulgaria</b>	08 Mar 2020	21 Apr 2020	975 (45)	4.62
	<b>Albania</b>	09 Mar 2020	21 Apr 2020	609 (26)	4.27
	<b>Cyprus</b>	09 Mar 2020	21 Apr 2020	784 (12)	1.53
	<b>Channel Islands</b>	09 Mar 2020	21 Apr 2020	488 (21)	4.30
	<b>Jersey</b>	10 Mar 2020	05 Apr 2020	126 (3)	2.38
	<b>Kazakhstan</b>	13 Mar 2020	21 Apr 2020	1,995 (19)	0.95
	<b>Kosovo</b>	13 Mar 2020	21 Apr 2020	598 (16)	2.68
	<b>Uzbekistan</b>	15 Mar 2020	21 Apr 2020	1,657 (5)	0.30
	<b>Greenland</b>	16 Mar 2020	05 Apr 2020	11	
	<b>Montenegro</b>	17 Mar 2020	21 Apr 2020	313 (5)	1.60
	<b>Kyrgyzstan</b>	18 Mar 2020	21 Apr 2020	590 (7)	1.19
	<b>Isle of Man</b>	19 Mar 2020	21 Apr 2020	307 (9)	2.93
<b>MIDDLE EAST</b>	<b>UAE</b>	29 Jan 2020	21 Apr 2020	7,755 (46)	0.59
	<b>Iran</b>	19 Feb 2020	21 Apr 2020	84,802 (5,297)	6.25
	<b>Israel</b>	21 Feb 2020	21 Apr 2020	13,942 (184)	1.32
	<b>Lebanon</b>	21 Feb 2020	20 Apr 2020	677 (21)	3.10
	<b>Kuwait</b>	24 Feb 2020	21 Apr 2020	2,080 (11)	0.53
	<b>Oman</b>	24 Feb 2020	21 Apr 2020	1,508 (8)	0.53
	<b>Bahrain</b>	24 Feb 2020	21 Apr 2020	1,952 (7)	0.36
	<b>Iraq</b>	24 Feb 2020	21 Apr 2020	1,602 (83)	5.18
	<b>Qatar</b>	29 Feb 2020	21 Apr 2020	6,533 (9)	0.14
	<b>Saudi Arabia</b>	02 Mar 2020	21 Apr 2020	11,631 (109)	0.94
	<b>Jordan</b>	02 Mar 2020	21 Apr 2020	425 (7)	1.65
	<b>Palestine</b>	05 Mar 2020	21 Apr 2020	461 (4)	0.87
	<b>Syria</b>	22 Mar 2020	20 Apr 2020	39 (3)	7.69
	<b>Yemen</b>	10 Apr 2020	10 Apr 2020	1	
<b>AFRICA</b>	<b>Egypt</b>	14 Feb 2020	21 Apr 2020	3,333 (250)	7.50
	<b>Algeria</b>	25 Feb 2020	21 Apr 2020	2,811 (392)	13.95
	<b>Nigeria</b>	28 Feb 2020	21 Apr 2020	665 (22)	3.31
	<b>Tunisia</b>	02 Mar 2020	21 Apr 2020	884 (38)	4.30
	<b>Morocco</b>	02 Mar 2020	21 Apr 2020	3,186 (144)	4.52
	<b>Senegal</b>	02 Mar 2020	21 Apr 2020	412 (5)	1.21
	<b>South Africa</b>	05 Mar 2020	21 Apr 2020	3,300 (58)	1.76
	<b>Cameroon</b>	06 Mar 2020	21 Apr 2020	1,163 (43)	3.70
	<b>Togo</b>	06 Mar 2020	19 Apr 2020	84 (5)	5.95
	<b>Burkina Faso</b>	09 Mar 2020	21 Apr 2020	581 (38)	6.54
	<b>Democratic Republic of Congo</b>	10 Mar 2020	21 Apr 2020	350 (25)	7.14
	<b>Ivory Coast</b>	11 Mar 2020	21 Apr 2020	879 (10)	1.14
	<b>Reunion</b>	11 Mar 2020	21 Apr 2020	410	
	<b>Ghana</b>	13 Mar 2020	20 Apr 2020	1,042 (9)	0.86
	<b>Guinea</b>	13 Mar 2020	21 Apr 2020	688 (6)	0.87
	<b>Gabon</b>	13 Mar 2020	21 Apr 2020	120 (1)	0.83
	<b>Sudan</b>	13 Mar 2020	21 Apr 2020	107 (12)	11.21
	<b>Kenya</b>	13 Mar 2020	21 Apr 2020	296 (14)	4.73
	<b>Ethiopia</b>	13 Mar 2020	21 Apr 2020	114 (3)	2.63
	<b>Central African Republic</b>	14 Mar 2020	21 Apr 2020	14	
	<b>Seychelles</b>	14 Mar 2020	06 Apr 2020	11	
	<b>Rwanda</b>	14 Mar 2020	20 Apr 2020	147	
	<b>Namibia</b>	14 Mar 2020	05 Apr 2020	16	

<b>Swaziland</b>	14 Mar 2020	21 Apr 2020	24 (1)	4.17
<b>Mauritania</b>	14 Mar 2020	14 Apr 2020	7 (1)	14.29
<b>Mayotte</b>	14 Mar 2020	21 Apr 2020	284 (4)	1.41
<b>Equatorial Guinea</b>	15 Mar 2020	17 Apr 2020	79	
<b>Republic of Congo</b>	15 Mar 2020	20 Apr 2020	160 (6)	3.75
<b>Benin</b>	16 Mar 2020	20 Apr 2020	54 (1)	1.85
<b>Liberia</b>	16 Mar 2020	20 Apr 2020	99 (8)	8.08
<b>Tanzania</b>	16 Mar 2020	21 Apr 2020	254 (10)	3.94
<b>Somalia</b>	16 Mar 2020	21 Apr 2020	237 (8)	3.38
<b>Gambia</b>	17 Mar 2020	20 Apr 2020	10 (1)	10.00
<b>Zambia</b>	17 Mar 2020	21 Apr 2020	70 (3)	4.29
<b>Mauritius</b>	18 Mar 2020	19 Apr 2020	328 (9)	2.74
<b>Djibouti</b>	18 Mar 2020	20 Apr 2020	846 (2)	0.24
<b>Niger</b>	19 Mar 2020	21 Apr 2020	655 (20)	3.05
<b>Chad</b>	19 Mar 2020	18 Apr 2020	33	
<b>Zimbabwe</b>	20 Mar 2020	19 Apr 2020	25 (3)	12.00
<b>Cape Verde</b>	20 Mar 2020	20 Apr 2020	67 (1)	1.49
<b>Madagascar</b>	20 Mar 2020	20 Apr 2020	121	
<b>Uganda</b>	21 Mar 2020	21 Apr 2020	58	
<b>Eritrea</b>	21 Mar 2020	19 Apr 2020	39	
<b>Angola</b>	21 Mar 2020	19 Apr 2020	24 (2)	8.33
<b>Mozambique</b>	22 Mar 2020	19 Apr 2020	39	
<b>Libya</b>	24 Mar 2020	21 Apr 2020	51 (1)	1.96
<b>Guinea-Bissau</b>	25 Mar 2020	20 Apr 2020	50	0.00
<b>Mali</b>	25 Mar 2020	21 Apr 2020	258 (14)	5.43
<b>Botswana</b>	30 Mar 2020	19 Apr 2020	20 (1)	5.00
<b>Sierra Leone</b>	31 Mar 2020	21 Apr 2020	50	
<b>Burundi</b>	31 Mar 2020	15 Apr 2020	5 (1)	20.00
<b>Malawi</b>	02 Apr 2020	17 Apr 2020	17 (2)	11.76
<b>South Sudan</b>	05 Apr 2020	10 Apr 2020	4	
<b>Sao Tome and Principe</b>	06 Apr 2020	06 Apr 2020	4	
			<b>2,454,729</b> <b>(171,804)</b>	

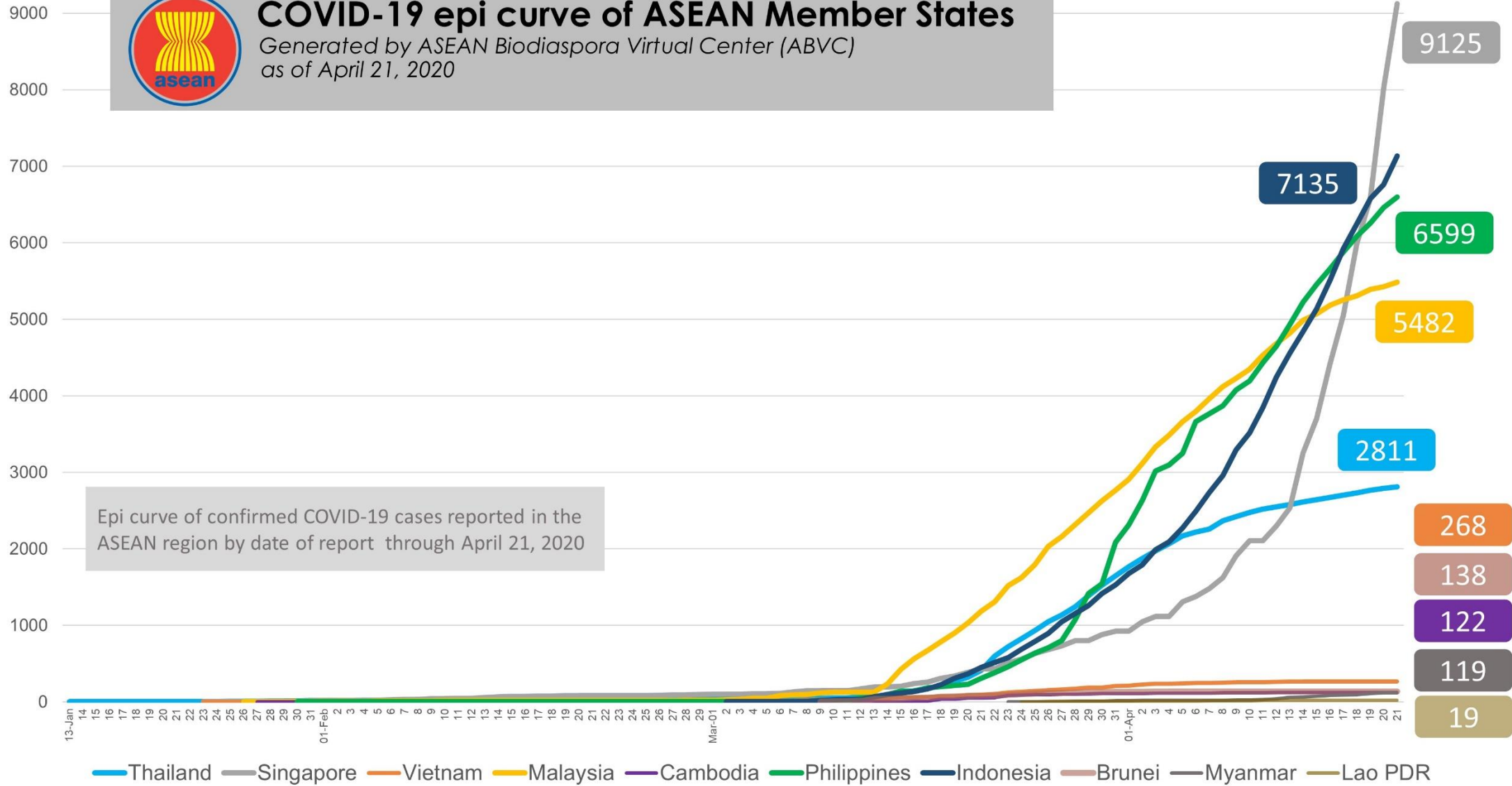
The calculated CFR is based on reported deaths and reported case counts, and does not account for recovered cases over time or rate of testing in a particular region.

\*\*adjusted cumulative count from last report



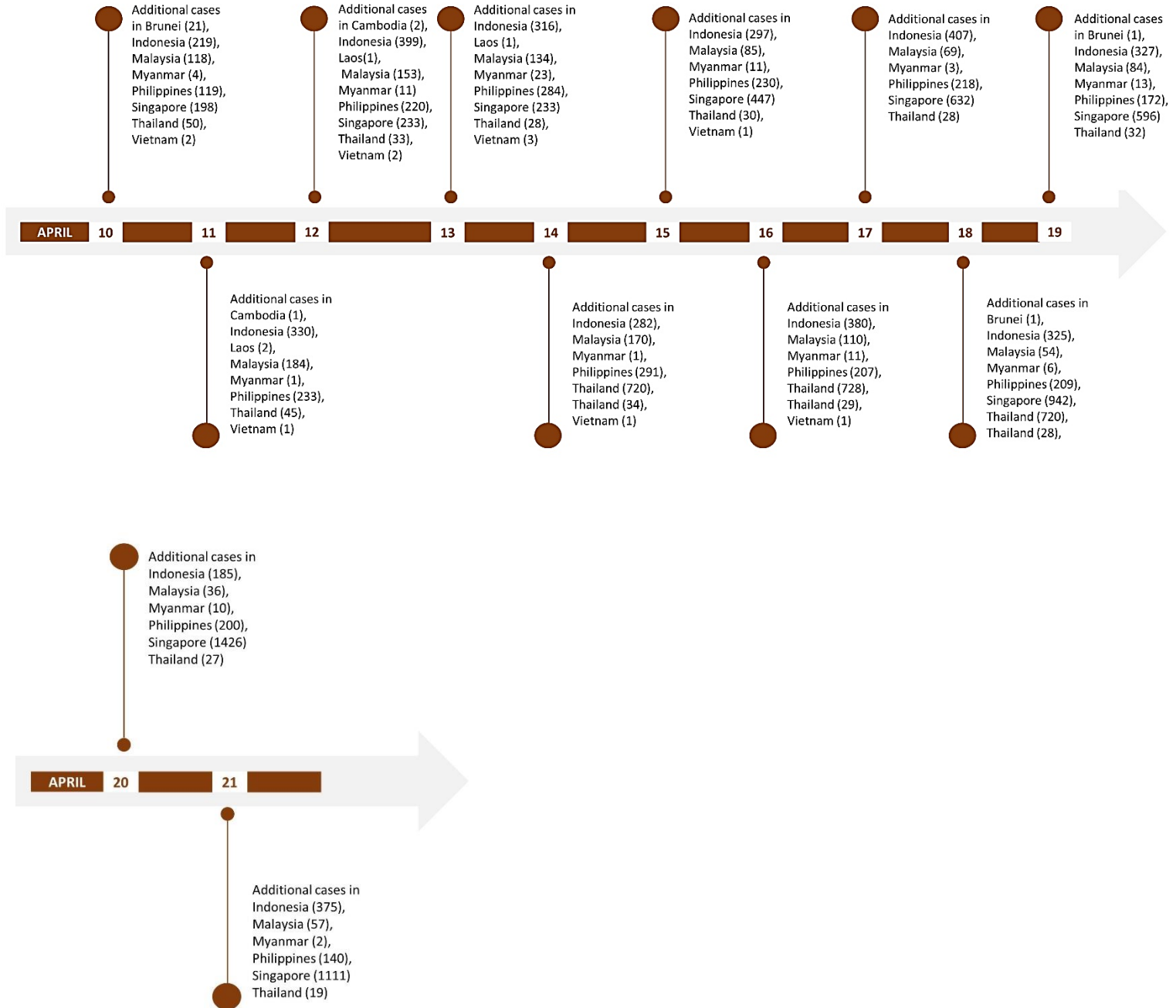
# COVID-19 epi curve of ASEAN Member States

Generated by ASEAN Biodiaspora Virtual Center (ABVC)  
as of April 21, 2020





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



## 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 11:00AM EST on 21 April 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). We 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.

The following report includes the following figures and table:

Map 1: Map depicting countries by the corresponding COVID-19 transmission category, as defined below.

Map 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 case count includes active cases, resolved cases, and fatalities.

Table: Summary of country categorizations, IDVI value, and COVID-19 cases per 1,000 population

- A** **Countries reporting <100 cases and a slowly increasing rate of COVID-19 transmission**
  - These countries have reported <100 cases of COVID-19, a CFR  $\leq 4\%$ , 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.
- B** **Countries reporting a steadily increasing OR stabilizing rate of COVID-19 transmission**
  - These countries have reported  $\geq 100$  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.
- C** **Countries reporting a rapidly increasing rate of COVID-19 transmission**
  - These countries have reported  $\geq 100$  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.
- D** **Countries reported a negative rate of COVID-19 transmission**
  - These countries have reported  $\geq 100$  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.
- E** **Countries where insufficient information is available on COVID-19 transmission**
  - These countries have not reported imported or local cases of COVID-19

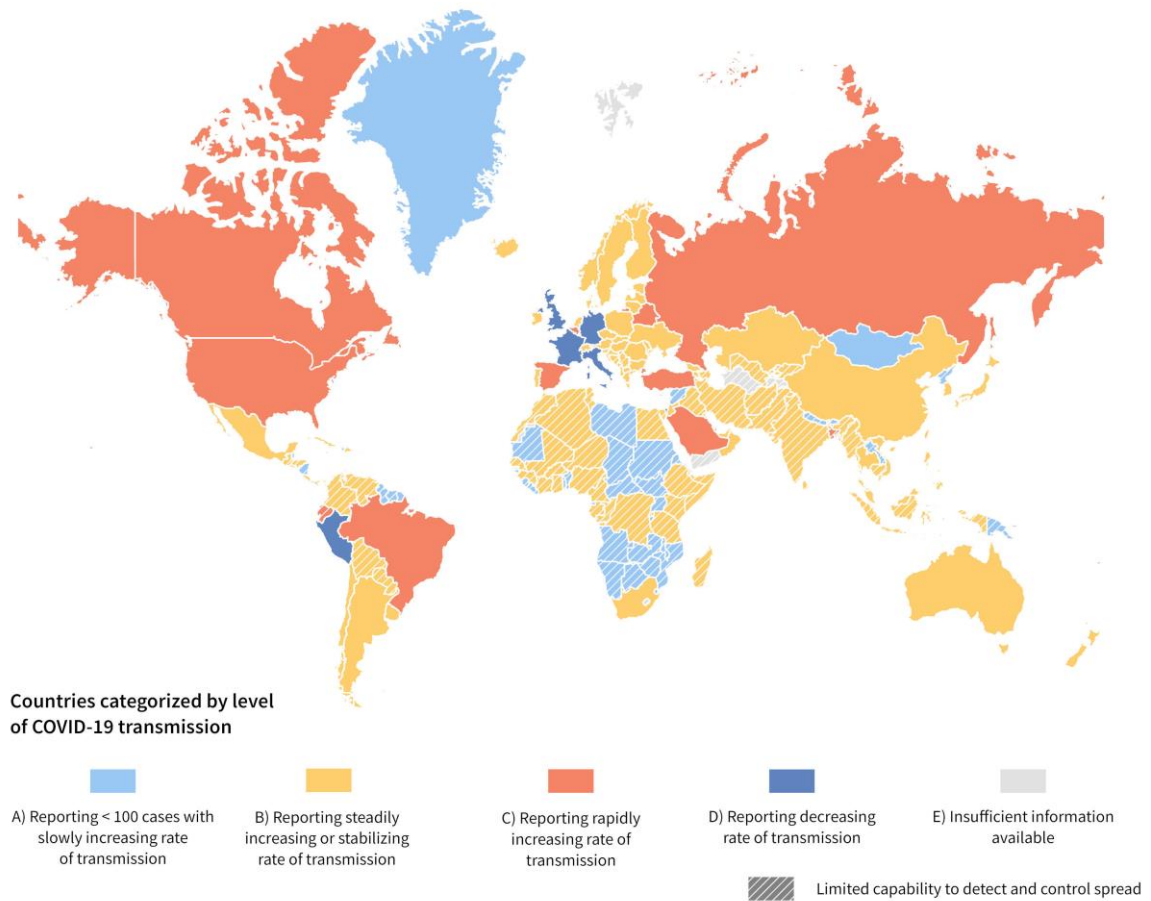


Figure 1. Map depicting countries by the corresponding COVID-19 transmission category

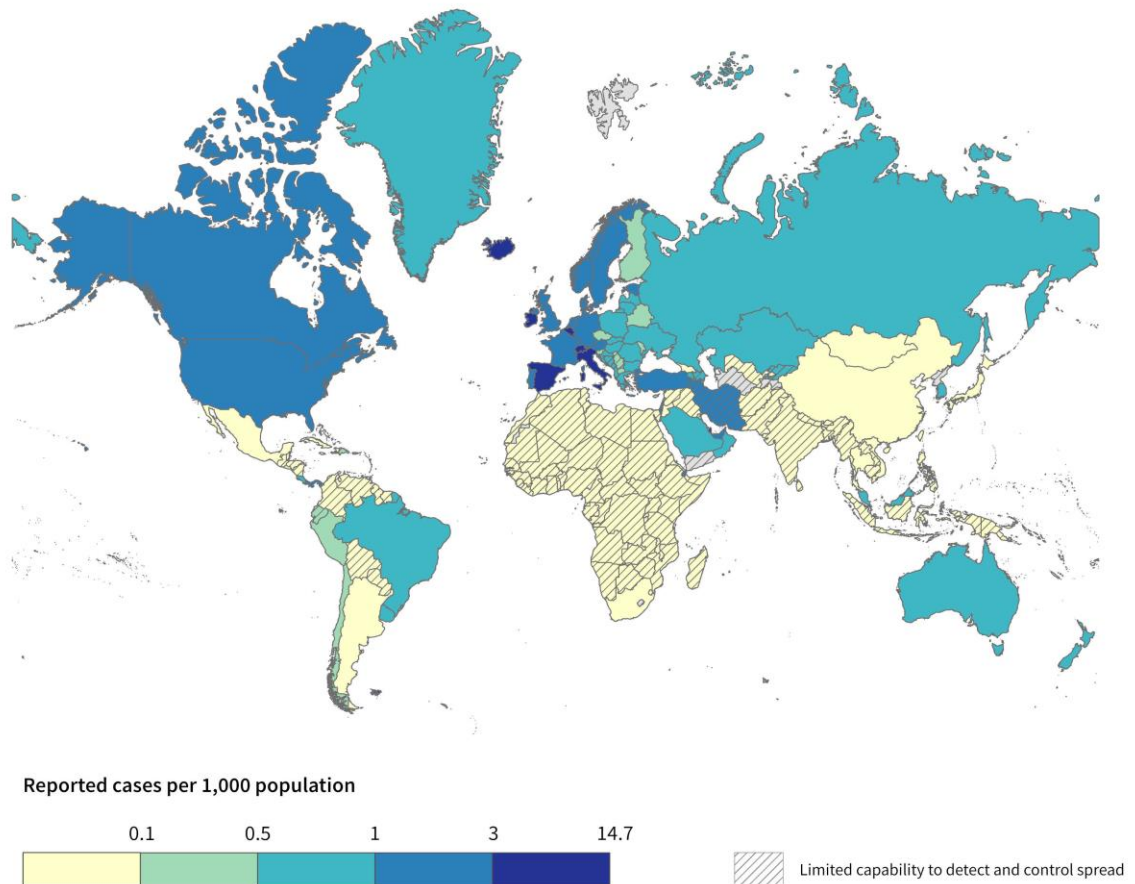


Figure 2. Map depicting the total number of COVID-19 cases reported per 1,000 population at a national level since the beginning of the pandemic. This include active cases, resolved cases, and fatalities

Table 1. Summary of ASEAN Member States' country categorization, IDVI value, and COVID-19 cases per 1,000 population as of 21 April 2020

Country	COVID-19 Category As of April 3, 2020 <sup>1</sup>	COVID-19 Category As of April 7 <sup>1</sup>	COVID-19 Category As of April 9 <sup>1</sup>	COVID-19 Category As of April 15 <sup>1</sup>	COVID-19 Category As of April 17 <sup>1</sup>	COVID-19 Category As of April 21 <sup>1</sup>	IDVI Score	Doubling Time (days) <sup>4</sup>	Confirmed COVID-19 cases per 1,000 Population
Brunei	B	B	B	B	B	B	0.763	32	0.349
Cambodia	B	B	B	B	B	B	0.355	21	0.008
Indonesia	B	B	B	B	B	B	0.563	11	0.028
Laos	E	E	A	A	A	A	0.355	13	0.003
Malaysia	B	B	B	B	B	B	0.761	22	0.194
Myanmar	E	E	A	A	A	B	0.448	9	0.002
Philippines	D	B	B	B	B	B	0.545	16	0.066
Singapore	B	B	B	C	C	C	0.878	5	2.259
Thailand	B	B	B	B	B	B	0.711	23	0.042
Vietnam	B	B	B	B	B	B	0.626	23	0.003

(refer to additional file for country categorization globally)

\* Categorized based on suspected cases of COVID-19. Confirmed COVID-19 cases count & cases per 1,000 population unavailable.

<sup>1</sup> Categorization determined based on the 7-day rate-of-change in new case reports.

<sup>2</sup> Doubling time is calculated retrospectively based on cumulative case reports as of April 21, 2020 at 11:00AM EST.



Report generated by  
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