

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

ASEAN Biodiaspora Virtual Center (ABVC)

as of April 1, 2020 (2:00 PM GMT+8)



COVID-19: Highlights and Situation Overview

- WHO Director-General stated that ensuring free movement of essential health products is vital for saving lives and curbing the social and economic impacts of the pandemic. WHO is working intensively with partners to increase access to life-saving products, including diagnostics, PPE, medical oxygen, ventilators and more.
- WHO has updated the operational planning guidelines to help countries maintain essential health services during the COVID-19 pandemic. The document includes a set of immediate actions that countries should consider at national, regional, and local level to reorganize and maintain access to high quality essential health services for all. This information can be found here: <https://www.who.int/publications-detail/covid-19-operational-guidance-formaintaining-essential-health-services-during-an-outbreak>
- On March 31, Indonesian President Joko Widodo signed the regulations needed for cities and provinces to enforce what the government described as "large-scale social restrictions" and declared public health emergency status amid the COVID-19 pandemic. Restrictions will be based on the 2018 Law on Health Quarantine, which allows cities and provinces to shut down non-essential services and limit religious and social activities.
- On March 30, Vietnam's Prime Minister Nguyen Xuan Phuc declared COVID-19 a nationwide pandemic and urged authorities at all levels to focus on efforts to contain the pandemic.
- **Travel Advisories (new updates)**
 - Indonesia: The Indonesian government will temporarily ban all foreign visitors from entering the country and oblige all its citizens returning from other countries to undergo a two-week quarantine to stop imported cases of COVID-19. Diplomatic passport holders and foreigners who hold stay and work permits in Indonesia will be exempted from the regulation, but health protocols will be applied. With restrictions on travel and public gatherings already in place, the government will also restrict cross-border mobility to curb the imported cases.
 - Thailand: Thailand's Department of Land Transport announced that four southern provinces – Pattani, Yala, Narathiwat and Phuket – will be closed to all public transport, except essential goods vehicles, medical and government vehicles. The director-general Jirut Wisanjit said the closures are effective March 31 to help prevent the virus from spreading between neighbouring provinces. The Governor of Phuket reported that he signed an order to close Phuket International Airport from April 10-30, 2020. Travelers should expect all flights in or out of Phuket to stop beginning at 12:01 a.m. April 10.
 - Vietnam: Vietnam has closed borders with its south-western neighbors Laos and Cambodia starting today (April 1) in its continued bid to contain the COVID-19 pandemic. Foreign Ministry suspended cross-border activities at main border gates, secondary border gates, trails and entry points at its border areas with Cambodia and Laos. Starting today (April 1), Ho Chi Minh City suspended all public bus services as a preventive measure against the spread of the Covid-19 virus. The suspension, in force until April 15, aims to restrict travel in the city of 13 million people.

Cases and Deaths as of 01 April 2020

- As of April 01 (2PM, GMT+8), worldwide, there were **839,457** confirmed cases, including **41,203** deaths.
- In **China**, there were **82,595** confirmed cases with **3,315** deaths, including deaths in Hong Kong (4) and Taiwan (5). Confirmed cases in China include confirmed cases in Hong Kong (714), Macau (41), and Taiwan (322).
- **756,862 confirmed cases** of COVID-19 have been reported in **201 countries/states** (other than China, Hong Kong, Taiwan and Macau):

REGION	COUNTRY	FIRST CONFIRMED CASE(S)	LATEST CONFIRMED CASE(S)	CONFIRMED CASES/(Deaths)
ASIA PACIFIC	Thailand	13 Jan 2020	31 Mar 2020	1,651 (10)
	Vietnam	23 Jan 2020	31 Mar 2020	207
	Singapore	23 Jan 2020	31 Mar 2020	926 (3)
	Malaysia	25 Jan 2020	31 Mar 2020	2,766 (43)
	Cambodia	27 Jan 2020	31 Mar 2020	109
	Philippines	30 Jan 2020	31 Mar 2020	2084 (88)
	Indonesia	02 Mar 2020	31 Mar 2020	1,528 (136)
	Brunei	10 Mar 2020	31 Mar 2020	129 (1)
	Myanmar	23 Mar 2020	31 Mar 2020	15 (1)
	Lao PDR	24 Mar 2020	31 Mar 2020	9
	Japan	16 Jan 2020	31 Mar 2020 2,659 (63)	1,963 (63) 696 from quarantined ship
	South Korea	20 Jan 2020	31 Mar 2020	9,786 (162)
	Nepal	24 Jan 2020	28 Mar 2020	5
	Australia	25 Jan 2020	31 Mar 2020	4,557 (19)
	Sri Lanka	27 Jan 2020	31 Mar 2020	142 (2)
	India	30 Jan 2020	31 Mar 2020	1,251 (32)
	Afghanistan	24 Feb 2020	31 Mar 2020	174 (4)
	Pakistan	26 Feb 2020	31 Mar 2020	1,865 (25)
	New Zealand	28 Feb 2020	31 Mar 2020	647 (1)
	Bhutan	05 Mar 2020	29 Mar 2020	4
Maldives	07 Mar 2020	31 Mar 2020	18	
Bangladesh	08 Mar 2020	31 Mar 2020	51 (5)	
Mongolia	10 Mar 2020	28 Mar 2020	12	
Turkey	10 Mar 2020	31 Mar 2020	13,531 (214)	

	French Polynesia	12 Mar 2020	31 Mar 2020	36
	Guam	15 Mar 2020	31 Mar 2020	69 (2)
	New Caledonia	17 Mar 2020	31 Mar 2020	16
	Fiji	18 Mar 2020	25 Mar 2020	5
	Papua New Guinea	21 Mar 2020	21 Mar 2020	1
	Timor Leste	21 Mar 2020	21 Mar 2020	1
	Northern Mariana Islands	28 Mar 2020	28 Mar 2020	2
AMERICAS	USA	21 Jan 2020	31 Mar 2020	182,385 (3,655)
	Canada	25 Jan 2020	31 Mar 2020	8,505 (100)
	Brazil	26 Feb 2020	31 Mar 2020	4,681 (167)
	Mexico	28 Feb 2020	31 Mar 2020	1,094 (28)
	Saint Martin	01 Mar 2020	30 Mar 2020	15
	Ecuador	01 Mar 2020	31 Mar 2020	1,966 (62)
	Dominican Republic	01 Mar 2020	31 Mar 2020	1,109 (51)
	Chile	03 Mar 2020	31 Mar 2020	2,738 (12)
	Argentina	03 Mar 2020	31 Mar 2020	966 (24)
	Peru	05 Mar 2020	31 Mar 2020	1,065 (24)
	Costa Rica	06 Mar 2020	31 Mar 2020	330 (2)
	Colombia	06 Mar 2020	31 Mar 2020	798 (14)
	French Guiana	06 Mar 2020	30 Mar 2020	43 (1)
	Martinique	06 Mar 2020	31 Mar 2020	119 (2)
	Paraguay	07 Mar 2020	31 Mar 2020	65 (3)
	Panama	10 Mar 2020	31 Mar 2020	1,075 (27)
	Bolivia	10 Mar 2020	31 Mar 2020	107 (6)
	Honduras	11 Mar 2020	31 Mar 2020	141 (7)
	Cuba	11 Mar 2020	31 Mar 2020	186 (6)
	Guyana	11 Mar 2020	29 Mar 2020	8 (1)
	Jamaica	12 Mar 2020	31 Mar 2020	36 (1)
	St Vincent and the Grenadines	12 Mar 2020	12 Mar 2020	1
	Saint Lucia	13 Mar 2020	30 Mar 2020	9
	Trinidad and Tobago	13 Mar 2020	31 Mar 2020	85 (3)
	Venezuela	13 Mar 2020	30 Mar 2020	135 (3)
	Guatemala	13 Mar 2020	30 Mar 2020	36 (2)
	Uruguay	13 Mar 2020	31 Mar 2020	320 (1)
	Curacao	13 Mar 2020	30 Mar 2020	11 (1)
	Puerto Rico	13 Mar 2020	31 Mar 2020	239 (8)
	Suriname	13 Mar 2020	25 Mar 2020	8

Antigua and Barbuda	13 Mar 2020	27 Mar 2020	7	
Guadeloupe	13 Mar 2020	30 Mar 2020	106 (4)	
Cayman Islands	13 Mar 2020	30 Mar 2020	12 (1)	
Aruba	14 Mar 2020	30 Mar 2020	50	
Bahamas	15 Mar 2020	30 Mar 2020	14	
US Virgin Islands	16 Mar 2020	30 Mar 2020	30	
Sint Maarten	17 Mar 2020	30 Mar 2020	6	
Montserrat	17 Mar 2020	27 Mar 2020	5	
Barbados	17 Mar 2020	31 Mar 2020	34	
El Salvador	18 Mar 2020	31 Mar 2020	32	
Nicaragua	18 Mar 2020	28 Mar 2020	4 (1)	
Bermuda	18 Mar 2020	31 Mar 2020	27	
Haiti	19 Mar 2020	29 Mar 2020	15	
Dominica	22 Mar 2020	31 Mar 2020	12	
Grenada	22 Mar 2020	30 Mar 2020	9	
Belize	23 Mar 2020	31 Mar 2020	3	
Turks and Caicos Islands	23 Mar 2020	30 Mar 2020	5	
Saint Kitts and Nevis	24 Mar 2020	31 Mar 2020	8	
British Virgin Islands	25 Mar 2020	31 Mar 2020	3	
Anguilla	26 Mar 2020	26 Mar 2020	2	
EUROPE	France	24 Jan 2020	31 Mar 2020	52,128 (3,523)
	Germany	27 Jan 2020	31 Mar 2020	68,180 (682)
	Finland	29 Jan 2020	31 Mar 2020	1,418 (17)
	Italy	30 Jan 2020	31 Mar 2020	105,792 (12,428)*
	Russian Federation	31 Jan 2020	31 Mar 2020	2,245 (17)
	Spain	31 Jan 2020	31 Mar 2020	94,417 (8,189)
	Sweden	31 Jan 2020	31 Mar 2020	4,435 (180)
	United Kingdom of Great Britain	31 Jan 2020	31 Mar 2020	25,150 (1,651)
	Belgium	05 Feb 2020	31 Mar 2020	12,775 (705)
	Switzerland	25 Feb 2020	31 Mar 2020	16,168 (395)
	Austria	25 Feb 2020	31 Mar 2020	9,851 (128)
	Croatia	25 Feb 2020	31 Mar 2020	867 (6)
	Norway	26 Feb 2020	31 Mar 2020	4,605 (39)
	Romania	26 Feb 2020	31 Mar 2020	2,245 (72)
	Estonia	26 Feb 2020	31 Mar 2020	745 (4)
	Georgia	26 Feb 2020	31 Mar 2020	110
	North Macedonia	26 Feb 2020	31 Mar 2020	329 (9)

Greece	26 Feb 2020	31 Mar 2020	1,212 (46)
Denmark	27 Feb 2020	31 Mar 2020	2,860 (90)
San Marino	27 Feb 2020	30 Mar 2020	230 (25)
Lithuania	27 Feb 2020	31 Mar 2020	533 (8)
Netherlands	27 Feb 2020	31 Mar 2020	12,595 (1,039)
Azerbaijan	27 Feb 2020	31 Mar 2020	298 (5)
Belarus	28 Feb 2020	31 Mar 2020	152 (1)
Iceland	28 Feb 2020	31 Mar 2020	1,086 (2)
Ireland	28 Feb 2020	31 Mar 2020	2,910 (54)
Monaco	29 Feb 2020	31 Mar 2020	49 (1)
Czech Republic	01 Mar 2020	31 Mar 2020	3,003 (25)
Luxembourg	01 Mar 2020	31 Mar 2020	1,988 (22)
Armenia	01 Mar 2020	31 Mar 2020	532 (3)
Latvia	02 Mar 2020	31 Mar 2020	398
Portugal	02 Mar 2020	31 Mar 2020	7,443 (160)
Andorra	02 Mar 2020	31 Mar 2020	370 (8)
Liechtenstein	03 Mar 2020	31 Mar 2020	65
Ukraine	03 Mar 2020	31 Mar 2020	549 (13)
Slovenia	04 Mar 2020	31 Mar 2020	802 (15)
Hungary	04 Mar 2020	31 Mar 2020	492 (16)
Poland	04 Mar 2020	31 Mar 2020	2,215 (32)
Faroe Islands	04 Mar 2020	30 Mar 2020	168
Bosnia and Herzegovina	05 Mar 2020	31 Mar 2020	411 (12)
Gibraltar	05 Mar 2020	31 Mar 2020	69
Slovakia	06 Mar 2020	31 Mar 2020	363
Serbia	06 Mar 2020	31 Mar 2020	900 (23)
Vatican City	06 Mar 2020	29 Mar 2020	6
Malta	07 Mar 2020	31 Mar 2020	169
Moldova	07 Mar 2020	31 Mar 2020	353 (4)
Bulgaria	08 Mar 2020	31 Mar 2020	379 (8)
Albania	09 Mar 2020	31 Mar 2020	243 (13)
Cyprus	09 Mar 2020	31 Mar 2020	262 (8)
Channel Islands	09 Mar 2020	31 Mar 2020	141 (2)
Jersey	10 Mar 2020	30 Mar 2020	81 (2)
Kazakhstan	13 Mar 2020	31 Mar 2020	336 (2)
Uzbekistan	15 Mar 2020	31 Mar 2020	167 (2)
Greenland	16 Mar 2020	28 Mar 2020	10
Montenegro	17 Mar 2020	31 Mar 2020	105 (2)
Kyrgyztan	18 Mar 2020	31 Mar 2020	107
Isle of Man	19 Mar 2020	31 Mar 2020	60
MIDDLE EAST			
UAE	29 Jan 2020	31 Mar 2020	644 (6)
Iran	19 Feb 2020	31 Mar 2020	44,605 (2,898)
Israel	21 Feb 2020	31 Mar 2020	4,831 (17)

	Lebanon	21 Feb 2020	31 Mar 2020	463 (12)
	Kuwait	24 Feb 2020	31 Mar 2020	289
	Oman	24 Feb 2020	31 Mar 2020	192
	Bahrain	24 Feb 2020	31 Mar 2020	567 (4)
	Iraq	24 Feb 2020	31 Mar 2020	630 (46)
	Qatar	29 Feb 2020	31 Mar 2020	693 (1)
	Saudi Arabia	02 Mar 2020	31 Mar 2020	1,563 (10)
	Jordan	02 Mar 2020	31 Mar 2020	268 (5)
	Palestine	05 Mar 2020	31 Mar 2020	117 (1)
	Syria	22 Mar 2020	31 Mar 2020	10 (1)
AFRICA	Egypt	14 Feb 2020	31 Mar 2020	656 (41)
	Algeria	25 Feb 2020	31 Mar 2020	584 (35)
	Nigeria	28 Feb 2020	31 Mar 2020	135 (2)
	Tunisia	02 Mar 2020	31 Mar 2020	362 (10)
	Morocco	02 Mar 2020	31 Mar 2020	574 (33)
	Senegal	02 Mar 2020	31 Mar 2020	175
	South Africa	05 Mar 2020	31 Mar 2020	1,353 (3)
	Cameroon	06 Mar 2020	31 Mar 2020	193 (6)
	Togo	06 Mar 2020	31 Mar 2020	34 (1)
	Burkina Faso	09 Mar 2020	31 Mar 2020	246 (12)
	Democratic Republic of Congo	10 Mar 2020	29 Mar 2020	65 (6)
	Ivory Coast	11 Mar 2020	31 Mar 2020	168 (1)
	Reunion	11 Mar 2020	31 Mar 2020	247
	Ghana	13 Mar 2020	29 Mar 2020	152 (5)
	Guinea	13 Mar 2020	31 Mar 2020	22
	Gabon	13 Mar 2020	31 Mar 2020	16 (1)
	Sudan	13 Mar 2020	31 Mar 2020	7 (1)
	Kenya	13 Mar 2020	30 Mar 2020	50 (1)
	Ethiopia	13 Mar 2020	31 Mar 2020	25
	Central African Republic	14 Mar 2020	20 Mar 2020	3
	Seychelles	14 Mar 2020	31 Mar 2020	10
	Rwanda	14 Mar 2020	30 Mar 2020	70
	Namibia	14 Mar 2020	29 Mar 2020	11
	Swaziland	14 Mar 2020	28 Mar 2020	9
	Mauritania	14 Mar 2020	31 Mar 2020	6
	Mayotte	14 Mar 2020	31 Mar 2020	94 (1)
Equatorial Guinea	15 Mar 2020	27 Mar 2020	12	
Republic of Congo	15 Mar 2020	29 Mar 2020	19	
Benin	16 Mar 2020	24 Mar 2020	6	
Liberia	16 Mar 2020	20 Mar 2020	3	
Tanzania	16 Mar 2020	30 Mar 2020	19	
Somalia	16 Mar 2020	27 Mar 2020	3	
Gambia	17 Mar 2020	25 Mar 2020	4 (1)	

Zambia	17 Mar 2020	30 Mar 2020	35
Mauritius	18 Mar 2020	31 Mar 2020	143 (5)
Djibouti	18 Mar 2020	31 Mar 2020	30
Niger	19 Mar 2020	31 Mar 2020	27 (3)
Chad	19 Mar 2020	31 Mar 2020	7
Zimbabwe	20 Mar 2020	31 Mar 2020	8 (1)
Cape Verde	20 Mar 2020	29 Mar 2020	6 (1)
Madagascar	20 Mar 2020	31 Mar 2020	46
Uganda	21 Mar 2020	30 Mar 2020	33
Eritrea	21 Mar 2020	31 Mar 2020	15
Angola	21 Mar 2020	30 Mar 2020	7 (2)
Mozambique	22 Mar 2020	29 Mar 2020	8
Libya	24 Mar 2020	30 Mar 2020	8
Guinea-Bissau	25 Mar 2020	30 Mar 2020	8
Mali	25 Mar 2020	31 Mar 2020	28 (2)
Botswana	30 Mar 2020	30 Mar 2020	3
Sierra Leone	31 Mar 2020	31 Mar 2020	1
			756,862 (37,888)

**corrected from last report*

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 our global epidemic surveillance system, as of 1:00 AM PHT (GMT+8) on April 1. To contextualize each country's current situation, BlueDot calculated: (1) each country's rate of change for COVID-19 case reports, (2) case fatality ratios (CFR) for each country, and (3) each country's COVID-19 case burden, per 1,000 population. 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 stable-to-slowly increasing rate of COVID-19 transmission**
 - These countries have reported <100 confirmed 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: The available surveillance data suggest that 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 ≥ 100 confirmed cases of COVID-19 and have a steadily increasing or stabilizing rate of COVID-19 transmission.
 - Interpretation: The available surveillance data suggest that these countries may be in a stage of the epidemic with either steadily-increasing community-based transmission, early evidence of epidemic control measures, or incomplete testing/reporting (e.g. testing demand exceeds supply and countries have reached their daily testing capacity).
- C Countries reporting a rapidly increasing rate of COVID-19 transmission**
 - These countries have reported ≥ 100 confirmed cases of COVID-19 and have an accelerating rate of COVID-19 transmission.
 - Interpretation: The available surveillance data suggest that these countries may be experiencing more widespread community-based transmission.
- D Countries reported a decreasing rate of COVID-19 transmission**
 - These countries have reported ≥ 100 confirmed cases of COVID-19 and have a decelerating rate of COVID-19 transmission.
 - Interpretation: The available surveillance data in these countries suggest that epidemics in these countries are slowing down secondary to robust and effective control measures and potentially increased herd immunity.
- E Countries reporting <100 cases AND a high case fatality ratio OR limited public health capacity to detect and/or respond to COVID-19 based on IDVI**
 - These countries have reported <100 confirmed cases of COVID-19, AND: are reporting a CFR $> 4\%$ OR have an IDVI value (< 0.6).
 - Interpretation: The available surveillance data suggest that these countries are experiencing a larger outbreak than reported case counts indicate, and/or may indicate concerns for detecting and controlling spread of COVID-19.
- F Countries where insufficient information is available on COVID-19 transmission**
 - These countries have not reported imported or local cases of COVID-19 as of April 1, 1:00 AM PHT (GMT+8)

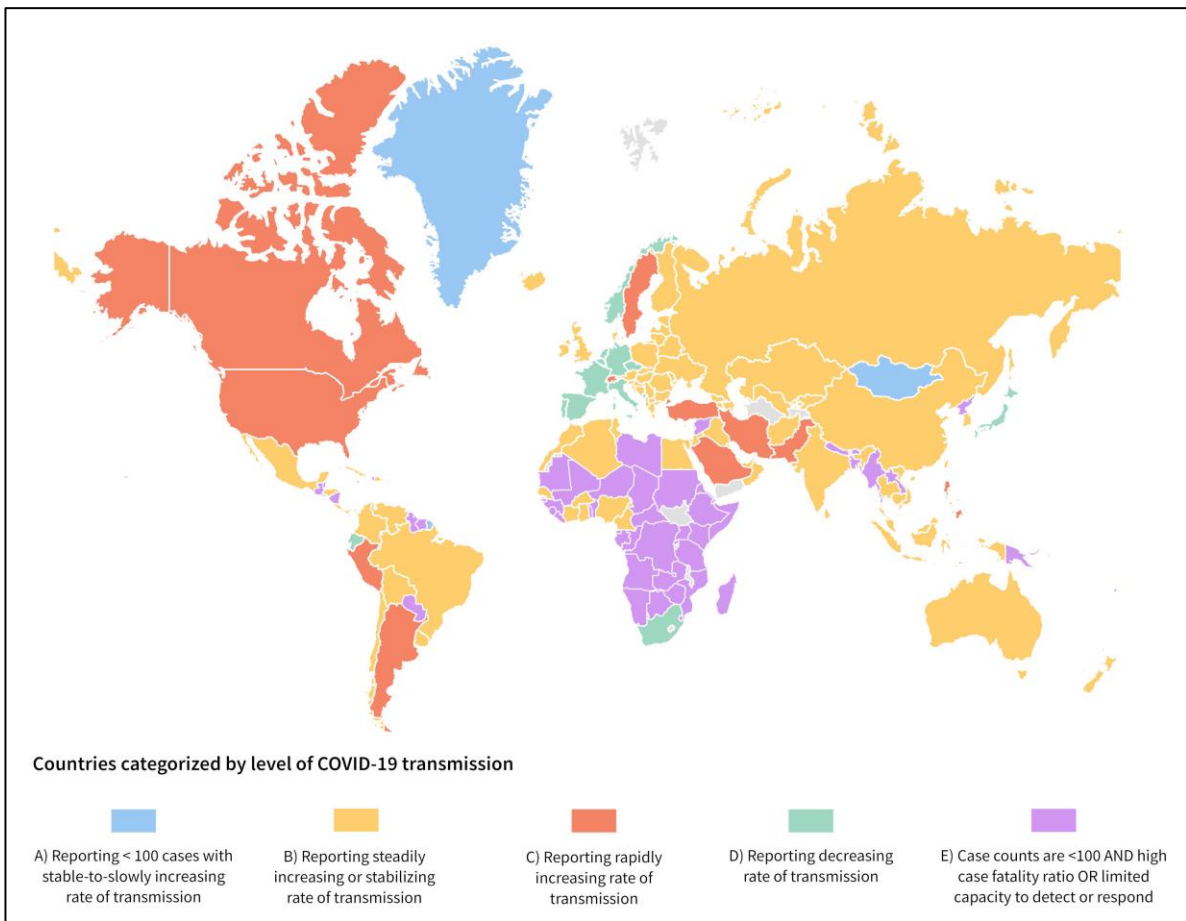


Figure 1. Map depicting countries by the corresponding COVID-19 transmission category

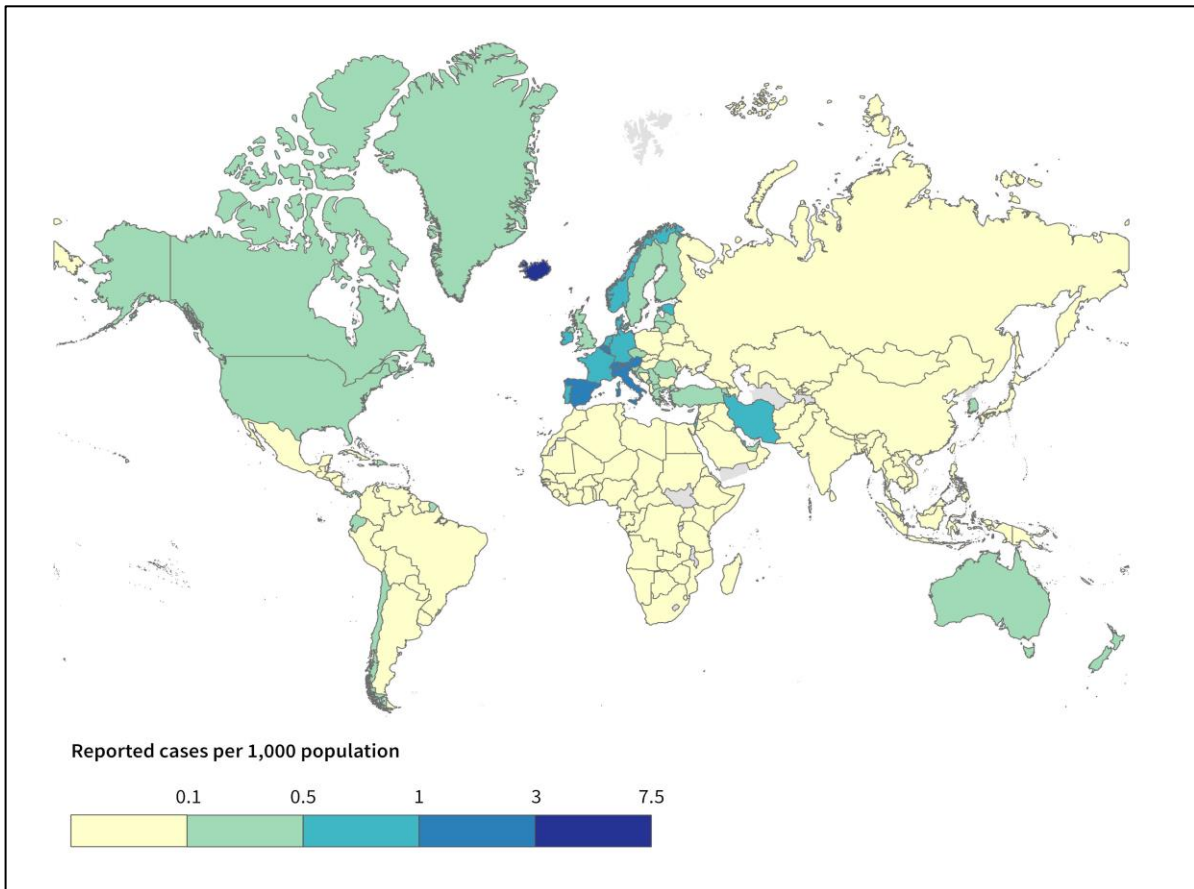


Figure 2. Map depicting the total number of COVID-19 cases reported per 1,000 population at a national level since the beginning of the pandemic. This include active cases, resolved cases, and fatalities

Table 1. Summary of ASEAN plus three country categorization, IDVI value, and COVID-19 cases per 1,000 population

Country*	COVID-19 Category As of April 1, 2020	IDVI Score**	Confirmed COVID-19 cases per 1000 population
Brunei	B	0.763	0.32656
Cambodia	B	0.355	0.00754
Indonesia	B	0.563	0.00629
Laos	E	0.355	0.00141
Malaysia	B	0.761	0.09783
Myanmar	E	0.448	0.00019
Philippines	C	0.545	0.02086
Singapore	B	0.878	0.19698
Thailand	B	0.711	0.02461
Vietnam	B	0.626	0.00231
China	B	0.664	0.06125
Japan	D	0.926	0.02089
South Korea	B	0.879	0.2021

*refer to additional file for country categorization globally

**The indexed scores for all countries are presented as normed values between 0 and 1.0.



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