



# Short Update 17a COVID-19 Coronavirus Disease 29<sup>th</sup> of April 2020



## GLOBALLY

**3 079 246**

Confirmed cases

928 930  
recovered  
217 183 deaths

## USA

(x2 in 21.5 d →)

**1 010 819**  
confirmed cases  
115 936 recovered  
58 255 deaths

## Brazil

(x2 in 9.5 d ↗)

**73 235**  
confirmed cases  
32 544 recovered  
5 083 deaths

## Russia

(x2 in 8.5 d ↗)

**93 558**  
confirmed cases  
8 456 recovered  
867 deaths

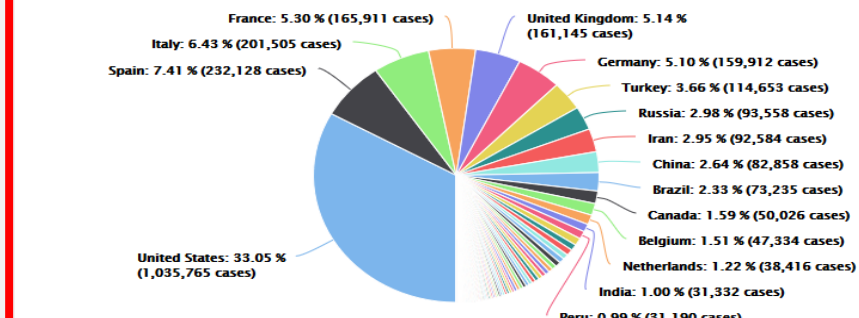
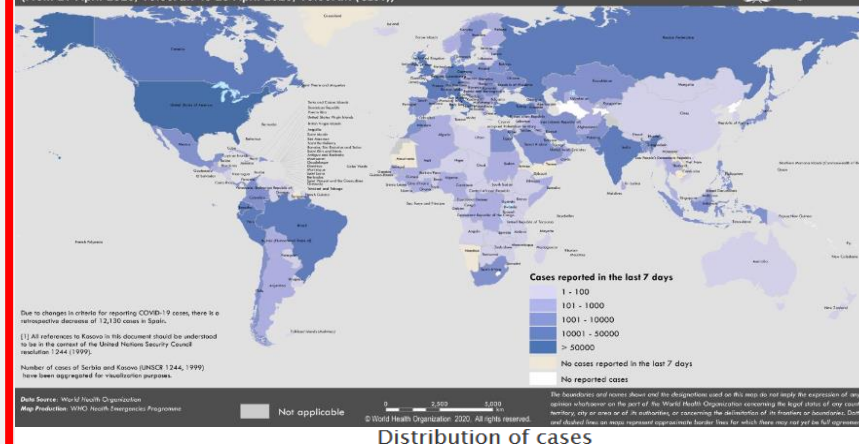
## News:

- The number of coronavirus infections detected worldwide has exceeded the three million mark. As a result of the pandemic, there are now almost 210,000 registered corona deaths
- UN:** The exit restrictions due to the coronavirus pandemic could lead to seven million unplanned pregnancies. One of the reasons for this is that due to the supply chain being interrupted during the crisis, around 47 million women in poorer countries could no longer have access to modern contraceptives. A sharp increase in violence against women and the forced marriage of girls is also projected. The Corona pandemic could have "catastrophic effects on women and girls around the world," said UNFPA director Natalia Kanem.
- EU:** The European Council published the Joint European Roadmap towards lifting COVID-19 containment measures. It addresses the question of how to minimise the impact of COVID-19 on healthcare systems and citizens' health while restarting economic and social activities, by providing a framework for a comprehensive economic and social recovery plan for the EU, with public health actions at its core. Information can be found [here](#).
- WHO:** The Regional Office for the Americas has published a document providing guidance regarding the operation of immunization programs in the context of the COVID-19 pandemic. Information find [here](#).
- WHO:** published the 'R&D Blueprint:COVID-19 Experimental Treatments', which lists drug and non-drug experimental treatments for COVID-19 as well as a living map on ongoing studies. This can be found [here](#).
- 3rd MilMed CoE VTC "COVID-19 Response" will be launched today. The topic is "COVID-19: Challenges of Aeromedical Evacuation".
- Find Articles and other materials about COVID-19 at our website <https://www.coemed.org/resources/COVID19>
- Please use our online observation form to report your lessons learned observations as soon as possible.  
[https://forms.office.com/Pages/ResponsePage.aspx?id=Ada59cF6jUaZ\\_fZxuxzAAVLXriN\\_74RJnkC57W6UsgRUQVhUVik4TUUzMIER0NDUzE1MzSSSDVOSi4u](https://forms.office.com/Pages/ResponsePage.aspx?id=Ada59cF6jUaZ_fZxuxzAAVLXriN_74RJnkC57W6UsgRUQVhUVik4TUUzMIER0NDUzE1MzSSSDVOSi4u)

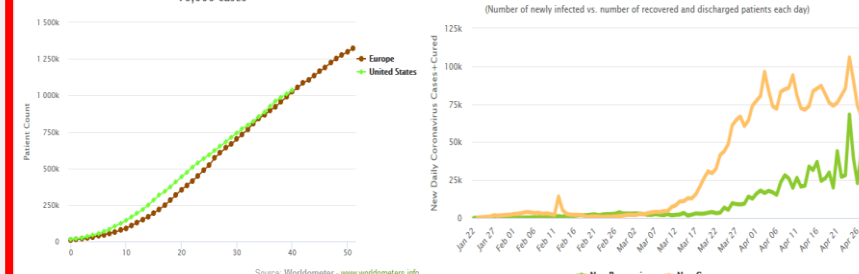
## Topics:

- Subject in Focus: Prerequisites for de-escalation and Overview of Currently monitored topics
- Coronavirus disease 2019 (COVID-19) in the EU/EEA and the UK–ninth update
- Conflict & Health

Countries, areas or territories with COVID-19 cases reported in the last 7 days  
(From 21 April 2020, 10:00AM to 28 April 2020, 10:00AM (CEST))



Cumulative number of cases Europe vs USA, by number of days since 10,000 cases



## EUROPE

**1 399 948**  
confirmed cases

497 256 recovered  
129 341 deaths

## SPAIN

(x2 in 38.0 d ↘)

**232 128**  
confirmed cases

123 903 recovered  
23 822 deaths

## ITALY

(x2 in 53.5 d ↘)

**201 505**  
confirmed cases

68 941 recovered  
27 359 deaths

## UK

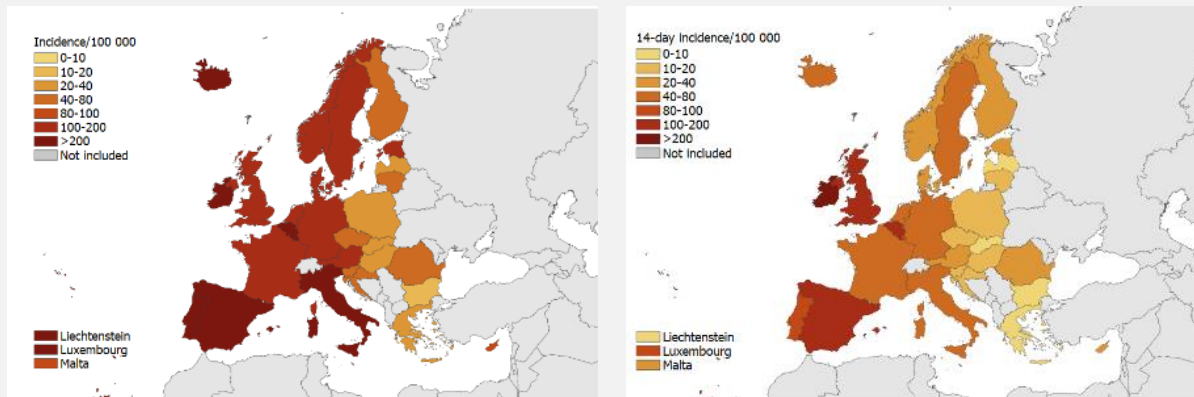
(x2 in 22.0 d →)

**161 145**  
confirmed cases

not reported recovered  
21 678 deaths

# Situation in Europe

**ECDC:** All EU/EEA countries and the UK implemented a range of measures to respond to the pandemic. Most countries implemented these in mid-late March. Following a reduction in the virus transmission, several countries (e.g., Austria, Denmark, Germany, Italy, Norway, Slovenia) have started to ease their mitigation measures by, for example, re-opening primary schools and day-care centres (e.g. Denmark, Norway) and small retail shops (e.g. Austria, Germany, Italy, Slovenia). In countries implementing different measures, the median time between the implementation of the measure and the observed peak number of reported daily cases (as of 22 April) was 23 days for mass gatherings, 18.5 days from the closure of public spaces, 20 days from the closure of educational institutions including day-care centres, 23.5 days from the implementation of 'stay-at-home' recommendations for risk groups or the general population and 14 days from enforced 'stay-at-home' policies.



Incidence of reported COVID-19 cases/100,000 population a) since 31 December 2020 and b) in the last 14 days from 8-22 April 2020. Source: [ECDC](#)

**AUT:** Due to the continued favourable development in the Corona crisis, the initial restrictions are lifted after almost seven weeks. From 1<sup>st</sup> May, a minimum distance of one meter from people who do not live in the same household is required. Restaurants are allowed to open starting 29<sup>th</sup> May.

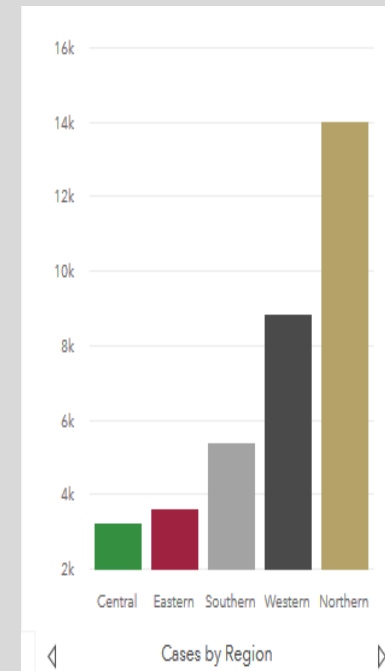
**DEU:** According to the Ifo Institute, German economic output has slumped by 16 percent in recent weeks. That was the result of a survey conducted in April asking 8,800 companies from almost all industries. Ifo expects the economic output to shrink by up to 6.6 percent calendar-adjusted over the year.

**ITA:** Is the first EU country to apply for aid from the EU Solidarity Fund. As the EU Commission announced, up to 800 million euros are available for immediate measures against the corona virus for the current year.

**LUX:** Large-scale tests are launched this week. A voluntary tests of the 600,000 inhabitants and of cross-border commuters from DEU, FRA and BEL will accompany the relaxation of contact restrictions. 8500 pupils and teachers are to be tested before the schools reopen on May 4th. Then at least 20,000 tests are planned per day.

# Global Situation

- USA:** US President Trump has again accused China of not preventing the coronavirus pandemic. He told journalists in Washington that the spread of the pandemic could have been stopped at the point of origin. Trump also announced that many schools in the U.S. could reopen soon. It looks like the virus doesn't affect young people badly, according to US President Trump.
- AUS:** 1.13 million people downloaded a coronavirus containment app within twelve hours. The CoviSafe software is intended to accelerate the tracing of contacts of people infected with SARS-CoV-2. According to the government, at least two-fifths of Australia's 26 million people - 10 million people - need to install the app to make this possible.
- RUS:** According to official figures, there are now more coronavirus infections than in China. The centre of the crisis in Moscow reported around 6,200 new cases. This increased the total number of confirmed cases to 87,247. Most infections were registered in Moscow, where strict curfews are now in place.



Source: CDC Africa

The World Health Organization is more than concerned about the number of infections on the African continent, which has increased by more than 50% within a few days. The death toll increased by 60% within a week. Given the lack of corona testing, there is very likely a very high number of unreported cases. In general, experts complain about the limited test capacities on the continent with 1.3 billion people. Experts warning of a humanitarian disaster across the continent, because in addition to the corona pandemic, many African countries are currently suffering from crop failures, e.g. due to the worst plague of locusts in East Africa for 70 years, severe flooding on the one hand and prolonged drought in West Africa on the other. This could lead to further civil wars and uncontrollable refugee movements. The World Health Organization has released a grim forecast for Africa in a recent report. The Sars-CoV-2 virus and the Covid-19 disease it causes could kill more than 300,000 people; the pandemic could plunge 30 million into poverty.

# Subject in Focus:

## Prerequisites for de-escalation (fluid approach)

### Strengthening and adjusting public health measures throughout the COVID-19 transition phases


Policy considerations for the WHO European Region  
24 April 2020

<p>Four key components to managing transitions and modulating restrictive measures:</p> <ul style="list-style-type: none"><li>✓ 1. Public health and epidemiological considerations must drive the decision-making process</li><li>↑↑ 2. Available capacity for dual-track health system management to reinstate regular health services, while at the same time continuing to address COVID-19</li><li>♥ 3. Leveraging social and behavioural perspectives as tools for responsive engagement with populations</li><li>🌐 4. Social and economic support to mitigate the devastating effects of COVID-19 on individuals, families and communities</li></ul>	<p>Four cross-cutting mechanisms are essential enablers throughout the transition process:</p> <ul style="list-style-type: none"><li>✚ 1. Governance of health systems</li><li>📊 2. Data analytics to inform decisions</li><li>📱 3. Digital technologies to support public health measures</li><li>💬 4. Responsive communication with populations</li></ul>
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Six conditions should be used as the basis to implement/adapt transitioning of measures:

<ul style="list-style-type: none"><li>🔗 1. Evidence shows that COVID-19 transmission is controlled</li><li>🔍 2. Sufficient public health and health system capacities are in place to identify, isolate, test and treat all cases, and to trace and quarantine contacts</li><li>🛡️ 3. Outbreak risks are minimized in high-vulnerability settings, such as long-term care facilities (i.e. nursing homes, rehabilitative and mental health centres) and congregate settings</li></ul>	<ul style="list-style-type: none"><li>⚠️ 4. Preventive measures are established in workplaces, with physical distancing, handwashing facilities and respiratory etiquette in place, and potentially thermal monitoring</li><li>📦 5. Manage the risk of exporting and importing cases from communities with high-risks of transmission</li><li>👥 6. Communities have a voice, are informed, engaged and participatory in the transition</li></ul>
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## Currently monitored and upcoming topics

### Topics on FHPB's radar

The following topics are on FHPB's radar and will likely be part of coming updates. For some of the topics there is currently not enough statistical evidence or research papers are still under review, others are in the final stage of preparation and will be included in next week's update.

We welcome input from our readers on new topics that might be interesting to the whole group of recipients.

#### 1. SARS and COVID-19: similarity, differences and why such outbreaks like to start in China

We would like to detail on similarities and differences of previous coronavirus outbreaks and give the reader some insights in the overall picture of zoonotic coronaviruses and how the environment and other circumstances play a role in the emergence of coronaviruses

#### 2. Concerning medical observations in connection with SARS

- [Increasing number of young children with severe course of COVID-19 infection and the possibility of an infection with a yet unknown pathogen](#)

In GBR a small but growing number of children was diagnosed with a rare toxic shock syndrome while also testing positive for COVID-19 in some cases. It is unclear if there is a link between both diseases (and Kawasaki syndrome as well) but the national health service issued a warning asking physicians to immediately send children presenting with the corresponding symptoms to a hospital.

- [The connection between air pollution and the geographic distribution of \(severe\) cases of COVID-19](#)

There are reports suggesting that air pollution plays an important role for the severity of regional COVID-19 outbreaks. Data from the USA and ITA hint at a negative effect of high air pollution. It is currently discussed if this is due to the fact that people living in polluted areas are more often diagnosed with pulmonary or cardio-vascular problems or if the particles in polluted areas serve as some kind of "taxi" for the virus making it easier to spread. At the moment the latter one is considered to be rather unimportant, while the pre-damage caused by polluted air is seen as an influencing factor.

- [Massively increased number of strokes within non-risk groups testing positive for COVID-19 in the US](#)

Recent reports from the US refer to an unexpected rise in the number of strokes within groups that are usually not at (high) risk of getting a stroke. Healthy people in their 30s and 40s are more and more often admitted to hospital after showing stroke symptoms. Most of them are testing positive for COVID-19 and reports show that they were afraid to call the emergency hotline because they feared to become infected with COVID-19 in the hospital (not knowing that they already have been infected). There is growing evidence that SARS-CoV-2/COVID-19 leads to increased blood clotting in severe cases. Research papers are currently in the scientific reviewing process and will be available in the near future.



# Coronavirus disease 2019 (COVID-19) in the EU/EEA and the UK—ninth update

Source: ECDC; document including all references can be found [here](#) (Nr. 100 – 131)

## SARS-CoV-2 Virus

### Virus evolution

There is currently no evidence that any of the mutations accumulated since the introduction of the SARS-CoV-2 virus have any effect on disease characteristics. Over 10,000 genome sequences have been deposited in the GISAID EpiCoV database as of 22 April 2020 ([www.gisaid.org](http://www.gisaid.org)). Mutations in the receptor-binding domain of the spike glycoprotein are of interest as they may affect infectivity and host-specificity. Some mutations in this domain have been reported, but these have so far been rare and are not present in any of the major SARS-CoV-2 clades.

### Seasonality

The transmission dynamic of SARS-CoV-2 depends on several factors, including the timing and extent of control measures, duration of host immunity to SARS-CoV-2, cross-immunity between SARS-CoV-2 and other human coronaviruses, and potentially seasonal factors. Like other human coronaviruses that show peak incidences in the winter months and might display similar seasonal patterns. However, whether climatic factors, such as temperature, humidity or UV, will suffice to suppress the transmissibility of SARS-CoV-2 during the summer months in the Northern Hemisphere remains to be seen. Modelling the SARS-CoV-2 transmission dynamic based on other human coronaviruses suggests that it can drop from winter peak to summer peak by 20% but can still generate substantial outbreaks ( $R_0 > 1$ ) if no control measures are in place.

## Immune response, immunity and treatment

### Vaccines

There is a large global effort to develop COVID-19 vaccines and at least three vaccines have entered clinical trials, including phase II trials. This is a rapidly evolving field as candidates move into the development and testing pipeline. However, the European Medicines Agency (EMA) expects that it may take at least one year before a vaccine is approved and available for widespread use.

### Cell-mediated immune response

Decreased absolute numbers of T lymphocytes, CD4+T cells, and CD8+T cells were observed in both mild cases and severe cases. The expression of IFN- $\gamma$  by CD4+T cells tends to be lower in severe cases than in moderate cases. Total lymphocytes, CD4+T cells, CD8+T cells, B cells, and natural killer cells showed a significant association with inflammatory status in COVID-19, especially CD8+T cells and CD4+/CD8+ratio. In multivariate analysis, post-treatment decrease in CD8+T cells and B cells and increase in CD4+/CD8+ratio were indicated as independent predictors of poor treatment outcome.

### Antibody-mediated immune response

Correlates of protection for COVID-19 have not yet been established and the detection of antibodies to SARS-CoV-2 does not indicate directly protective immunity especially if a neutralisation assay has not been used as the detection method.

Based on the currently available data, the IgM and IgG antibodies to SARS-CoV-2 develop between 6–15 days post disease onset. The median seroconversion time for total antibodies (Ab), IgM and then IgG were day-11, day-12 and day-14 post symptom onset, respectively. The presence of antibodies was detected in <40% among patients within 1-week from onset, and rapidly increased to 100% (total Ab), 94.3% (IgM) and 79.8% (IgG) from day-15 after onset. It is too early to know how long the protective immune response against.

SARS-CoV2 will last, as this will require longitudinal serological studies that follow patients' immunity over an extended period. The possibility of re-infection and the duration of immunity still remains to be studied. Primary infection with SARS-CoV-2 was shown to protect rhesus macaques from subsequent challenge and casts doubts on reports that the re-positivity observed in discharged patients is due to re-infection

### Testing population immunity

Population-based seroepidemiological studies have been started in some EU Member States. Preliminary results from DNK, FIN, FRA, NLD, GBR and USA show that 1-3.4% of healthy adult blood donors-patients had antibodies against SARS-CoV-2 virus in the period 20 March-12 April. In DEU, in a household study in a highly-affected area, the proportion of positive specimens was 14% in early April. In addition, in the capital area of DNK, the preliminary results of an antibody screening by a rapid test of healthcare employees showed that infection among health professionals is at 4.1%.

These estimates provide a consistent picture, suggesting significant underreporting, under-ascertainment, or asymptomatic infection across multiple locations in Europe and North America. Many uncertainties and sources of bias remain in interpreting these preliminary results. Clinically validated laboratory assays for detection of antibodies are still largely lacking and therefore these results need to be interpreted with caution. In addition, specimens from blood donors are from healthy adults, and will necessarily exclude people with symptomatic respiratory or febrile illness. With levels of prevalence in the range of 2-3%, the expected positive predictive value of such test is in the range of 20%, therefore the reported proportions are to be seen as significant overestimates of population prevalence.

### Pharmaceutical prophylaxis and treatment

At present, no medicine has demonstrated efficacy in the prevention or treatment of COVID-19. Potential treatments should be carefully assessed in randomised controlled trials (RCTs). There are several large-scale, multicentre trials underway, including the WHO Solidarity Trial, several US National Institutes of Health and national trials in several EU Member States. Enrolment of patients in clinical trials should be encouraged. The EMA has published recommendations on compassionate use of the investigational antiviral agent Remdesivir. Two encouraging reports of COVID-19 convalescent plasma (CP) use in China concur with ongoing activities, mainly in the US and the EU, on the collection, qualification, therapeutic use and data collection of COVID-19 CP.

# Global Health Index (GHS Index)

The Global Health Security Index presents the results of an assessment of global health security capabilities in 195 countries prepared by the Johns Hopkins Center for Health Security, the Nuclear Threat Initiative (NTI) and the Economist Intelligence Unit (EIU). It was first published in 2019. It shows that "no country is fully prepared for epidemics or pandemics, and every country has important gaps to address". In 2019, the countries in the category "most prepared" were - in alphabetical order - Australia, Canada, Finland, France, the Netherlands, South Korea, Sweden, Thailand, the United Kingdom and the United States. The United States was ranked first with an index value of 83.5 out of 100. The largest number of countries in the category "least prepared" was in Western and Central Africa.

The GHS Index relies entirely on open-source information: data that a country has published on its own or has reported to or been reported by an international entity. The GHS Index was created in this way with a firm belief that all countries are safer and more secure when their populations are able to access information about their country's existing capacities and plans and when countries understand each other's gaps in epidemic and pandemic preparedness so they can take concrete steps to finance and fill them. The indicators and questions that compose the GHS Index framework also prioritize analysis of health security capacity in the context of a country's broader national health system and other national risk factors.

**The 140 GHS Index questions are organized across six categories:**

**Prevention:** Prevention of the emergence or release of pathogens

**Detection and Reporting:** Early detection and reporting for epidemics of potential international concern

**Rapid Response:** Rapid response to and mitigation of the spread of an epidemic

**Health System:** Sufficient and robust health system to treat the sick and protect health workers

**Compliance with International Norms:** Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms

**Risk Environment:** Overall risk environment and country vulnerability to biological threats

Among its 140 questions, the GHS Index prioritizes not only countries' capacities, but also the existence of functional, tested, proven capabilities for stopping outbreaks at the source. Several questions in the GHS Index are designed to determine not only whether a capacity exists, but also whether that capacity is regularly—for example, annually—tested and shown to be functional in exercises or real-world events.

The GHS Index also includes indicators of nations' capacities and capabilities to reduce Global Catastrophic Biological Risks (GCBRs), which are biological risks of unprecedented scale that could cause severe damage to human civilization at a global level, potentially undermining civilization's long-term potential. These are events that could wipe out gains in sustainable development and global health because of their potential to cause national and regional instability, global economic consequences, and widespread morbidity and mortality. The GHS index came to prominence during the outbreak of the current pandemic. On February 27, 2020, US President held up a map based on the GHS index showing the United States was "the best prepared country in the world for a pandemic". However, one of the consultants working on the project, pointed out that "even though the US does rank at the top for the index, there are areas where there is room for improvement", notably access to healthcare.



PREVENT



DETECT



RESPOND



HEALTH



NORMS



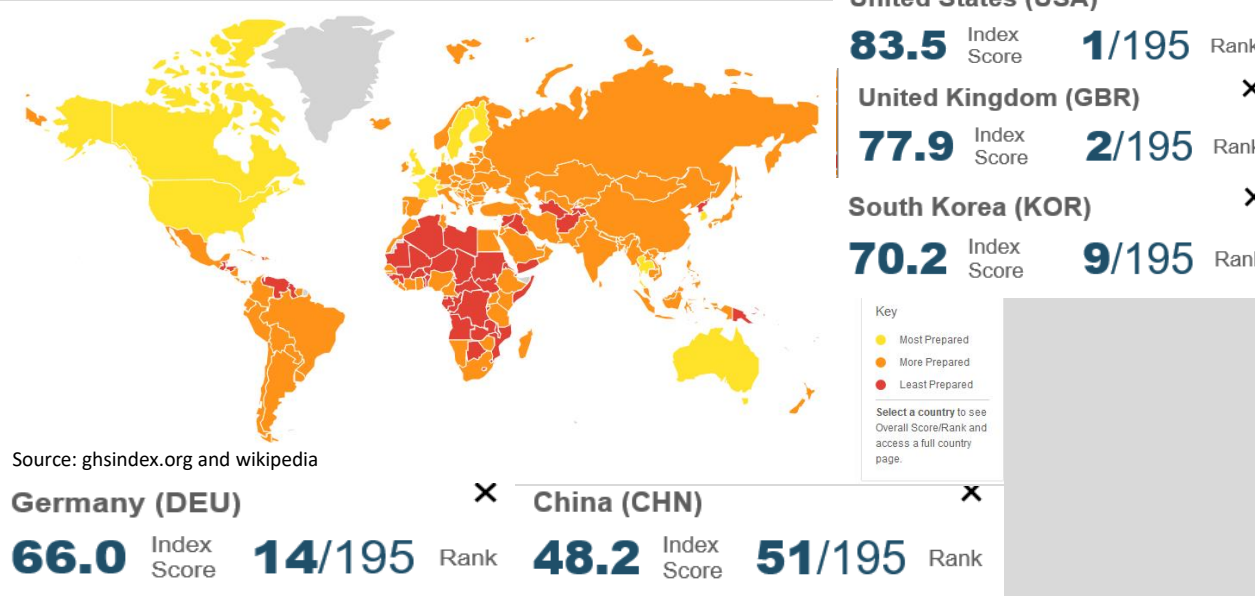
RISK

The GHS index has also faced criticism regarding whether it overestimated the capacity of the healthcare systems in historically rich states, countries ranked the most prepared, such as the UK fared worse than those ranked lower amid the pandemic, such as China or South Korea. Although Germany was only ranked as a more prepared country it saw significant lower case mortality rates than even best ranked countries and finally was able to offer ICU capacity to most prepared countries in Europe.

## Why Is the GHS Index Needed?

It is likely that the world will continue to face outbreaks that most countries are ill positioned to combat. In addition to climate change and urbanization, international mass displacement and migration—now happening in nearly every corner of the world—create ideal conditions for the emergence and spread of pathogens. Countries also face an increased potential threat of accidental or deliberate release of a deadly engineered pathogen, which could cause even greater harm than a naturally occurring pandemic. The same scientific advances that help fight epidemic disease also have allowed pathogens to be engineered or recreated in laboratories. Meanwhile, disparities in capacity and inattention to biological threats among leaders have exacerbated preparedness gaps. The 2014 West Africa Ebola epidemic was a wake-up call. It prompted global leaders and the World Health Organization to realize that it's not clear where the gaps are – or how to fill them. It also highlighted that leaders need better ways to understand and measure improvement in global capability to prevent, detect, and respond to infectious disease threats.

The GHS Index seeks to illuminate preparedness and capacity gaps to increase both political will and financing to fill them at the national and international levels.





# Conflict & Health

## Interview with SPIEGEL (German newspaper) and World Bank's Managing Director Van Trotsenbrug

The World Bank aims at fighting the consequences of the COVID-19 crisis with USD 160 billion. The Managing Director explains, why this is by far not enough and how rich countries could really help poor countries.

Which developing countries will be hit hardest by the corona crisis?

The crisis is twofold and consists of a health- and an economic crisis and will affect every country. The poorest countries are at highest risk. Among them especially the fragile states with on-going wars and conflicts, slums and big refugee camps with many people living in a very small area are at risk. It is hard to determine a single geographic area that will be hit hardest, but for sure some regions in Africa will be heavily affected but it is also possible that areas like Cox' Bazar in Bangladesh will be hit.

- **Currently the pandemic seems to take place in the developed countries and not in the global south. Does the world bank have an explanation for this?**

In OECD countries more tests are conducted, therefore it is likely that the number of unreported cases is much higher in developing countries. But, even though the situation in those countries appears to be not too bad, a sudden and steep increase of the number of cases like in Europe is possible. What concerns us the most is a lack of medical infrastructure: While in some European countries there is one physician per 300 inhabitants in Africa, we see a ratio of 1:70,000. Those countries are awaiting a health-political and economic tsunami.

- **The prime minister of India, Narendra Modi warned, that the corona crisis could set back his country by one generation. Is this alarmism or a realistic scenario?**

I am not going to speculate about how many years the world will fall behind but it is going to be far worse that during the financial crisis since 2007. Africa is going to see its first recession since 25 years. We can already see the effects in minor countries in the Caribbean which are dependent on tourism that is already suffering heavily. At the same time less money is transferred to those countries by emigrants living in the US and other countries.

- **The world bank announced to invest USD 160 billion within the next 15 months to fight the pandemic.**

We understand this alone won't solve all problems. The poorest countries already have a combined gross national product (GNP) of approximately USD 2,000 bn: We will only be able to compensate a small percentage thereof, but if we add up what the International Monetary Fund and other multilateral organizations will invest, we end up with a notable amount of money.

- **How much money do you think will the global south need during this crisis?**

This is hard to tell, as there are too many movements. The only thing I can definitively say is: The dimensions are enormous. The demand for money will be much higher than the supply, this is obvious.

- **During the last week the G20 announced a debt moratorium for the 77 poorest countries, a total of only USD 14 bn.** Everybody must do whatever possible. If the donors don't grant additional money for the poor countries at the moment, they should at least not insist on the payback of debts.

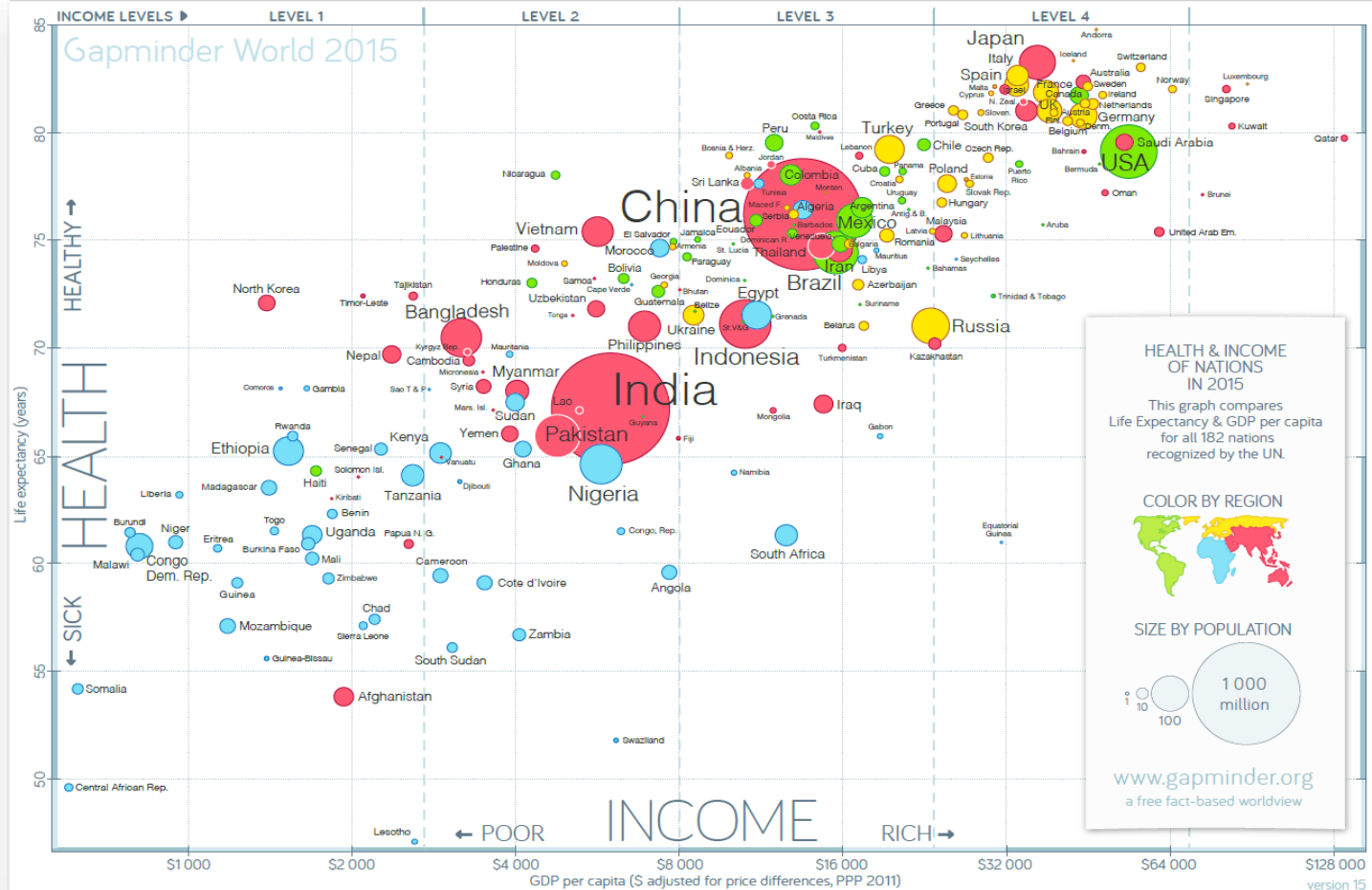
- **How does a multilateral financial institution plan during such an unprecedented situation?**

One must not get hampered by the size of the problem. We have to react quickly, and we can't proceed along our old scheme. For example: In March we prepared relief programmes for 25 countries within two weeks. Usually this would take nine to twelve months.

- **If the World Bank uses all of its capital for fighting the pandemic, this means that there will be not enough money for other programmes. Where will you cut investments?**

We will have to postpone numerous investments, for example infrastructure projects that are not essential now. But many projects can't be stopped simply. Think about water supply. It is easy to give good advice on how to properly wash hands, but what does this help if there is not even water in a slum?

[https://www.spiegel.de/politik/ausland/weltbank-warnt-vor-folgen-der-coronakrise-auf-entwicklungslaender-a-eb3d0c9a-d200-465a-ab3a-1b86330756c6?sara\\_ecid=soci\\_upd\\_KsBF0AFjff0DZCxpPYDQcQ01dEMph](https://www.spiegel.de/politik/ausland/weltbank-warnt-vor-folgen-der-coronakrise-auf-entwicklungslaender-a-eb3d0c9a-d200-465a-ab3a-1b86330756c6?sara_ecid=soci_upd_KsBF0AFjff0DZCxpPYDQcQ01dEMph)



In the graphic above life expectancy (y-axis) and income (x-axis, below) of 182 countries in the year 2015 are compared. Unfortunately there is no recent version of this graphic as the author Prof. Rosling died two years ago – but nevertheless in our opinion this graphic has enormous visual potential. Every nation is represented by a bubble, its size reflects the size of the country's population. The color reflects to which global area the country belongs and the the position within the chart impressively shows the still present conflict/crisis areas and the socio-economically challenged areas respectively. It becomes clear that the binary classification into developing and developed countries doesn't help, especially when taking into consideration the huge importance of the so called emerging countries (BRICS countries). In contrast to that the author decided to classify the countries into 4 income groups.

Stattdessen hat der Autor eine Einteilung in 4 Einkommensgruppen (x-Achse oben) dargestellt – diese definieren sich nach Einkommensgruppen wie auf der x-Achse unten dargestellt.

### Data sources:

- LIFE EXPECTANCY: IHME – Institute for Health Metrics and Evaluation.
- POPULATION: UN World Population Prospects: The 2015 Revision.
- INCOME DATA: World Bank's GDP per capita, PPP (constant 2011 international \$), with a few additions by Gapminder. The x-axis uses a log-scale so that doubling incomes show the same distance on all levels.
- INCOME LEVELS: Gapminder uses four income groups which roughly correspond to those used by the World Bank, with minor differences. The World Bank uses the indicator GNI per capita in US dollars, while Gapminder uses the indicator GDP per capita in PPP (constant 2011 international \$).

<https://www.gapminder.org/downloads/updated-gapminder-world-poster-2015/>





# Ramadan and COVID-19









## Ramadan:

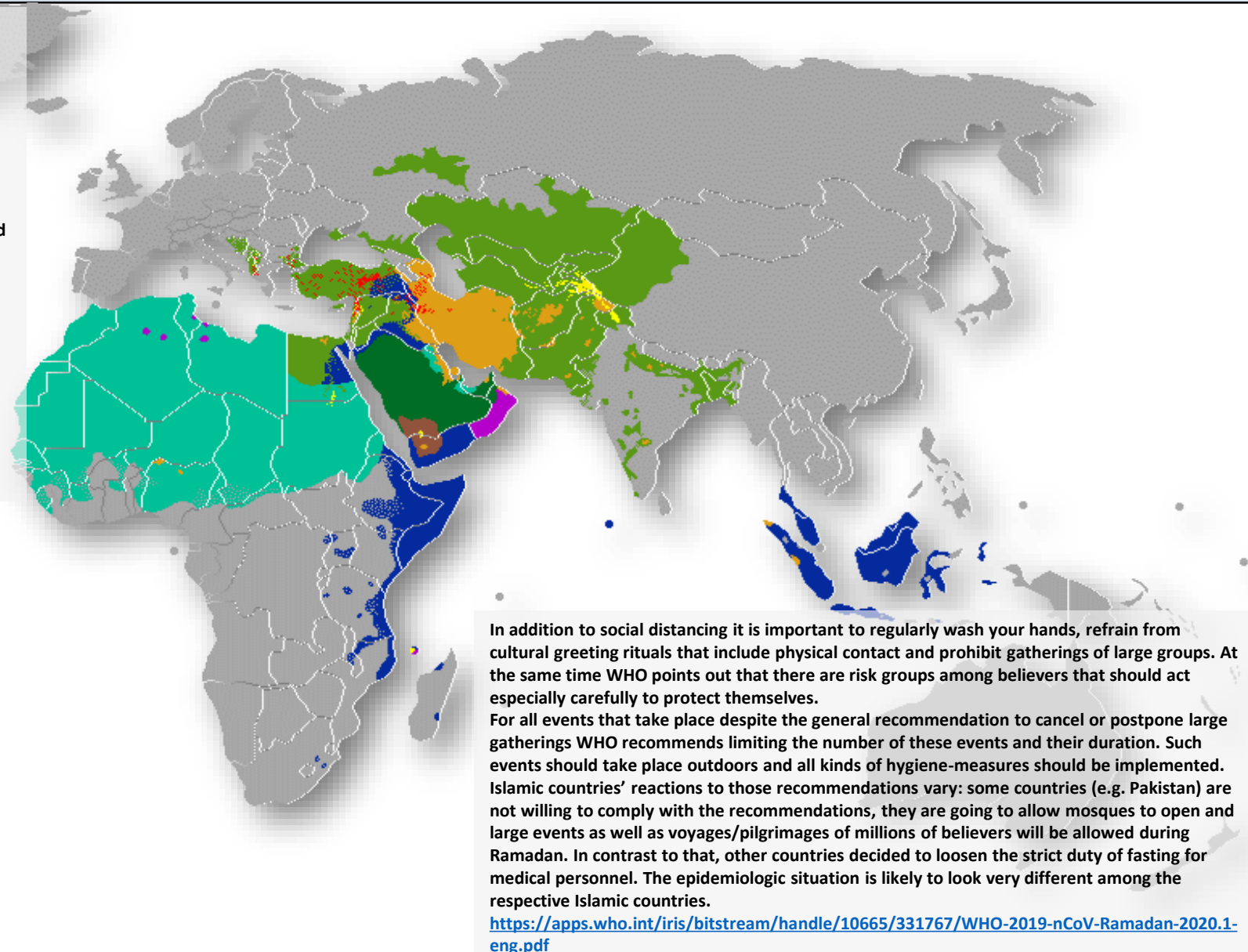
The Ramadan, the month of fasting for the Muslims and the subsequent Fast-Breaking ("Iftar") are two important events in the Islamic calendar. As one of the five pillars of Islam fasting during Ramadan is conducted by 1.8 billion people (approx. ¼ of global population). Like many other cultural and religious festivities and events worldwide, the Ramadan, starting at the end of April and lasting until the end of May is affected by the pandemic.

During Ramadan/fasting numerous social and physical contacts take place for religious reasons (e.g. increased and intensive visits to the mosques, pilgrimages and celebrations with the family). The usual way of conducting these activities are often not compliant with the rules of social distancing and other prevention measures. Therefore, WHO has published recommendations for celebrating a safe Ramadan. These recommendations should enable believers to fulfil their religious duties while at the same time complying with medical and epidemiological prevention measures to contain the deadly virus.

The most effective measures are the postponement or cancellation of social and religious gatherings, as recommended by the WHO whenever possible. It is recommended to use all available virtual/digital ways of communication to replace physical gatherings for religious interaction to the maximum possible extent.

A strong communication strategy has to be implemented by the authorities (especially national health authorities) to make believers understand, accept and comply with the necessary measures. In order to protect yourself and other from infection WHO still recommends the following:

SUNNI	
	HANAFI
	HANBALI
	MALIKI
	SHAFI'I
SHIA	
	ISMAILI
	JAFARI
	ZAIDI
	OTHER
OTHER	
	IBADI



In addition to social distancing it is important to regularly wash your hands, refrain from cultural greeting rituals that include physical contact and prohibit gatherings of large groups. At the same time WHO points out that there are risk groups among believers that should act especially carefully to protect themselves.

For all events that take place despite the general recommendation to cancel or postpone large gatherings WHO recommends limiting the number of these events and their duration. Such events should take place outdoors and all kinds of hygiene-measures should be implemented. Islamic countries' reactions to those recommendations vary: some countries (e.g. Pakistan) are not willing to comply with the recommendations, they are going to allow mosques to open and large events as well as voyages/pilgrimages of millions of believers will be allowed during Ramadan. In contrast to that, other countries decided to loosen the strict duty of fasting for medical personnel. The epidemiologic situation is likely to look very different among the respective Islamic countries.

<https://apps.who.int/iris/bitstream/handle/10665/331767/WHO-2019-nCoV-Ramadan-2020.1-eng.pdf>