



Scientific Research Monitoring on COVID-19

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Reported by:
Public Health Research Taskforce

- Dr. Shammah Al Memari
- Dr. Shada Al Ghzali
- Hanan Al Mutairi
- Nart Shabsough
- Alia Al Hammadi

Reviewed by:
Dr. Shereena Al Mazrouei

SUMMARY ABOUT COVID19 (1/2)



1. The virus have been sequenced and found to be similar to MERS-CoV and SARS-CoV. Research revealed that the virus originated in a bat reservoir.
2. New designation for the disease and the virus: **COVID-19** and **SARS-COV2** .
3. Transmission from human to human has been confirmed. Incubation period ranges from 3–7 days and can reach up to 14 days. Transmission during the incubation period is not yet confirmed (further studies are required).
4. Suggested human-to-human transmission occurs through droplets, contact and fomites, similar to Severe Acute Respiratory Syndrome (SARS).
5. Efforts currently in developing therapies for this virus focus on previously known medications and vaccination for MERS-CoV and SARS-CoV.
6. Most studies mention multiple antiviral medications are involved but treatment outcomes are yet to be published. One study in the US reported recovery after 1 day of treatment with Remdesivir.
Trial on animals have shown multiple drug candidates to be effective. Trials in humans are ongoing.



SUMMERY ABOUT COVID19 (2/2)

7. WHO forum held 11-12 Feb 2020 to mobilize research on COVID19 vaccinations and therapies.
8. WHO issued a response budget for three month starting from February 2020.
9. Human coronavirus remains on inanimate surfaces such as metal or glass for up to 9 days, but can be efficiently inactivated by disinfection, suggesting that effects on SARS-CoV2 could be similar.
10. Pregnant women infected with SARS-COV2 may experience symptoms similar to those of non-pregnant adults. No evidence suggests transmission from mother to newborn if infected late in pregnancy. No evidence of transmission through breast milk.
11. Isolation is the best measure to control transmission. The epidemic is expected to peak in early March 2020.
12. Transmission of SARS occurs most often when a patient develops sever symptoms, which make it easier to contain an outbreak. But with COVID-19/ SARS-CoV2, a patient can present with mild symptoms and still have the potential to spread the disease.



All articles presented in this report represents the authors' views and not necessarily represents Abu Dhabi Public Health Center views or directions.

Scientific Research

- **Clinical feature section: study of 85 fatal cases** support previous information on non-survivors of COVID19 (high risk group are Males , Elderly with non-communicable disease. Have progressive CT finding and low eosinophil and lymphocyte count).
- **Public health response:** An article suggest the use of serosurvey to predict the attack rate of COVID19

*Due to abundant COVID19 information resources and given the urgent need to keep up with the updates .Below is a cluster of other academic articles for interested reviewer.
Listed articles may represent information that has been previously shared in the report and/or may target specific technical audience.*

Others

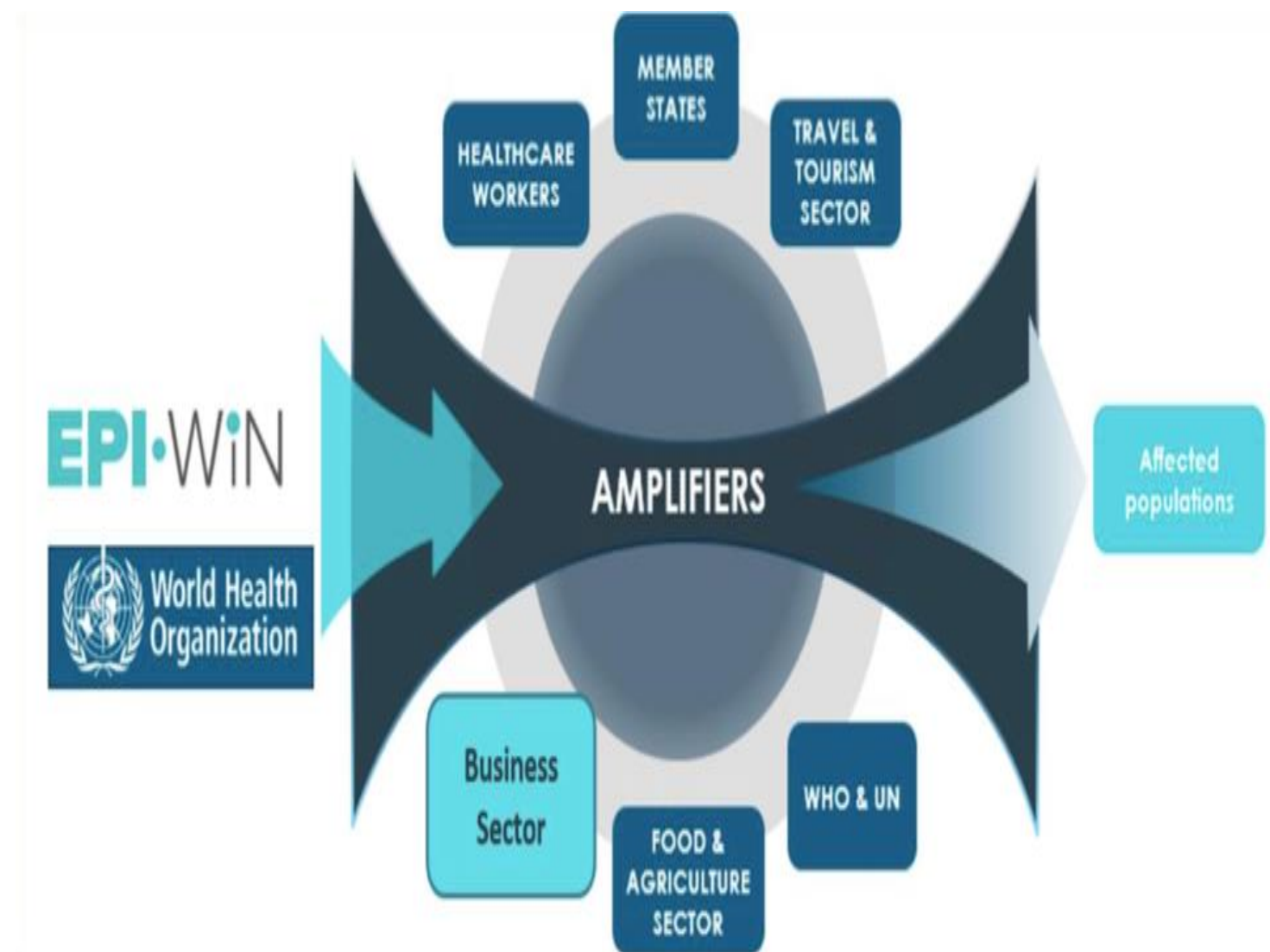
- Article title : **Priorities for the US Health Community Responding to COVID-19.** [link](#)
- Article title: **Clinical Characteristics of Seven Cases Infected with SARS-CoV-2 in the Perioperative Period of Lung Resection: A Retrospective Study from a Single Thoracic Department in Wuhan, China.** [Link](#)
- Article title: **Risk of COVID-19 for cancer patients .** [Link](#)
- Article title: **The species Severe acute respiratory syndrome-related coronavirus: classifying 2019-nCoV and naming it SARS-CoV-2 .** [Link](#)
- Article Title : **Analyzing the Epidemiological Outbreak of COVID-19: A Visual Exploratory Data Analysis (EDA) Approach.** [Link](#)
- Article title: **Fecal specimen diagnosis 2019 Novel Coronavirus–Infected Pneumonia.** [Link](#)



5th March 2020

- Five new countries/territories/areas (Bosnia and Herzegovina, Gibraltar, Hungary, Slovenia, and occupied Palestinian territory) have reported cases of COVID-19 in the past 24 hours.
- In anticipation for an increase in the number of COVID-19 cases, the South- East Asia Region is preparing to roll out rapid response activities by engaging with communities, procuring personal protective equipment (PPE), and ensuring laboratories have the capacity to test for COVID-19 or ship samples to global referral laboratories.
- WHO's initiative called the WHO Network for Information in Epidemics (EPI- WIN) leverages all communications platforms to amplify evidence-based information. EPI-WIN has identified trusted sources and engaged with these “trust chains”. More information visit the website in figure 1.

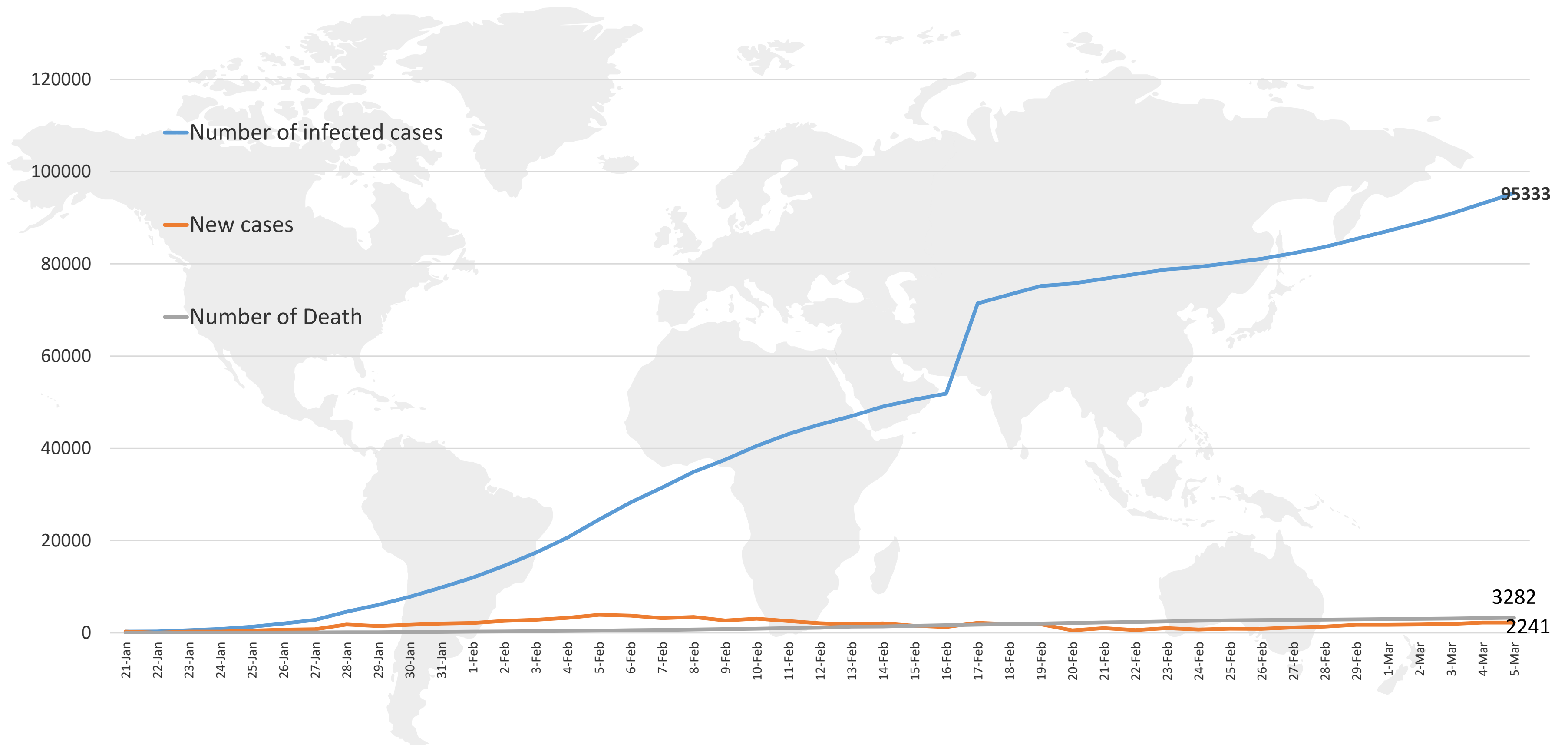
Figure 1:



<https://www.epi-win.com>



Figure 1: Total number of infected, new, and death cases (January 21st to March 5th, 2020)

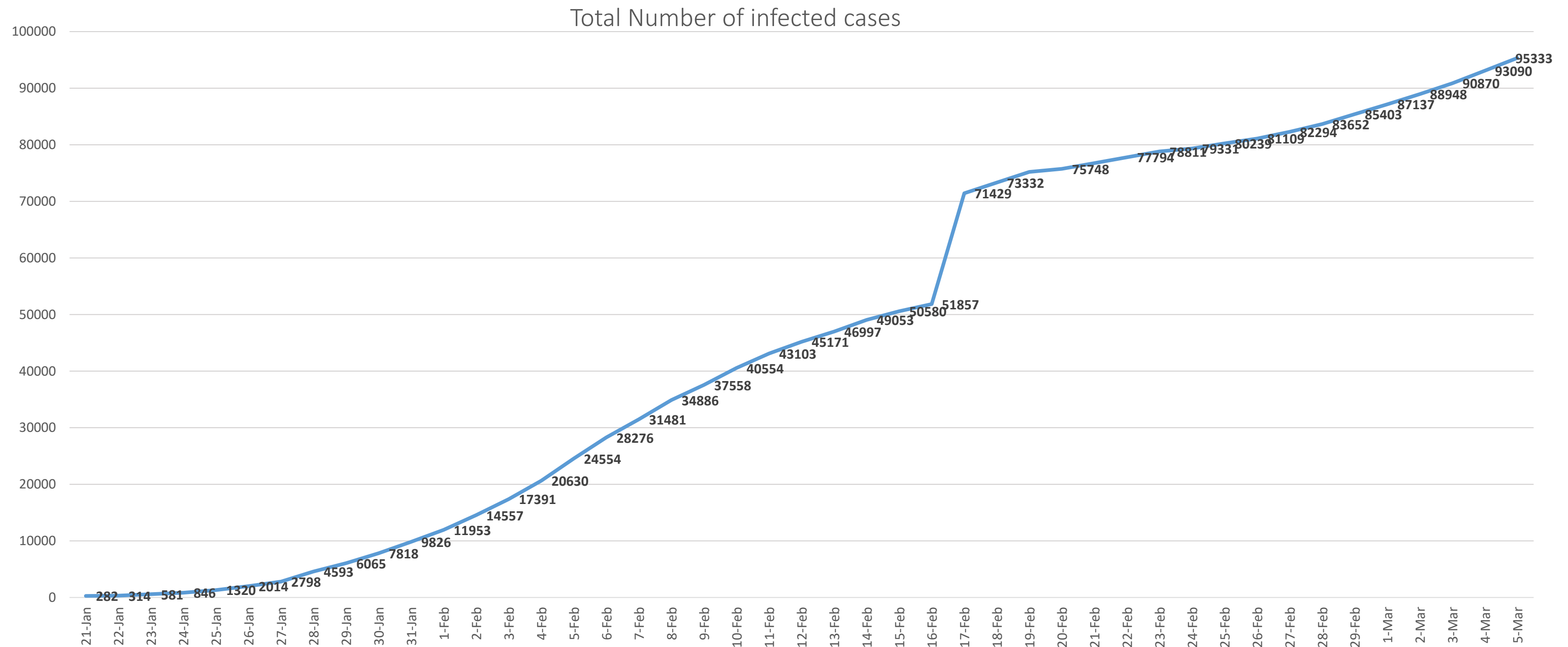


Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](https://www.who.int/)



Figure 2: Number of infected cases (January 21st to March 5th, 2020)

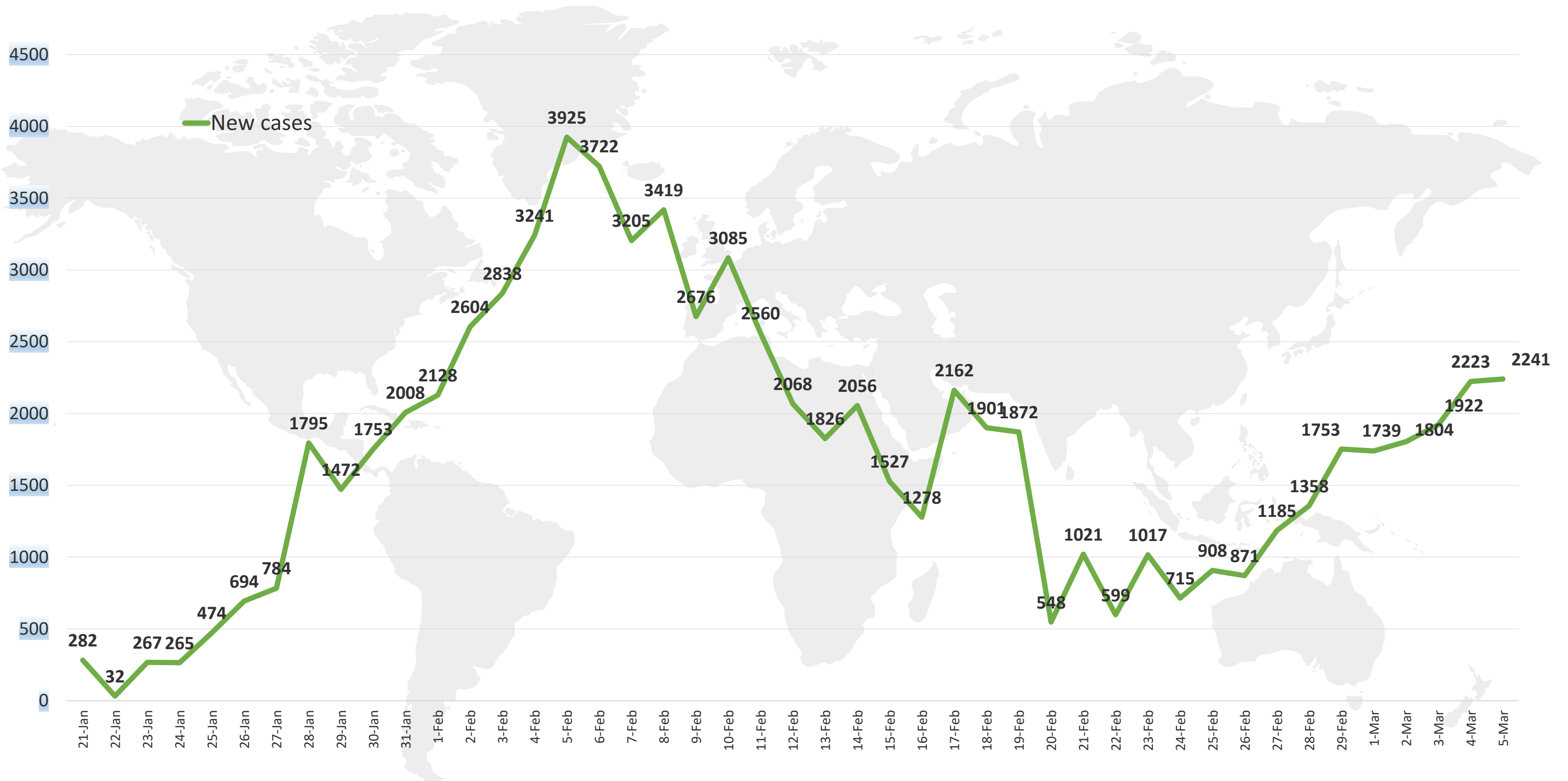


Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](#)



Figure 3: Number of new cases (January 21st to March 5th, 2020)

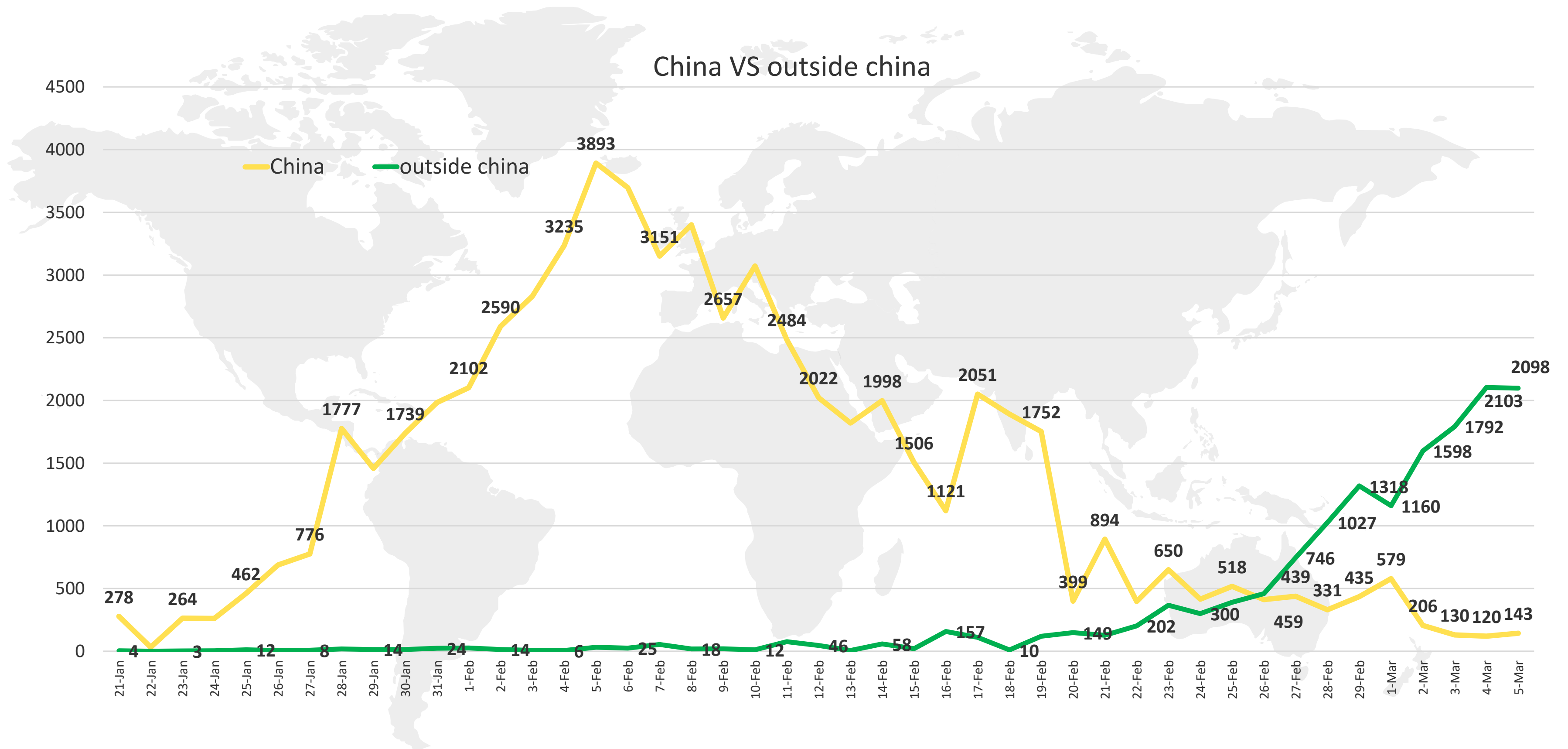


Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](https://www.who.int/)



Figure 4: Number of new cases in China versus outside China (January 21st to March 5th , 2020)

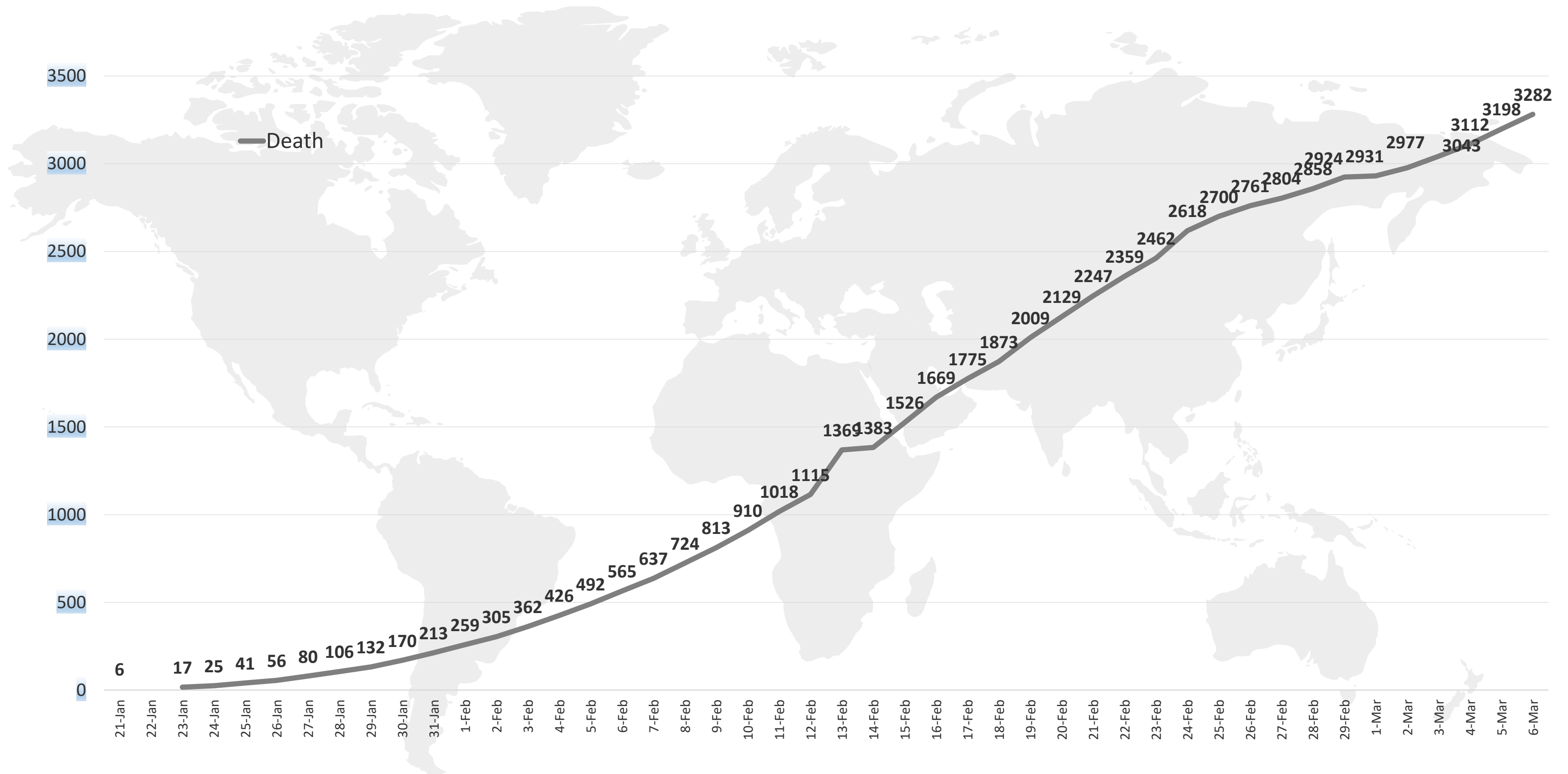


Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](http://www.who.int)



Figure 5: Number of total deaths (January 21st to March 5th, 2020)

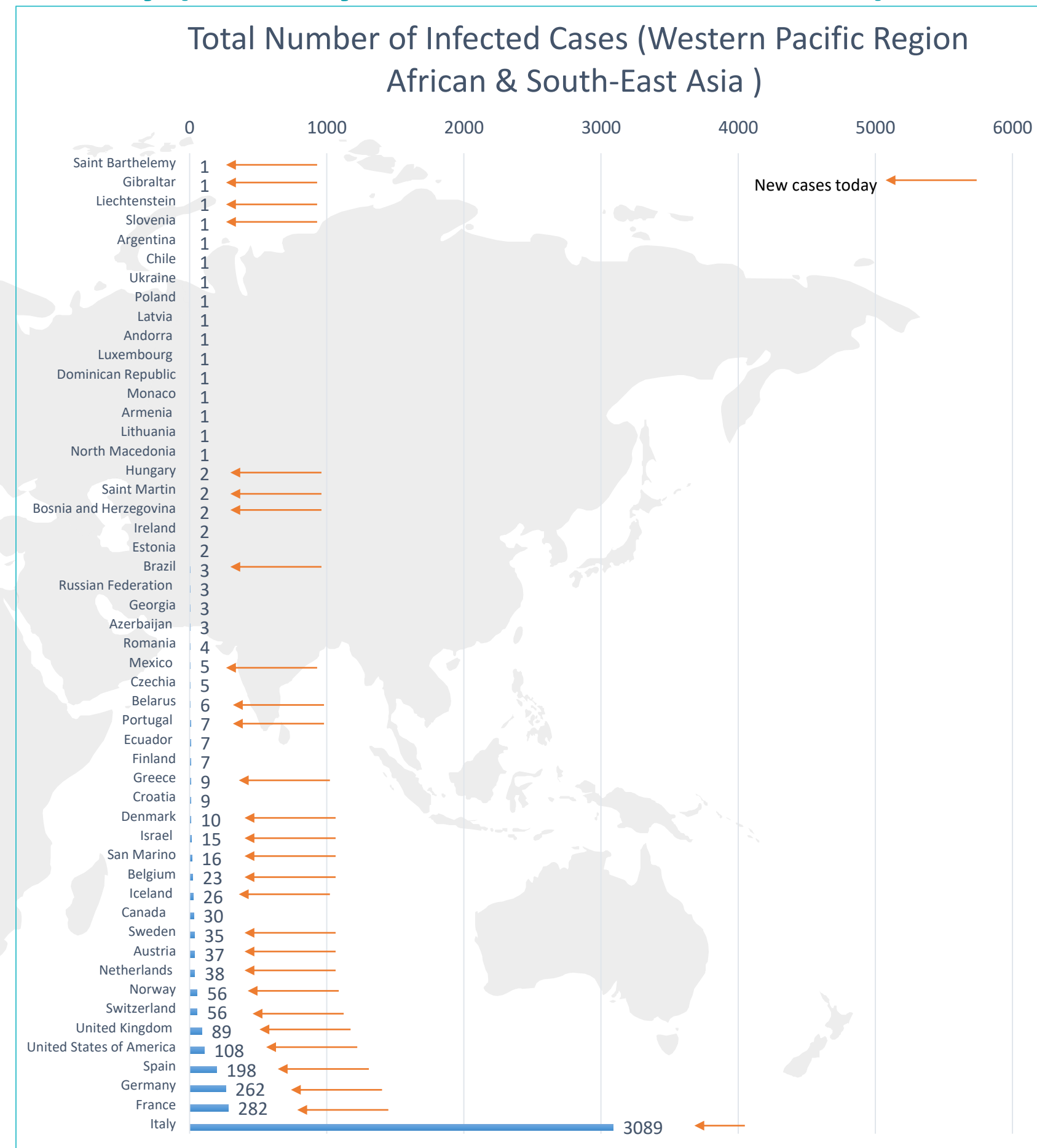
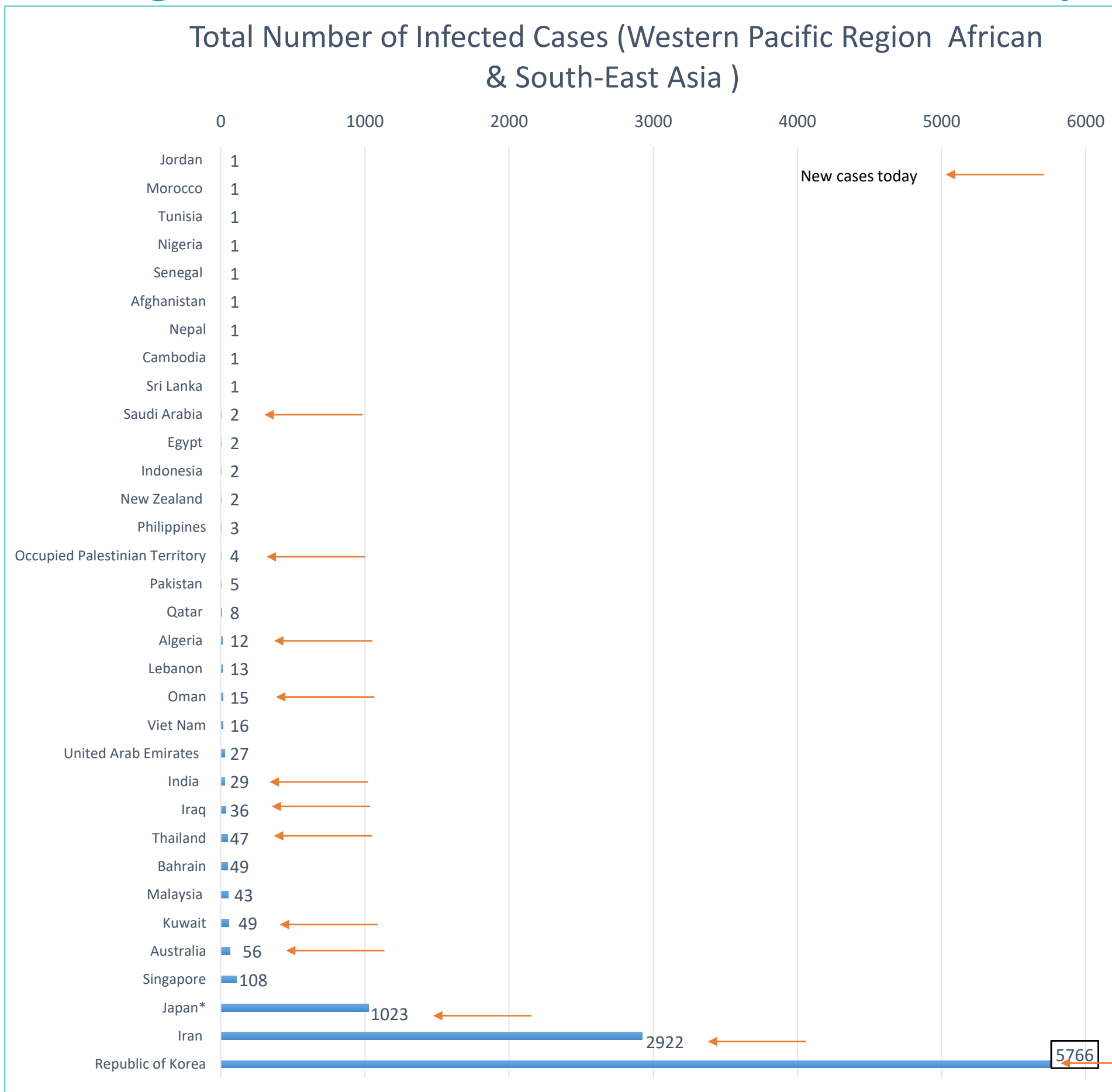


Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](#)



Figure 6: Total number of cases outside China per country (January 21st to March 5th, 2020)

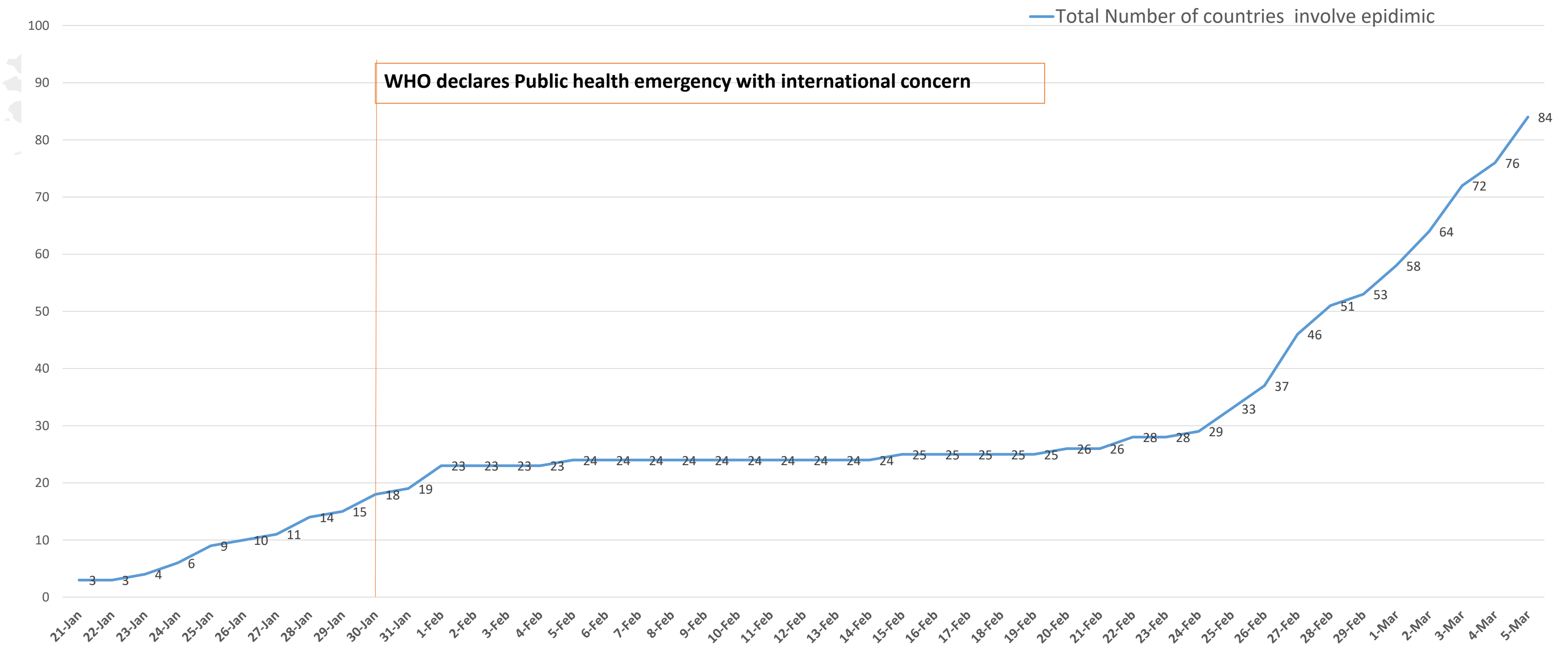


Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](http://www.who.int)



Figure 7: Total number of countries reporting cases of COVID-19 outside China over time



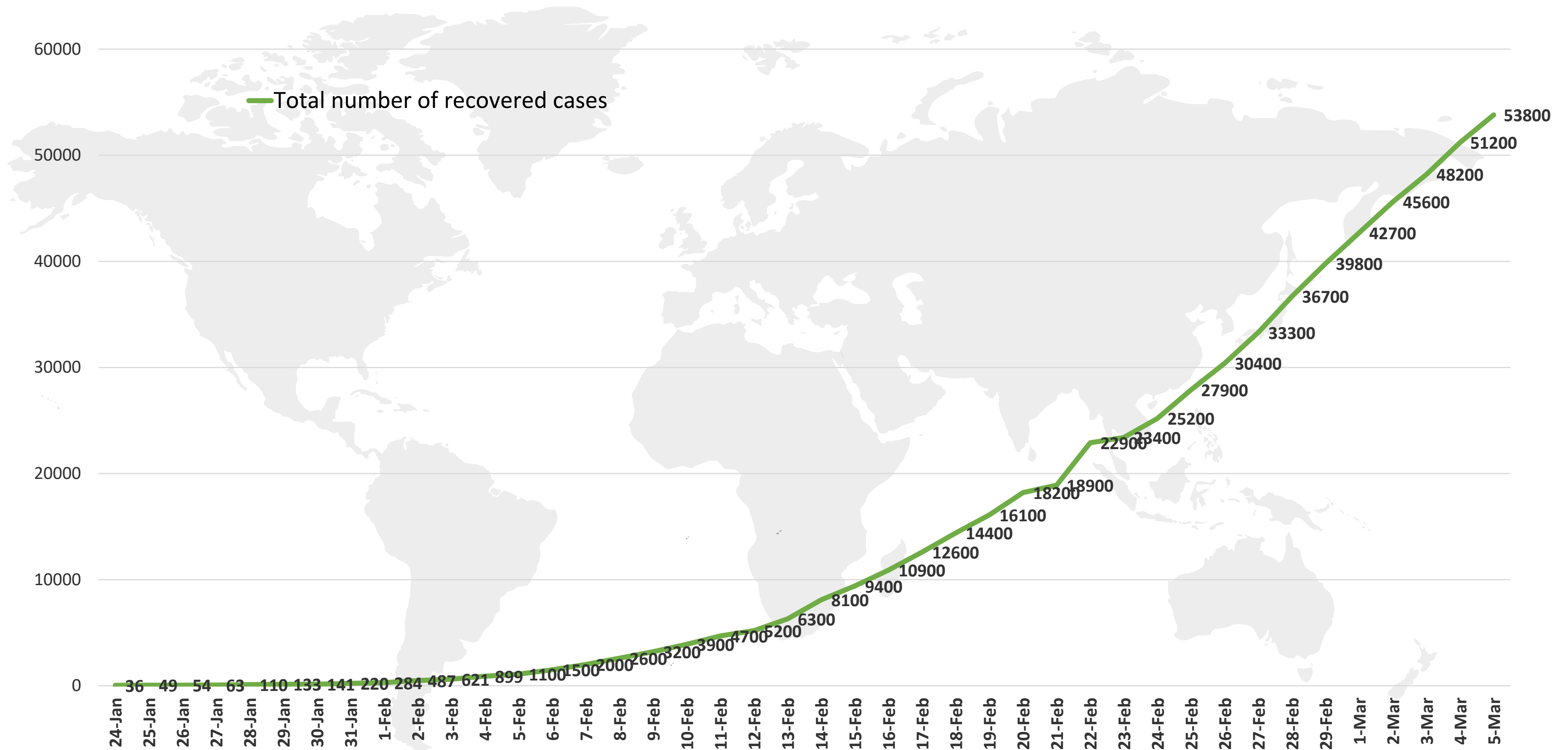
Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](https://www.who.int/)

Epidemiology



Figure 8: Total recovered cases of COVID-19. (January 21st to March 5th, 2020)



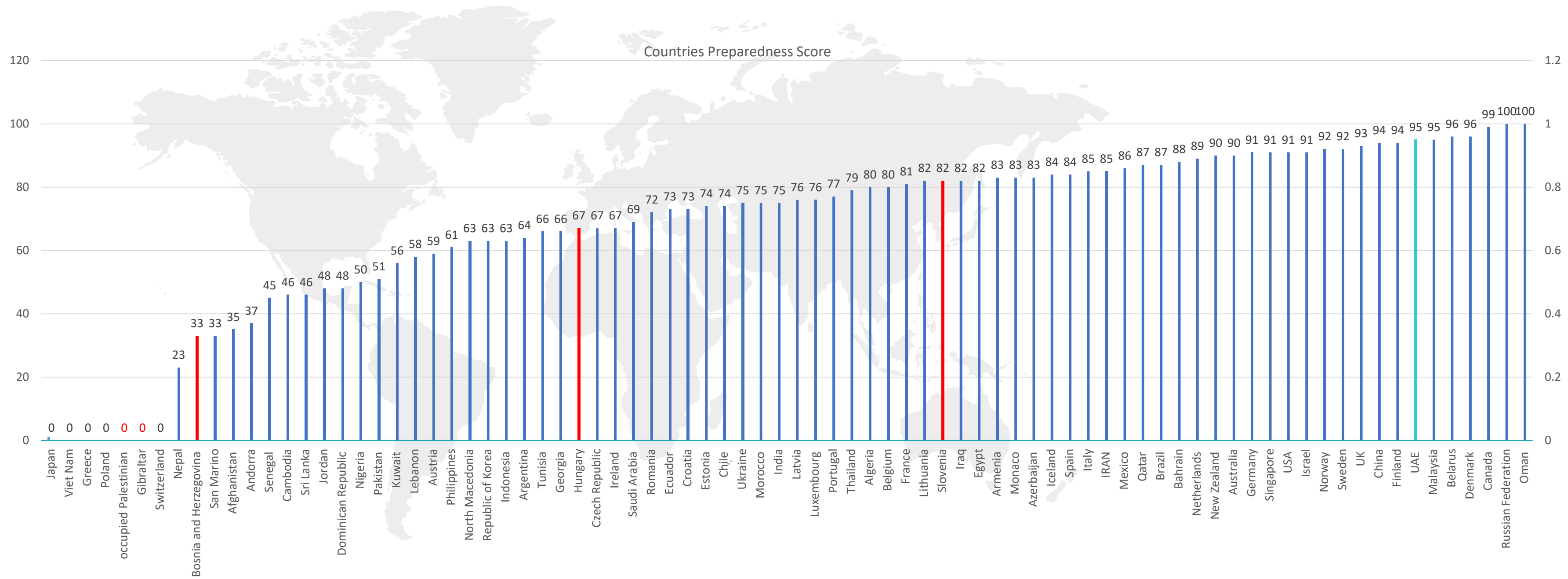
Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [John Hopkins University](https://www.jhu.edu/)



Figure 9 : Capacities of countries reporting COVID19 cases

Figure 9A: Countries' preparedness score in responding to Public health risks and acute events. Published in 2018



Line graph published by Abu Dhabi Public Health Center 2020.

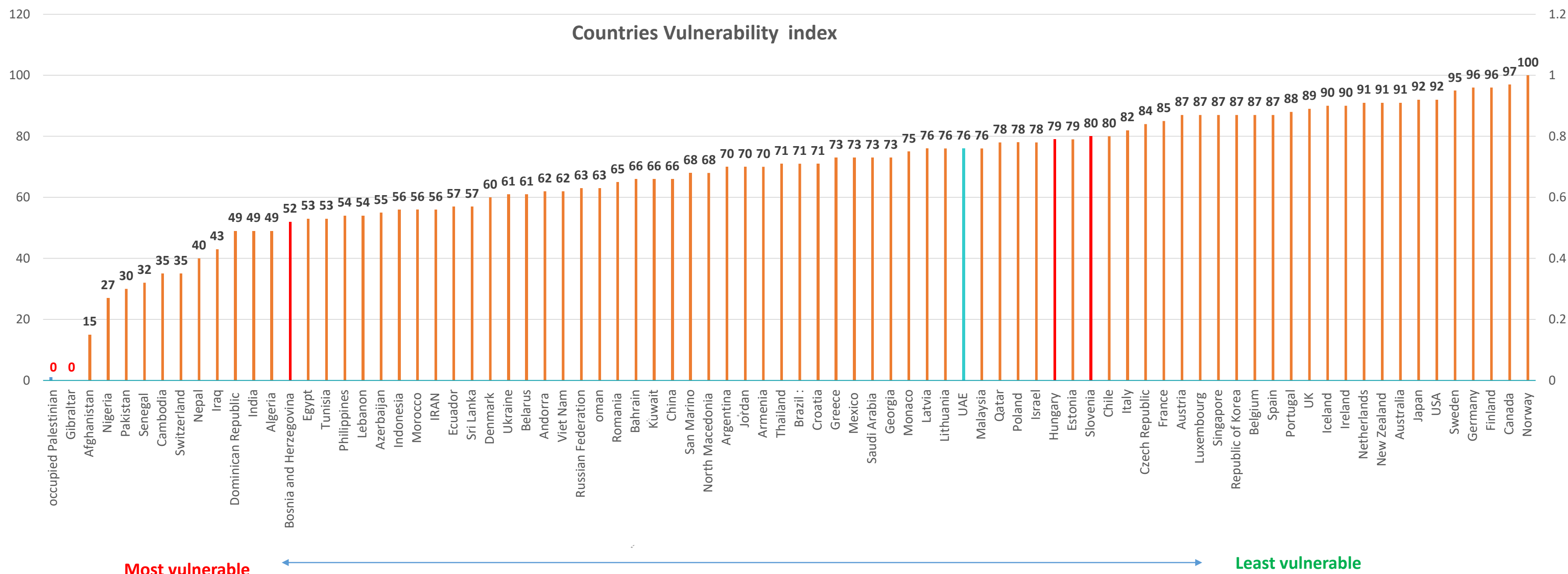
Data resources : [SPAR score](#), [IDVI score](#)

Epidemiology



Figure 10 : Capacities of countries reporting COVID19 cases

Figure 9B: Countries' vulnerability index to spread infectious disease. Published in 2016



Line graph published by Abu Dhabi Public Health Center 2020.

Data resources : [SPAR score](#) , [IDVI score](#)



Public health response

Article : Outbreak investigation for COVID-19 in northern Vietnam

Published: 4th March 2020

Summary:

This case illustrates the importance of isolating patients and suspected cases for at least **14 days** after exposure and of community-wide screening to enhance diagnosis of COVID-19 as a case was discharged after one negative test (11 days after returning from Wuhan) yet was readmitted and tested positive.

Link: [click here](#)

Article: Has China faced only a herald wave of SARS-CoV-2?

Published: 4th March 2020

Summary:

The author predicted **that 50- 60 % of china's population will eventually end up infected** with (SARS-CoV-2) if no firm decision was taken.

the author suggest to use **Serosurveys** which is a test of blood serum from a group of individuals to determine seroprevalence, neutralizing antibodies from a at least 1000 people sample could allow for **the rate of SARS-CoV-2 infections** to be estimated with **good accuracy**. Which tell **us if the attack rate is high or low**. There is no reason to wait for the end of the epidemic before doing serosurveys

Processing Serosurveys in this period will greatly benefit China in the first place and the world

Link : [click here](#)

Clinical feature and transmission



Article : Clinical features of 85 fatal cases of COVID-19 from Wuhan: a retrospective observational study.

Published: 4th March 2020

Summery:

A Retrospective observational study investigates 85 fatal cases of COVID-19 from Wuhan, China, the study reports the clinical laboratory and radiologic features of the patients. Study duration (*9 Jan and 15 Feb 2020*).

Finding:

- Most cases were male, median age 65.8 with noncommunicable chronic disease. Such as hypertension, diabetes, coronary heart diseases. Most of the patients died of multiple organ failures.
- Early onset of shortness of breath might be used as an observational symptom for COVID-19 exacerbations. Low eosinophilia and lymphocyte count indicates a poor prognosis.
- Also as reported bilateral pneumonia and progressive radiographic deterioration on follow-up CT might be risk factors for poor prognosis in chest CT scan of COVID-19 patients.

Link: [Click Here](#)

[Link : here](#)