



Short Update 21b COVID-19 Coronavirus Disease 29th of May 2020



GLOBALLY

5 779 681

Confirmed cases
2 420 881
recovered
360 440 deaths

USA

(new cases/day 20 243)

1 717 850
confirmed cases
399 774 recovered
101 470 deaths

Brazil

(new cases/day 17 177)

438 238
confirmed cases
177 604 recovered
26 754 deaths

Russia

(new cases/day 8 785)

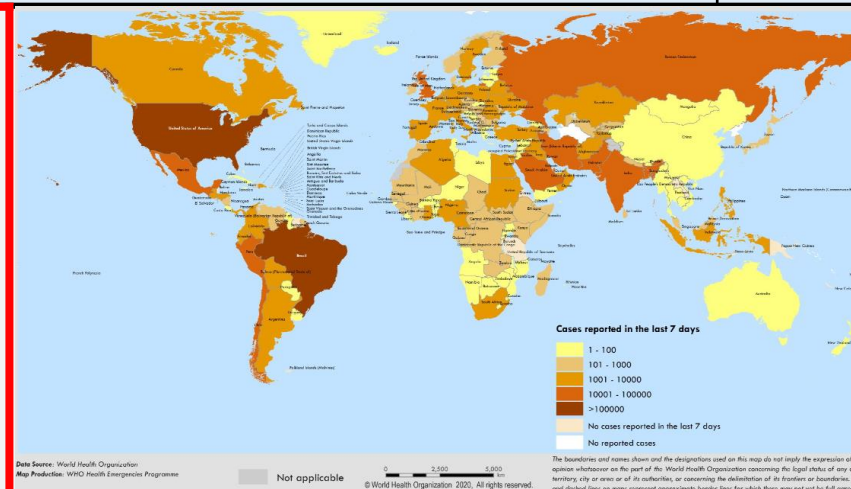
379 051
confirmed cases
150 993 recovered
4 142 deaths

News:

- The U.S. death toll now exceeds 100,000, far higher than any other nation.
- WHO:** published a case-control protocol for [the assessment of risk factors for coronavirus disease 2019 \(COVID-19\) in health workers](#). The primary objective of this study is to characterize and assess the risk factors for SARS-CoV-2 infection in health workers exposed to COVID-19 patients.
- WHO:** published [a population-based age-stratified seroepidemiological investigation protocol for COVID-19 virus infection](#). This protocol was designed to investigate the extent of infection, as determined by positive blood tests in the general population, in any country in which COVID-19 virus infection has been reported.
- WHO:** Published an interim guidance on the [clinical management of COVID-19](#). This guidance document is intended for clinicians caring for COVID-19 patients during all phases of their disease.
- WHO:** Regional Director for the Americas, Dr Carissa F. Etienne said [the response to the COVID-19 pandemic in the Region of the Americas must include chronic disease care](#), as 1 in 4 people are at increased risk of poor outcomes from COVID-19 due to underlying noncommunicable diseases.
- ECDC:** published a [Methodology for estimating point prevalence of SARS-CoV-2 infection by pooled RT-PCR testing](#) the document is a technical guidance for estimating the prevalence of SARS-CoV-2 infected cases, through a cross sectional study design based on pooled sampling for RT-PCR testing on a random population sample.
- UN:** The UN climate conference in Glasgow has been postponed by one year to November 2021.
- Find Articles and other materials about COVID-19 on our website [here](#)
- Please use our online observation form to report your lessons learned observations as soon as possible [here](#)

Topics:

- Subject in Focus - China's air pollution overshoots pre-crisis levels for the first time
- Cyberattacks in the healthcare sector during the first three month of the COVID-19 pandemic
- In the press



EUROPE

2 047 468
confirmed cases

1 026 616 recovered
175 907 deaths

UK

(new cases/day 2 603)

269 127
confirmed cases

-not reported- recovered
37 837 deaths

SPAIN

(new cases/day 696)

237 906
confirmed cases

150 376 recovered
27 119 deaths

ITALY

(new cases/day 532)

231 732
confirmed cases

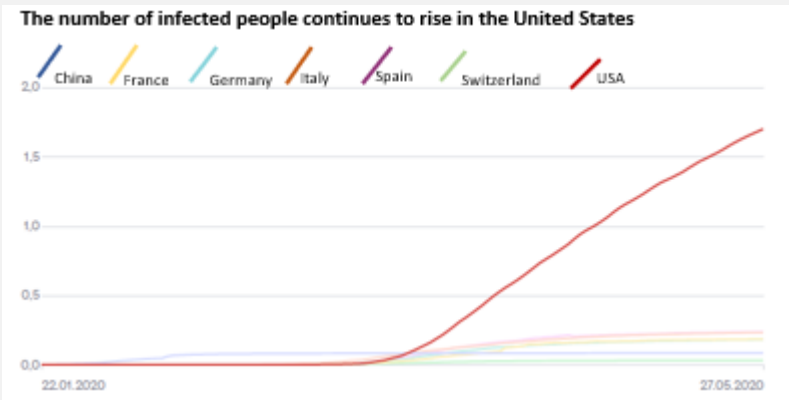
150 604 recovered
33 142 deaths

Global Situation

USA: In the United States, the number of confirmed infections continues to rise sharply, the total number is higher than anywhere else. Since the end of March, more cases have been counted in the United States than in China and Italy, and the millions of confirmed cases has now been exceeded.

This development is particularly worrying because the spread of the virus in the United States can only be slowed down slowly. The growth is slower than in other countries.

There is also little hope in the development of the number of deaths in the USA: growth is still stronger than in France, Italy or Spain.



The largest virus focus in the United States is in New York. In the metropolis alone, more than 200,000 people have already tested positive for the corona virus (as of May 23). Several thousand cases are currently also counted in other large cities. The state of Washington is also badly affected. According to the Guardian, the high number of people infected there may also be due to the fact that a lot of testing was carried out early, because the first case in the United States became known in Washington State.

If you compare the cities of San Francisco and New York, there are some differences: On the west coast, people used to act and declare a state of emergency, and large employers switched to home offices. In addition, San Francisco is less populated than New York and public transport is much less developed - this could have been an advantage in the Corona crisis.

In many states, tough measures have been taken to counter the spread of the pandemic. California, New York and Washington issued curfews. Other member states did not issue curfews, but ordered people home and largely shut down public life. These include, for example, Illinois, Massachusetts or Michigan. In Michigan and other countries there have also been protests against these so-called "stay at home" decisions over the past few weeks. This was also after President Donald Trump called for "liberation" of Michigan and loosening the measures to restart economic activity.

In some states, such as Texas, Wyoming or Florida, easing has now come into force, and shops, restaurants and churches can resume operation under more or less strict conditions. Further easing is also being examined in other member states.

KOR: had gradually loosened the nationwide measures to limit social contacts. However, the authorities were recently alarmed by a new local cluster of infections, this time in the distribution center of a mail order company in the Seoul suburb of Bucheon. As of Thursday morning, more than 80 cases among employees and contact persons were confirmed there, more than 4000 people were tested. The government decided to again tightening the restrictions on people in the metropolis of Seoul and the surrounding area in view of the further significant increase in the number of cases of coronavirus infections. With immediate effect, public facilities including museums, theaters and multi-purpose halls in the greater Seoul area will be closed again by June 14.

FRA: on Wednesday the authorization allowing hydroxychloroquine as a treatment for COVID-19 patients was revoked, a day after halting the use of the malaria drug in clinical trials.

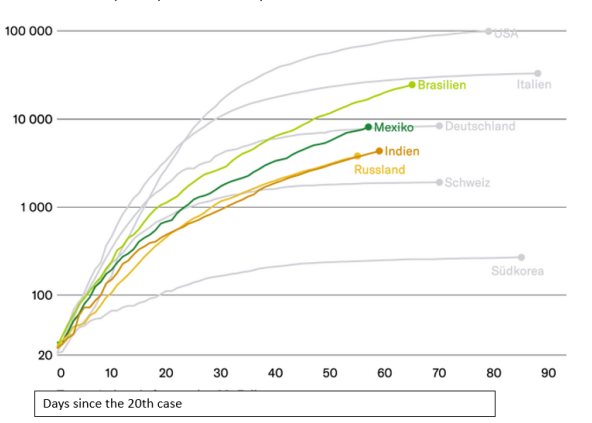
More tests in Switzerland than in South Korea

Test frequency in selected countries

Country	Date	Test per million of population
Bahrain	27.5.	194 995
Russia	27.5	65 163
Italy	27.5.	59 644
UK	27.5.	57 172
Germany	24.5.	47 747
Austria	27.5.	47 462
USA	27.5.	46 432
Norway	27.5.	44 684
Switzerland	27.5.	44 418
South Korea	27.5	16 046

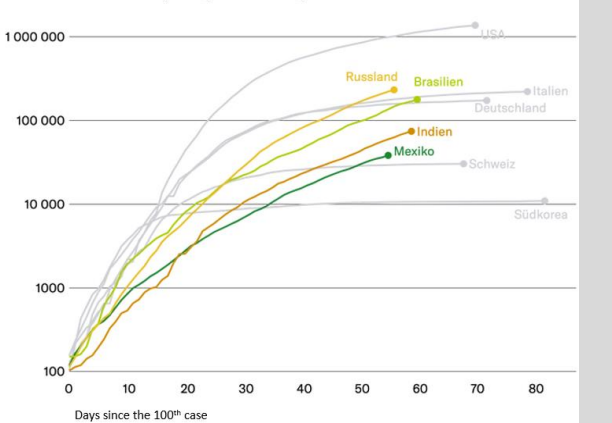
Emerging countries are experiencing strong growth in deaths

Coronavirus deaths by country and number of days since the 20th death



Russia and Brazil have more cases than Italy

Confirmed coronavirus infections by country and number of days since the 100th case



Especially the emerging countries of Latin America still show a increasing deaths number every day. The same can be seen for India and Russia. Strong growth is also evident in the four emerging countries in the confirmed cases. There can be several reasons why the number of cases in the emerging countries initially increased more slowly, but is now growing faster - for example less test capacity, but also local peculiarities. Source: NZZ

Source: <https://www.nzz.ch/>

China's air pollution overshoots pre-crisis levels for the first time

Summary of the CREA report

Levels of health-harming air pollutants in China have exceeded concentrations at the same time last year in the past 30 days, for the first time since the start of the COVID-19 crisis.

This includes PM2.5, NO₂, SO₂ and ozone. Air pollutant levels plummeted during the national lockdown in February, bottomed out in early March and have now overshoot their pre-crisis levels. The rebound appears to be driven by industrial emissions, as the pollution levels in the largest cities, Beijing and Shanghai, are still trailing below last year. More broadly, pollution levels tended to increase more in areas where coal-burning is a larger source of pollution. Ozone levels are close to the record level of 2018. Rebounding air pollutant levels are a demonstration of the importance of prioritizing green economy and clean energy in the recovery from the COVID-19 crisis.

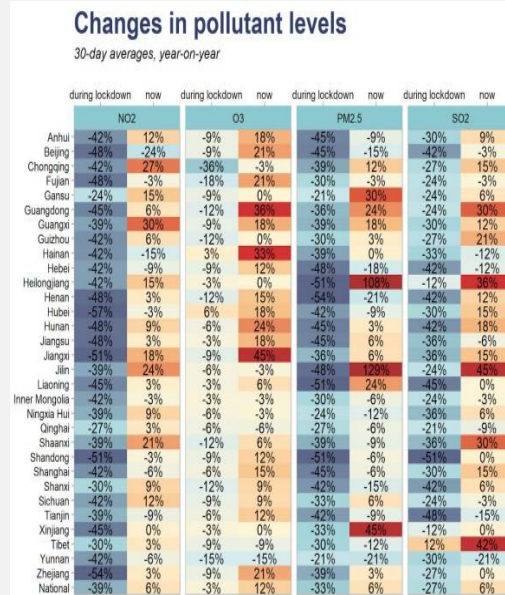
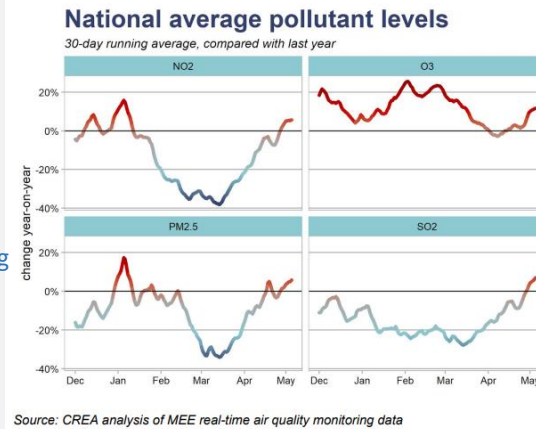
All eyes are on China, as the first major economy to return to work after a lockdown. China's previous economic recoveries,

including the aftermath of the Global Financial Crisis in 2008 and the SARS epidemic of 2003, have been associated with surges in air pollution and CO₂ emissions.

Impact of the lockdown on air quality

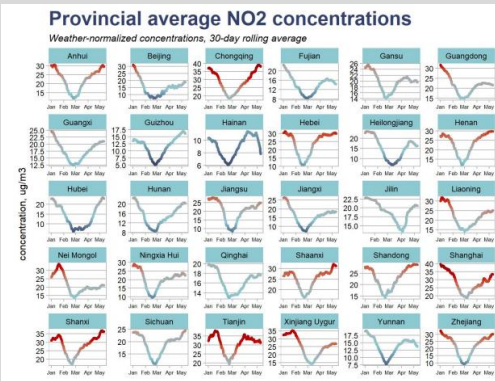
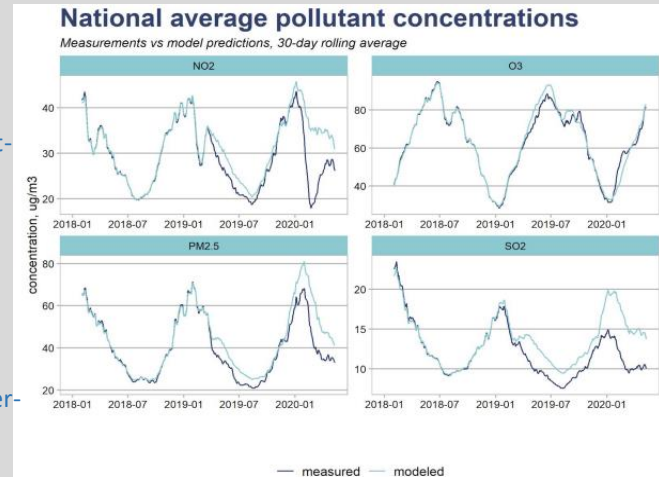
The COVID-19 lockdowns had a dramatic impact on China's fossil fuel consumption and air quality - from February to March, national average PM2.5 levels fell by 33% while NO₂ levels dropped by 40%, compared to the same post-holiday period in 2019. CO₂ emissions fell by an estimated 25%, with coal-fired power generation, cement manufacturing and oil consumption all plummeting.

It's obvious that once the economy starts to recover and production and transport to resume, much of the air pollution would return. What's not obvious was whether air pollution will overshoot pre-crisis levels, especially when many economic sectors are still reeling. Such an overshoot would signify a "dirty" recovery in which the more highly polluting sectors are leading. Due to emphasis on GDP targets and on construction and manufacturing projects to hit those targets, China's recoveries have tended to be "dirty", with negative economic shocks.



The most well-known example is the 2008 stimulus package that ushered in an unprecedented wave of construction projects and record levels of coal, cement and steel consumption. The stimulus programme culminated in the horrendous air pollution episodes of the winter 2012-13, commonly known as the "airpocalypse", around Beijing. Another worrying parallel to the current situation is the "SARS investment boom" started by the government in 2003 to offset the negative economic impacts of the SARS epidemic and resulting in a surge in pollution in the region surrounding Beijing. As a result, air quality gains slowed down but didn't reverse. Now there are early warning signs that China's recovery from the COVID-19 crisis is reversing air quality gains, with national average PM2.5, NO₂, SO₂ and ozone levels catching up to and exceeding the levels at the same time last year in the past 30 days. All four pollutants have severe health impacts, and their concentrations in China remain far above safe levels despite air quality gains made since the "airpocalypse" in 2013.

The graph shows nationally averaged pollutant concentrations as actual observed values and model-predicted values. The measured values for pollutants other than ozone gradually move below the model-predicted values as air quality improves, but the short-term variation of the two lines follows each other closely. In 2020, after the lockdowns, SO₂, NO₂ and PM2.5 fall steeply below the predicted values as emissions are reduced. The effect on ozone is much more complex, as NO_x emissions can inhibit ozone formation. The model-predicted values show the part of the variation in air quality that is attributable to weather. When that variation is removed, the weather-controlled trend shows the effect of changes in emissions.



Weather-normalized PM2.5 and SO₂ concentrations have exceeded their pre-crisis levels in early January, while NO₂ has returned to pre-crisis levels. Ozone concentrations initially spiked under the lockdowns due the effects of reduced emissions of other pollutants. They then fell and are now increasing, rising above last year's levels. On the provincial level, the next graph shows post-lockdown increases in NO₂ pollution levels after lockdowns were lifted.

Source: <https://energyandcleanair.org/wp/wp-content/uploads/2020/05/China-air-pollution-rebound-final.pdf>



Cyberattacks in the healthcare sector during the first three month of the COVID-19 pandemic

Report by the Swedish Defence Research Agency (FOI)

Since the early 1950s, NATO has had an important role in supporting and promoting civil preparedness among Allies (<https://www.nato.int/docu/review/articles/2019/02/27/resilience-the-first-line-of-defence/index.html>)

In 2016, at the Warsaw Summit, Allied leaders committed to enhancing resilience by striving to achieve seven baseline requirements for civil preparedness. One baseline requirement is the ability to deal with mass casualties; which includes the health care sector.

Even prior to the outbreak of SARS-CoV-19, the healthcare sector had been the target of cyberattacks on several occasions. For instance, ransomware attacks on the health care system is common by e.g. blocking access to journal systems. One notable example is the Wannacry ransomware attack that was launched in May 2017 and severely affected the National Health Services (NHS) in the United Kingdom (<https://www.england.nhs.uk/wp-content/uploads/2018/02/lessons-learned-review-wannacry-ransomware-cyber-attack-cio-review.pdf>).

Since the Coronavirus outbreak, misinformation as well as disinformation and conspiracy theories have spread in e.g. social media. Furthermore, criminal elements have seized the opportunity to exploit the situation and launched a large number of cyber frauds, and cyberattacks both on targets in the health care sector and against any target they believe will yield a profit. A number of attacks have also been attributed to state actors.

Malware risks in the healthcare sector

The aforesaid Wannacry attack was of this type. The current crisis has seen similar attempts; On April4, 2020, Interpol warned of cybercriminals using ransomware to target critical healthcare infrastructures fighting COVID-19 pandemic with ransomware. Also, biotech firms, searching for possible COVID-10 treatments, have been targeted.

Trojans, Phishing and Watering hole-attacks

During a crisis attackers have a greater than normal chance of getting victims to access websites, download software, and open emails because people are more worried, emotional vulnerable and active looking for information about the subject they have little prior knowledge about. Since the outbreak began, attackers have created many tens of thousands of websites that masquerade as legitimate healthcare information sites where they offer software that can track the spread of the illness but actually contain ransomware or other kinds of trojan (see Figure 1). Cyberattacks and phishing in the healthcare sector have been reported in e.g.

FRA, USA, ESP, THA. A attack in March in a major hospital in CZE resulted in a need to shut down the IT network, reportedly with impact on surgical operations, a need to reroute acute patients and the delay of administrating COVID-19 test by several days.

Politically motivated attacks

A number of attacks have been attributed to state sectors. E.g. in UKR several targets received emails purportedly sent from Ukraine Centre for Public Health, containing documents about COVID-19 research, but infected with malware. The attack was attributed to a Russian government sponsored hacking group. At the same time a rumour spread by email about Chinese evacuees spreading COVID-19 led to panic and riots in part of the country.

Conclusion

The COVID-19 pandemic resulted in an unpredictable increase of cyberattacks, especially using malicious “fake” apps for COVID-19 information. Due to a crisis population feels worried and/or threatened and in need of information that gives rise to a very target-rich environment for attackers. Psychological operations, misinformation spread, espionage, ransomware extortion among other attacks are facilitated by this situation.

FROM: [redacted]
Date: March 26, 2020 at 1:05:42 PM GMT+8
To: [redacted]
Subject: I can infect you with COVID-19

I know everything little secret about your life.
To prove my point, that is why I am sending you this email from your system using your email account.

I am aware of your whereabouts, what you eat, with whom you talk to, every little thing you do everyday.

What am I capable of doing?
If I want, I could infect you and your whole family with the Corona Virus (COVID-19).
Reveal all your secrets, There are countless things I can do.

What should you do?
transfer the amount of \$500 to my bitcoin address (if you do not know how to do this, write to Google: "Buy Bitcoin" or <https://www.coinmama.com>).

My bitcoin address (BTC Wallet) is: 1HEGd19p2wVtCxmF2PQcVvKzB2JzairA82W

After receiving the payment, you will never hear me again.

I give you 72 hours (NOT more than 3 days) to pay, failure to do this, I will infect YOU and every member of your family with the Corona Virus (COVID-19).
no matter how smart you are, and believe me, I will completely ruin your life.

I have a notification reading this letter, and the timer will start to work when you see this letter.
Don't waste your time replying this email because it was sent from your system and email account.

Figure2. Example of a family threatened to be infected by COVID-19, unless paying 500 dollar in bitcoin.



There is a need, but also an opportunity to learn from the direct and indirect cyber related impacts of the COVID-19 pandemic, on the wider health care system, in order to be better prepared for future disruptions. Potential measures are e.g. the establishment of pre-arranged secure information channels, information campaigns about how to access them, how avoid misinformation and legal requirements for app suppliers to have a robust vetting in crisis apps.

In the press

This new experimental section tries to summarize trending headlines with regards to COVID-19. The collection does not aim at being comprehensive and we indicate that those headlines and linked articles are no scientific material and for information purposes only. The headlines and linked articles do not reflect NATO's or NATO MilMed COE FHPB's view.

28 May 2020

The Diplomat:

Pakistan Plans Another COVID-19 Lockdown. Will It Work?

<https://thediplomat.com/2020/05/pakistan-plans-another-covid-19-lockdown-will-it-work/>

26 May 2020

Aljazeera:

Venezuela health system 'grossly unprepared' for COVID-19 crisis

<https://www.aljazeera.com/news/2020/05/venezuela-health-system-grossly-unprepared-covid-19-crisis-200526152027746.html>

26 May 2020

Science Magazine:

Japan ends its COVID-19 state of emergency

<https://www.sciencemag.org/news/2020/05/japan-ends-its-covid-19-state-emergency>

28 May 2020

Financial Times:

GSK targets production of 1bn doses of coronavirus vaccine booster

<https://www.ft.com/content/30c6c6a7-dca7-40f4-9fc0-5b8835f1aab3>

27 May 2020

Financial Times:

No lockdown, few ventilators, but Ethiopia is beating Covid-19

<https://www.ft.com/content/7c6327ca-a00b-11ea-b65d-489c67b0d85d>

28 May 2020

The Guardian:

Questions raised over hydroxychloroquine study which caused WHO to halt trials for Covid-19

<https://www.theguardian.com/science/2020/may/28/questions-raised-over-hydroxychloroquine-study-which-caused-who-to-halt-trials-for-covid-19>

28 May 2020

The Economist:

Eastern Europe's covid-19 recession could match its post-communist one

<https://www.economist.com/europe/2020/05/28/eastern-europes-covid-19-recession-could-match-its-post-communist-one>

28 May 2020

The Guardian:

A porter's story: 'The hospital in Covid-19 times reminds me of a disaster movie'

<https://www.theguardian.com/society/2020/may/28/porters-story-hospital-reminds-me-disaster-movie-covid-19>