COVID-19 Global Trends and Analyses

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SUMMARY

COVID-19 GLOBAL TRENDS AND ANALYSES | 24 Feb – 27 Mar 2021

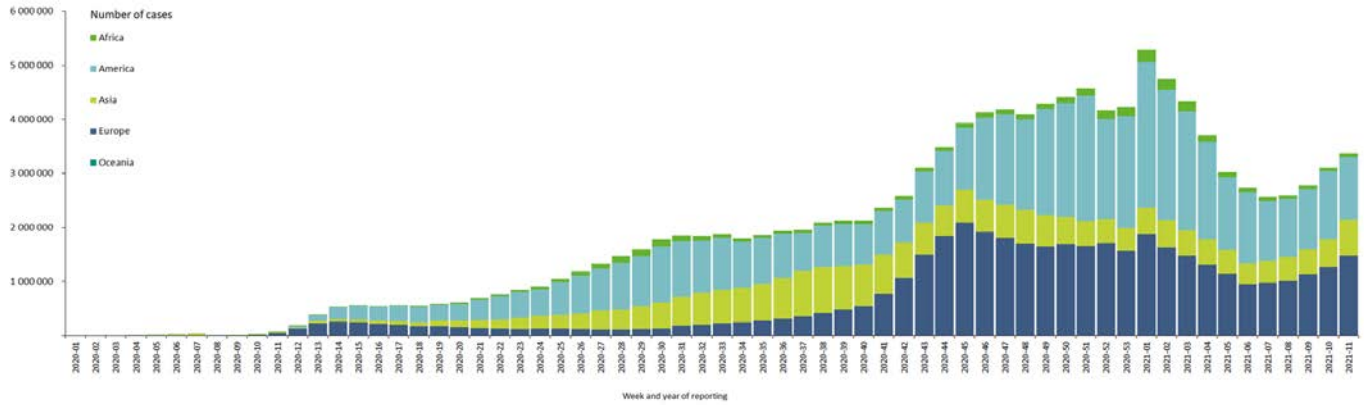
- The **global** total number of reported cases has surpassed 127 million and 2.8 million deaths as of 28 March 2021.
- The number of new daily cases globally has been increasing steadily since a low of 297,000 new daily cases on 1 March to around 630,000 daily new cases in the fourth week of March, representing a 112 per cent increase.
    - This increase is largely due to third waves in most countries in Europe and surges in Brazil, India and other large Asian countries.
    - Daily new global deaths have also increased from 6,600 on 8 March to more than 10,000 during the fourth week of March.
- **Europe** has now reported 39 million cases of COVID-19 and more than 900,000 deaths (both 30 per cent of the global totals).
    - Daily new cases have been climbing steadily since the first week of March.
    - Almost every country in Europe is experiencing a third or fourth wave. The exceptions are the UK, Russia, Spain, Belgium, Portugal, Switzerland and Lithuania. However, Russia and the UK are still reporting more than 10,000 and 5,000 daily new cases, respectively.
- **The US** has reported more than 30.9 million cases and 560,000 deaths. There has been a steep decline in new cases since early January. However, in recent weeks there has been a significant increase in cases and hospitalisations in north-eastern states. That surge has led to a recent reversal in US cases up 7 per cent in the past week to 67,000 on 25 March, the highest since mid-February.
- The rate of new daily cases is surging in a number of **Latin American countries**, led by Brazil where the 7-day average has risen from around 13,000 on 5 November to a new all-time peak of 97,000 on 26 March. Brazil is reporting more than 3,500 deaths daily, around 30 per cent of the global total.
    - Other countries with significant surges include Argentina, Peru, Chile, Colombia, Uruguay and Paraguay.
    - Mexico has revised its estimate of COVID-19 deaths to 321,000, up 60 per cent from the previous official figure of 201,429. This means that the country has reported the second highest number of deaths in the world.
- In the **Asia-Pacific region**, India is experiencing a second wave of infections reporting 63,000 new daily cases on 26 March, up almost six-fold from just fewer than 9,000 cases on 8 February.
    - Pakistan, Bangladesh and the Philippines are also reporting significant second waves.
    - Cases have been in steep decline in Nepal, Myanmar and Malaysia and stable in Sri Lanka and Indonesia.
    - In Asian high-income countries, there is a mixed pattern. While Japan seemed to have controlled its third wave, there has been a significant uptick in daily new cases from 679 on 9 March to 1,943 on 26 March. South Korea has still not contained its fourth wave and Hong Kong is experiencing a fifth wave.
    - Papua New Guinea is having an alarming surge in cases during March. The cumulative number of cases doubled in the ten days between 15 and 25 March, and the total reached 5,184 on 28 March.
    - Australia has reported seven new community cases in Brisbane unlinked to hotel quarantine.

GLOBAL EPIDEMIOLOGY AND TRENDS

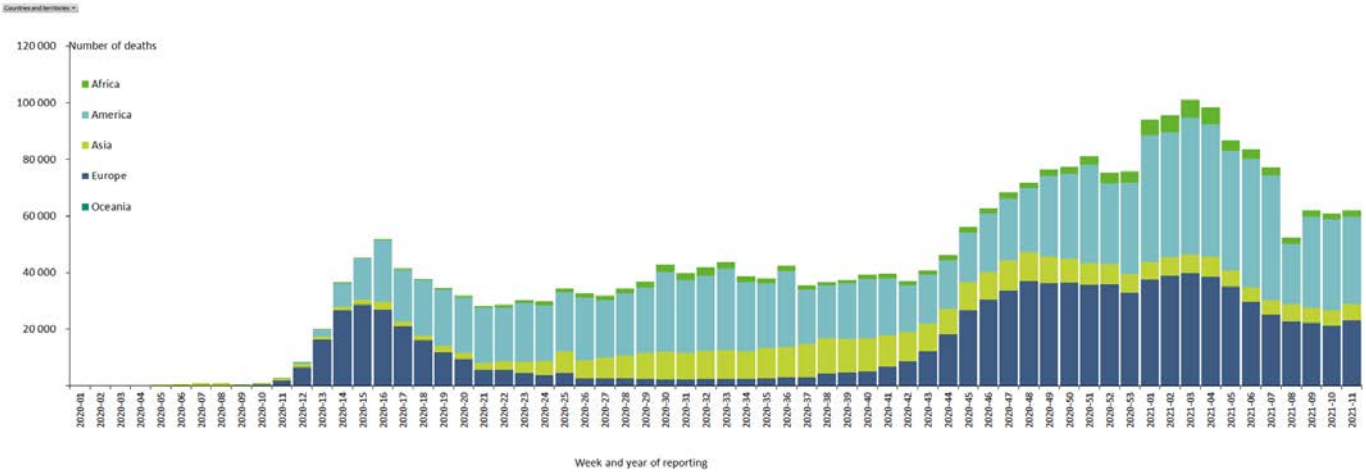
The **global total** number of reported cases has surpassed 127 million and 2.8 million deaths as of 27 March.
The number of new daily cases globally has been increasing steadily since a low of 297,000 new daily cases on 1 March to around 630,000 daily new cases in the fourth week of March, representing a 112 per cent increase.

- This increase is largely due to third waves in most countries in Europe and surges in Brazil, India and other large Asian countries.
- Daily new global deaths have also increased from 6,600 on 8 March to more than 10,000 during the fourth week of March.

Distribution of COVID-19 cases worldwide, as of 27 March 2021 (source European CDC)



Distribution COVID-19 deaths worldwide, as of 27 March 2021



Very Few Countries Have Been Spared COVID-19

Places without face masks or elbow-bumps, without QR codes or capacity limits, without lockdowns or physical distancing. There are a handful of countries across the globe – many of them islands, most of them remote – that have managed to escape the pandemic. Only 14 countries and territories (out of a total of 251) have reported no cases of COVID-19. Twelve of them are small Pacific and Atlantic islands. The other two are North Korea and Turkmenistan.

With a population of more than 25 million, **North Korea** is by far the largest nation yet to report a single case, although there's widespread scepticism over leader Kim Jong Un's claim of a perfect record in keeping out the virus. It has severely restricted cross-border traffic, banned tourists, flown out diplomats and mobilised tens of thousands of health workers to screen entry points, monitor residents and isolate those with symptoms. Most analysts believe North Korea has had at least some cases of COVID-19 because it shares a porous border with China, where smuggling activities are common. Some believe the North may be in the grip of a significant outbreak.

As with North Korea, there is significant doubt about **Turkmenistan's** claim of zero cases. Authorities in the secretive and authoritarian Central Asian nation of six million have rejected allegations they're hiding information about the outbreak. And yet health officials have recommended people wear masks and keep a distance of two metres from each other in public places. In March 2020, Turkmenistan restricted travel in and out of the country, and restricted mass religious events.

The largest cluster of countries and territories without the coronavirus is in the **Pacific.** Tonga, Cook Islands, Niue, Nauru, Palau, Kiribati, Samoa, Tokelau, Federated States of Micronesia and Tuvalu are among the small island countries and territories yet to report a single case. They haven't been spared from the pandemic's effects, however. Many of these South Pacific islands rely on tourism as a major source of revenue and have seen unemployment spike and their economies struggle since the pandemic began. Much of the South Pacific is relatively poor and has basic health systems that would be ill-equipped to deal with major outbreaks. Not everywhere in the South Pacific has been spared. **French Polynesia** has been particularly hard hit, with more than 18,000 cases and 140 deaths, and one of the highest attack rates in the world at 6,585 cases per 100,000 (compared with 114 per 100,000 in Australia).

The small Atlantic territories of Saint Helena, Ascension and Tristan da Cunha (population: 5,633), UK and Svalbard (population: 2,667), Norway have also reported no cases.

Countries that did well initially were eventually overwhelmed

The inevitability of COVID-19 is illustrated by the experiences of six countries in six different regions of the world – Czech Republic, Cuba, Paraguay, Jordan, Sri Lanka and Papua New Guinea. Each of these countries escaped the spread of the virus during most of 2020.

The **Czech Republic,** with a population of 10.7 million, had among the lowest rates of infection in Europe during the first eight months of 2020. The country reported fewer than 25,000 cases up until the 1 September. It was one of the first countries in Europe to close its borders and impose other restrictions to ensure physical distancing. However, like the rest of Europe, borders were opened and restrictions relaxed during the northern summer. Since September, the country has experienced three severe waves of infection, with daily new cases reaching a peak of almost 18,000 in early January. It has now reported 1.5 million cases (14 per cent of the population), the highest per capita rate in the world among countries with a population greater than one million.

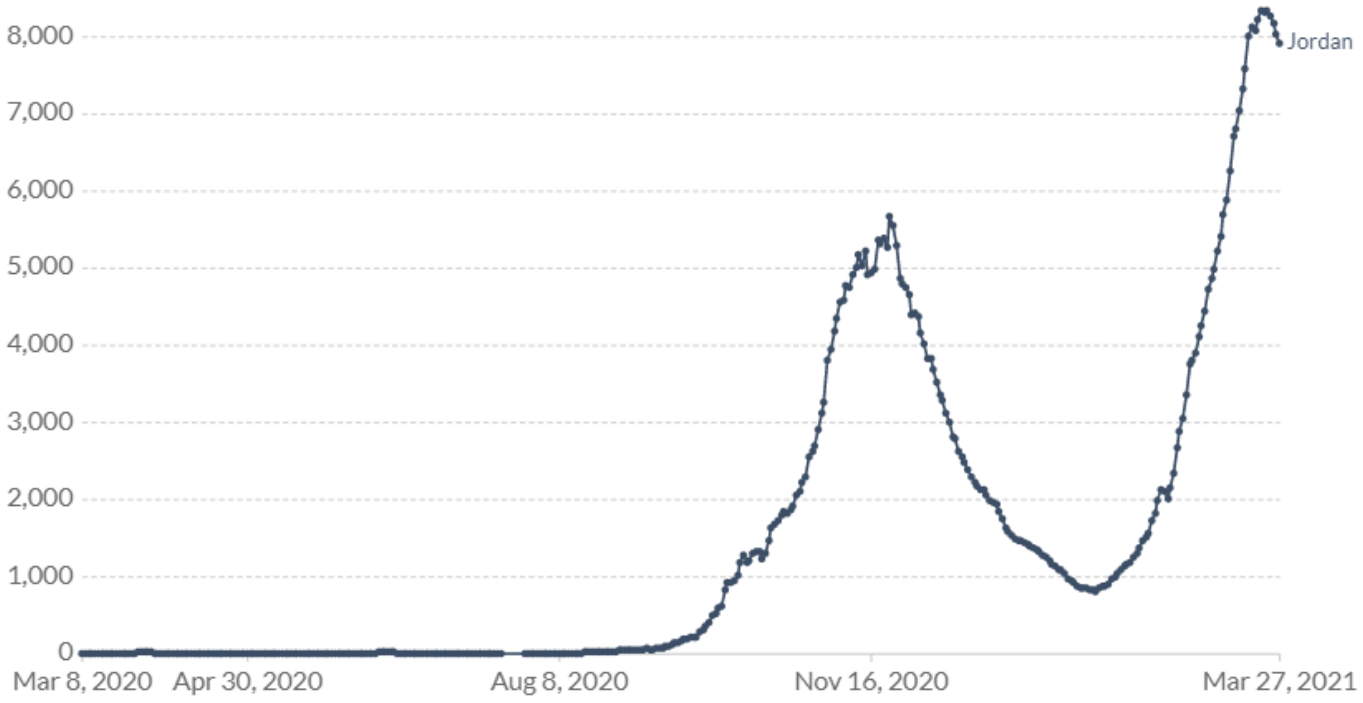
In North America, **Cuba** was quick to close its borders early in 2020 and was largely spared in the period up until September, reporting 4,065 cases in a population of 11.3 million. However, its economy being heavily dependent on international tourism, Cuba welcomed tourists in the northern summer. This was followed by a number of clusters of daily double-digit cases. The country then required arriving tourists to have proof of a negative test. However, this did not prevent a huge surge beginning in late December and reaching a peak of more than 1,000 daily cases in early

February. Arriving tourists then had to go into mandatory hotel quarantine until they tested negative on day 5 and incoming flights from some countries, such as the US and Mexico, were limited to once weekly. The current surge is still not under control.

Early in the pandemic, **Paraguay**, with a population of 7.2 million, was hailed as the only success story in South America in keeping the virus at bay. Up until 1 September, the country had reported 18,000 cases and 300 deaths. However, following the opening of international borders and the relaxation of restrictions, Paraguay has experienced a prolonged surge of infections resulting in lockdowns and significant social unrest. The country has now reported 194,000 cases and almost 4,000 deaths.

Like all the above countries, **Jordan** had a very modest first wave in the first half of 2020. Jordan's early success was credited to swift, strict action, with authorities sealing off borders in mid-March and briefly placing citizens under one of the most restrictive lockdowns in the world – banning anyone from leaving the house for any reason but a medical emergency, punishable by up to one year in prison. With a population of 10.3 million, Jordan reported just over 2,000 cases in the first eight months of the year. In late September, a huge second wave began, most likely due to cases imported from Israel and the West Bank and truck drivers bringing goods from neighbouring Syria and Saudi Arabia. The 7-day average of daily cases reached a peak of 5,265 cases on 21 November. Health experts in the country said the resurgent pandemic illustrated the limits of lockdowns and closed borders without a strong testing and contact tracing system. After a lull in January, the country is experiencing a third wave, with the 7-day average reaching more than 8,000 on 21 March. Curfews have been extended and non-essential businesses closed. In addition, Jordan has launched an accelerated vaccination program, having administered 270,000 doses or 2.7 per cent of the population. The country has reported 545,000 cases and 9,270 deaths.

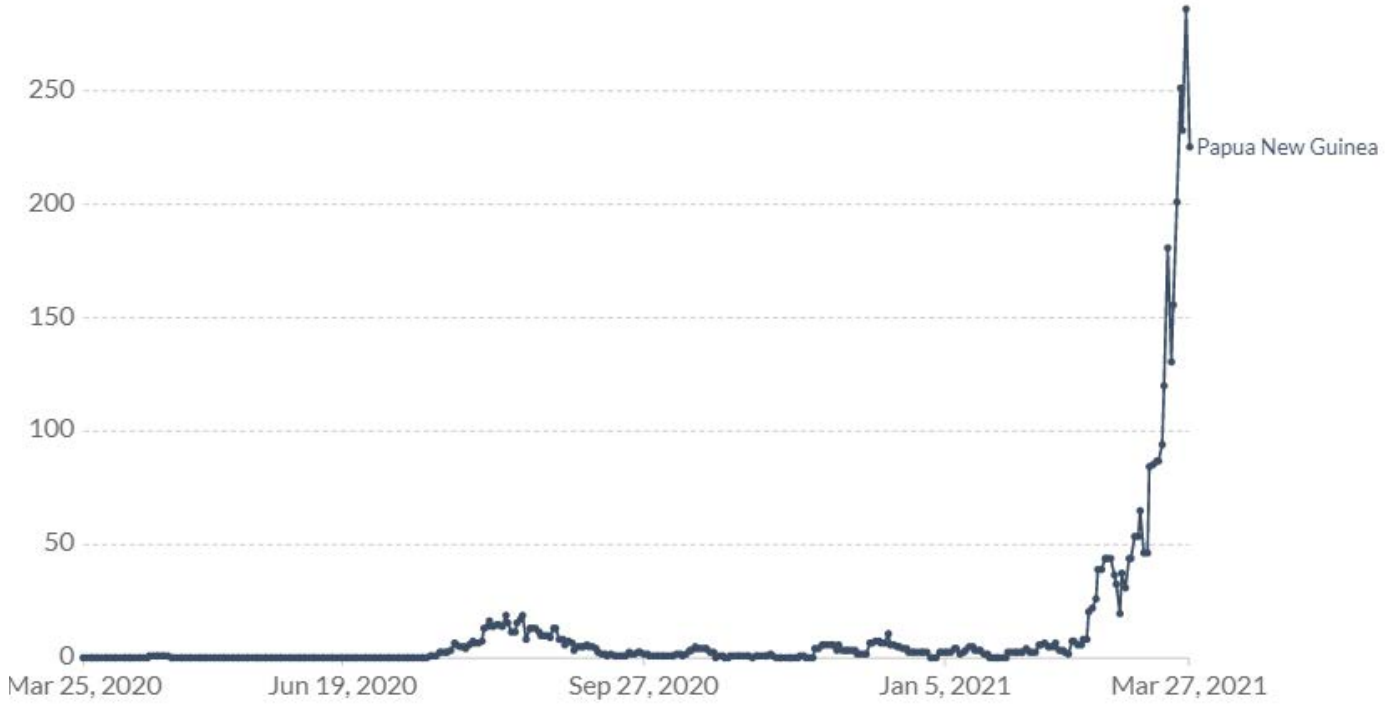
Daily new confirmed COVID-19 cases in Jordan



Sri Lanka had the lowest caseload in South Asia during the first nine months of 2020. In that period the country, with a population of 21.5 million, reported 3,380 cases and 13 deaths. However, the absence of widespread community testing during this period had made it difficult to make an accurate assessment. In early October, a spike occurred centred on a garment factory and a seafood market south of Colombo. This led to a prolonged wave of infections peaking at a 7-day average of 857 on 11 February. The response was sluggish, relying on local curfews and the closing of garment factories. Eventually restrictions were tightened and new cases have declined to a 7-day average of 290 on 18 March. Sri Lanka has reported more than 90,000 cases and 551 deaths.

Papua New Guinea is highlighted in a case study in the Asia Pacific Region section, below. This country of nine million reported just 11 cases and zero deaths in the first six months of 2020. By the end of the year, 780 cases and nine deaths had been reported. Just under three months later, those figures have surged to 5,184 cases (a 500% increase) and 45 deaths. The 7-day average of daily cases increased from zero on 1 January to 286 on 26 March. Given the strict border quarantine system for arriving travellers, it is likely that this resurgence was due to undetected community transmission. This reflects the very low testing rate of 6 per 1,000, compared to 591 per 1,000 in Australia.

Daily new confirmed COVID-19 cases in PNG



Source: Johns Hopkins University CSSE COVID-19 Data

European Region

- Europe has now reported 39 million cases of COVID-19 and more than 902,000 deaths (both 30 per cent of the global totals).
- Daily new cases have been climbing steadily since the first week of March.
- Almost every country in Europe is experiencing a third or fourth wave. The exceptions are the UK, Russia, Spain, Belgium, Portugal, Switzerland and Lithuania. However, Russia and the UK are still reporting more than 10,000 and 5,000 daily new cases, respectively.
- The Netherlands, Serbia, Norway and Moldova are experiencing fourth waves.
- The Netherlands is the 21st country in the world to report more than one million cases.
- A number of countries, including Belgium, Germany, France, Italy, Austria, Finland and Iceland have reintroduced lockdowns.
- Daily deaths have also increased to more than 1,500.

United Kingdom | European Region

The UK has been one of the most affected countries in the world having reported more than 4.3 million cases (ranked #6 globally) and more than 126,000 deaths (#5). The UK has had three distinct waves, each one worse than the previous wave. Like other European countries, there were very few cases during the northern summer, the border opened and many Britons went on vacation in other European countries, especially Spain, Portugal, Greece, Italy and France. In the second wave that followed the summer, the peak 7-day average reached more than 25,000 in mid-November. After a low point of around 14,000 in early December, the country rapidly opened up and cases increased steeply in the weeks leading up to Christmas.

It was on 14 December when the health ministry announced the identification of a new viral variant – B.1.1.7. The variant was picked up as part of an epidemiological and virological investigation initiated earlier in December 2020 following an unexpected rise in COVID-19 cases in South East England. It was characterised by a more than three-fold increase in the 14-day case notification rate from 5 October to 13 December 2020. WHO confirmed the variant of concern on 20 December stating that it may spread more readily between people. The subsequent third wave reached a 7-day average peak of almost 60,000 on 9 January. By then a national lockdown had been imposed. The 7-day average of daily deaths increased from 467 on 29 December to 1,243 on 24 January.

The first person in the UK (and the world) to be inoculated with the Pfizer vaccine received their jab on 8 December. The rollout of vaccines (later including the AstraZeneca vaccine) took place in the context of the burgeoning third wave and in parallel with the strictest lockdown since the beginning of the pandemic. This concurrence makes it difficult to interpret the reasons for the steep decline in cases since late January. Imperial College London's React study found infections dropped by two-thirds across England since lockdown began just before Christmas, with an 80 per cent fall in London. The authors attributed most of the decline to the lockdown and mask wearing. From the peak of 60,000 daily cases in early January, the 7-day average had declined to 5,537 on 22 March. By that same date, the UK had administered 30.28 million doses of vaccines, equivalent to 44.6 doses per 100 people, fifth in the world behind Israel, Seychelles, UAE, and Chile.

France | European Region

France has reported more than 4.3 million cases (#5 globally) and 93,000 deaths (#7). While comparable with the UK, France differs significantly in its inability to control the third wave of infections. The first and second waves coincided in timing and scale with the UK. However, the third wave has had a different “shape” from the UK. While the latter was characterised by a sharp increase and a steep decline, in France there has been a more gradual and unstable increase from a 7-day average of 10,500 on 5 December to just over 31,000 on 22 March. The 45,000 new cases on 25 March was the highest daily figure since 7 November. The pattern of deaths is quite different and resembles a roller coaster. From a

high 7-day average of 612 daily deaths on 21 November, there was a decline to 308 on 26 December, followed by a peak of 459 on 11 February then down to 225 on 25 March.

The latest surge of cases has led to a heavy strain on the hospital system, especially in Paris. In mid-March, more than 100 COVID-19 patients had to be evacuated from Paris to regional hospitals. At that time, the total number of people hospitalised for the disease was 25,492, the highest tally since 24 February, including 4,329 in ICU. On 22 March, nearly a third of France's population entered what the prime minister labelled as a "lockdown" – the country's third since the start of the COVID-19 pandemic. The restrictions imposed on sixteen administrative departments for four weeks include limiting travel outside one's home department without a "compelling" or professional reason. In these regions, there is a night-time curfew from 7pm to 6am.

France has been slow, and at times confusing, in rolling out vaccines, initially limiting AstraZeneca to those under 65 then suspending use of the vaccine while the possible link to blood clots was investigated. It currently limits this vaccine to those over the age of 55 years. The country has administered 8.63 million doses (12.7 per 100 people) including 2.4 million second doses.

The United States and Canada

- The **US** has reported more than 30.8 million cases and 561,000 deaths. There has been a steep decline in new cases since early January. From a peak of 245,000 on 9 January, the 7-day average of new daily cases has fallen to 53,400 on 22 March, a 78 per cent reduction. Likewise, the 7-day average of daily deaths has fallen from 3,400 on 15 January to 980 on 22 March. However, in recent weeks there has been a significant increase in cases and hospitalisations in north-eastern states. That surge has led to a recent reversal in US cases up to 77,000 on 27 March, the highest since mid-February.
- In **Canada**, case trends have more or less followed her southern neighbour, although it did not have the summer surge that was experienced in the southern states of the US. The winter surge reached a peak of 7-day average cases of 9,075 on 8 January, followed by a decline to 2,846 on 20 February. Unlike the US, Canada has had a third wave with an increase in the 7-day average of 32 per cent in one month to 3.747 on 23 March. There has not yet been a concomitant rise in deaths.

Increase of cases in the North-Eastern Region of the U.S. | United States

The number of people hospitalised with a confirmed case of COVID-19 in the United States has been plummeting since early January. Until about three weeks ago, hospitalisations in Michigan were following the same pattern. But in the past few weeks, data from the CDC and the Department of Health and Human Services have shown that hospitalisations have risen by 45 per cent from the state's recent low on 25 February. According to federal data, among US metropolitan areas with more than one million people, the Detroit area now ranks fourth in hospital admissions—and first in a metric that combines increases in test positivity and cases.

Genomic surveillance remains limited in the United States, but from the numbers, it seems as though the variant known as B.1.1.7, first identified in the U.K., is quite widespread in Michigan. In fact, according to the CDC's tracking, the state of Michigan has the second-most confirmed cases of B.1.1.7 after Florida, despite having less than half the number of residents.

The recent surge in cases is not unique to Michigan. During March, new cases increased by more than 10 per cent in fifteen states and six states have seen their case averages increase by at least 25 per cent in the last week. The epicentre of this spike appears to be in the north-eastern states of New York, New Jersey, Delaware, Maine, Maryland, Massachusetts, and New Hampshire. This spike may be associated with the increased dominance of the B.1.526 variant first identified in New York.

Federal data show that per-capita hospitalisations in the New York area have remained among the highest in the nation. Unlike many other areas of the country, where hospitalisations have fallen close to pre-surge levels, in New York and New Jersey hospitalisations have plateaued for weeks, according to federal data.

Rochelle Walensky, director of the Centres for Disease Control and Prevention, said at a White House briefing that the most recent weekly average shows a 7 per cent increase in infections in the US from the previous week, at about 57,000 cases a day. As public-health experts have suggested for months, there will be continuing outbreaks in the northern spring—likely as a result of B.1.1.7 becoming the dominant virus. Now the question is how bad they'll get and how far they'll spread.

Latin America

- The rate of new daily cases has been surging in a number of countries, led by **Brazil** where the 7-day average has risen from around 13,000 on 5 November to a new all-time peak of 75,000 on 22 March.
- Other countries with significant surges include Argentina, Peru, Chile, Colombia, Uruguay and Paraguay.
- Further north, cases are decreasing in Mexico and Costa Rica while surging in Cuba.
- **Mexico** has revised its estimate of COVID-19 deaths to 321,000, up 60 per cent from the previous official figure of 201,429. This means that the country has reported the second highest number of deaths in the world.

Brazil | Latin America

Brazil has become the worst country on Earth for both cases and deaths from COVID-19. The country reported a new high of 97,586 cases on 25 March and 3,158 deaths on 23 March (almost one in three of all global deaths that day). In more than half of the country's 26 states, ICU occupancy rates have hit 90 per cent or above, according to a bulletin posted on 16 March by the Brazilian medical research institution, Fiocruz. There have been numerous reports in Brazilian media and on social media platforms of patients dying while waiting for beds, shortages of medicines and oxygen, and bodies being dumped in hospital corridors. Once admired worldwide for its fast and efficient national immunisation drives, Brazil has seen its COVID-19 vaccination program plagued by political infighting, bureaucratic blunders and supply problems. So far, three COVID-19 vaccines have been authorized by Brazil's health regulators — AstraZeneca, CoronaVac (Sinovac) and Pfizer. Fewer than 7 per cent of Brazilians have had one dose.

The pandemic response in Brazil has been hampered by the denialism of President Jair Bolsonaro who has never accepted that the virus is a major public health problem. On his 66th birthday recently he marked the occasion by appearing before hundreds of flag-waving supporters outside the presidential palace who, with little regard for physical distancing, gathered there to sing Parabéns (the traditional birthday congratulations) and hand him a birthday cake decorated in Brazil's yellow and green national colours. Standing before the cheering crowd, Bolsonaro yanked off his face mask and began lambasting governors and mayors who are imposing restrictions in towns and cities across the country.

Brazil's medical professionals and scientists are watching their president with disdain and alarm, and worrying about what will happen next. "Brazil now represents a threat to global public health," said Dr. Pedro Hallal, coordinator of EpiCovid-19, the largest epidemiological study into the coronavirus in Brazil. With the virus out of control, he said he believes Brazil is a breeding ground for more variants that could prove even more lethal and spread to other countries. The P.1 variant, which was first identified in Manaus, is already rapidly spreading across the country.

African Region

- There have been 4.2 million cases and 111,000 deaths reported in the African continent. **South Africa, Morocco, Tunisia, Egypt and Ethiopia** have recorded the highest number of cases – 64 per cent of the total. Over the past month, new cases have been in steep decline in the first three countries, stable in Egypt, while surging in Ethiopia. In Ethiopia, the 7-day average of new daily cases has risen from 365 on 22 January to 1,754 on 22 March.
- In **Southern Africa**, new cases have been in decline in all countries except Botswana, the richest country in the region. New cases are spiking to a 7-day average of 365 on 22 March.
- Kenya is experiencing a third wave, with the 7-day average increasing from 111 on 30 January to 1,153 on 22 March.
- In **West Africa,** Cote d'Ivoire is experiencing a third wave averaging more than 600 new daily cases.

Africa's Second Wave | Sub-Saharan Africa

Africa experienced a 30 per cent rise in infections in its second wave of coronavirus last year but implemented fewer public health measures than in the first, according to research published on 25 March. Writing in The Lancet, researchers said the loosening of public health measures such as distancing and intermittent lockdowns probably contributed to higher death tolls during the second wave. The study looked at COVID-19 case, death, recovery and test data carried out across all 55 African Union member states between 14 February and 31 December 2020.

Using publicly available data, it also analysed health control measures such as school closures and travel restrictions. At the end of 2020, the continent had reported nearly 2.8 million COVID-19 cases – 3 per cent of the global total – and just over 65,000 deaths. Average daily new cases during the first wave numbered 18,273. During the second wave this figure stood at 27,790 – a 30 per cent rise. Among the 38 nations that experienced a pronounced second wave and for which control measures were available, the study found that almost half had fewer measures in place compared with the first. The researchers said it was highly likely new variants had contributed to higher caseloads across the continent's second wave.

The highest incidences of cases per 100,000 population were recorded in Cape Verde (1,973), South Africa (1,819), Libya (1,526), Morocco (1,200), and Tunisia (1,191).

While the case-fatality ratios of African COVID-19 were not overall more severe than the global average, they varied greatly between nations. Of the 53 countries that reported more than 100 virus cases, one-third had case-fatality ratios – the proportion of deaths compared with total cases – higher than the global average of 2.2 per cent.

"These insights reveal a need to improve testing capacity and reinvigorate public health campaigns," said John Nkengasong, a study author and virologist who is also director of Africa CDC.

Middle East Region

- After seven weeks of falling numbers of COVID-19 cases, a global upsurge was reported during the week of 22 February 2021. This case resurgence was observed earlier in the WHO Eastern Mediterranean region, where, between 30 January and 26 February, the number of weekly cases increased from 158,004 to 207,424 (31%).
- In the region, the weekly number of tests increased by 4 per cent during the same period, but no major changes were observed in testing strategies, no major mass gatherings were organised, and the number of social and public health measures actually increased. Thus, this increase in cases could be due to the spread of variants.
- SARS-CoV-2 variants of concern have been reported in 13 countries in the Eastern Mediterranean region (B.1.1.7 in all; B.1.351 and B.1.1.28 in the United Arab Emirates).

Asia-Pacific Region

- **India** is experiencing a second wave of infections reporting 59,000 new daily cases on 25 March, up almost six-fold from just fewer than 9,000 cases on 8 February.
- **Pakistan, Bangladesh and the Philippines** are also reporting significant second waves.
- Cases have been in steep decline in **Nepal, Myanmar and Malaysia** and stable in **Sri Lanka and Indonesia**.
- **Thailand** is emerging from a second wave, but daily cases are unstable, reaching more than 400 on 23 March. **Vietnam and Laos** are not reporting community cases. But **Cambodia** has a third wave with more than 100 cases a day in the past week.
- In Asian high-income countries, there is a mixed pattern. While **Japan** seemed to have controlled its third wave, there has been a significant uptick in daily new cases from 679 on 9 March to 1,943 on 26 March. **South Korea** has still not contained its fourth wave and **Hong Kong** is experiencing a fifth wave.
- **Papua New Guinea** is having an alarming surge in cases during March. The cumulative number of cases doubled in the ten days between 15 and 25 March.
- The total number of cases reported in **Timor-Leste** doubled to 452 between 17 and 26 March. Most recent cases are in the capital Dili, which is now in lockdown.

Australia | Asia-Pacific Region

After 13 days of zero community transmission in Australia seven new cases have been reported in Brisbane. The city entered a three-day lockdown on 29 March. No cases have any links to workers in quarantine hotels and the source of the infections is unknown. However, genomic testing has linked them to a cluster of three cases, including a hospital doctor, with the B.1.1.7 variant in early March. This indicates that there has been undetected community transmission in the intervening period. It seems that the index case, a 26-year-old man, may have been infectious in the community for ten days. An intensive contact tracing exercise is underway. Queensland is at high risk of leaks from hotel quarantine into the community because of the large number of COVID-19 infected returned travellers -- there are currently 81 active cases in hospitals and Queensland continues to report 5 to 6 new cases in this cohort, many of them returning from PNG.

India | Asia-Pacific Region

The coronavirus, once seemingly in retreat, is again surging across India. The 7-day average of confirmed infections has risen from a low of 11,144 on 11 February to 47,474 on 25 March, a more than threefold increase. The 62,291 new cases reported on 26 March was the highest daily figure since 16 October. The country has now reported almost 12 million cases and more than 160,000 deaths. In a recent two-week period, deaths increased by 82 per cent.

India's second wave is concentrated in Maharashtra State, including Mumbai, the country's financial capital. Cases are also surging in New Delhi. Entire districts of Maharashtra have gone back into lockdown. Scientists are investigating whether a new variant found there is more transmissible, like variants found in Britain, South Africa and Brazil.

The Indian government is playing vaccine catch-up. Since it launched a nationwide vaccination drive two months ago, uptake has been disappointing. Less than 3 per cent of the population has received one dose, including about half of health care workers. At the current rate, it will take India about a decade to vaccinate 70 per cent of its people, according to one estimate. While vaccinations were initially available only in public hospitals, India is now inoculating in private clinics and enormous makeshift vaccination centres, and it is considering making them available in pharmacies. Vaccination hours have been extended, and those eligible can register in person and receive a vaccine the same day, bypassing an online scheduling system.

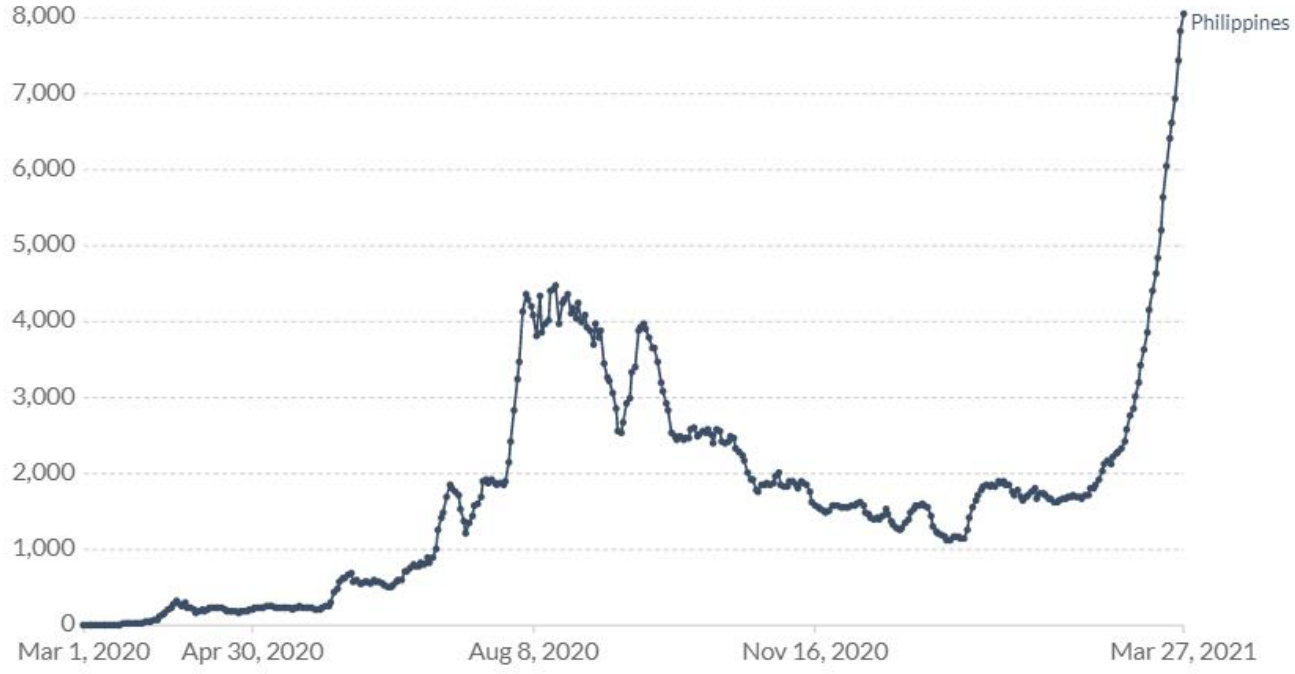
The government approved a domestically developed vaccine, called Covaxin, manufactured by the company Bharat Biotech, before its safety and efficacy trials were completed, although preliminary findings since then have suggested it is effective.

Philippines | Asia-Pacific Region

After a number of lockdowns in the capital Manila, the Philippines appeared to have controlled its first wave around December 2020. However, since then there has been a massive second wave much more severe than the first. The 7-day average of new daily cases has increased from a low of 1,130 on 2 January to an all-time high of 6,944 on 24 March. So far, the country has received barely enough vaccines for 1 per cent of the population. At the current rate, the nation won't be vaccinated until 2023.

And as the Philippines launch its mass immunisation program, there are worrying signs that several new and faster-spreading variants of the virus are fuelling a huge new wave of infections. In the past month, the Philippines has recorded hundreds of cases of the B.1.1.7 variant first detected in the UK, and 152 cases of the B.1.351 strain discovered in South Africa. Scientists believe they have now discovered a Philippines strain, known as P3, in the Central Visayas region. The new local variant, which includes spike protein mutations E484K, N501Y, and P681H, has been linked to possible increased transmissibility and immune escape in some studies, according to the UP Philippine Genome Centre.

Daily new confirmed COVID-19 cases in the Philippines



Source: Johns Hopkins University CSSE COVID-19 Data

Papua New Guinea | Asia-Pacific Region

In early 2020, the Papua New Guinea government reacted quickly to the global pandemic and widely anticipated large-scale outbreaks did not eventuate. However, since February 2021 COVID-19 infections in PNG, a country home to an estimated 9 million people, have been rising exponentially. As of 29 March, there have been 5,184 infections and 45 coronavirus-related deaths reported since the pandemic began. The daily average of new cases over the past 7 days was 286 and last week was the seventh consecutive week of increasing cases.

Source: https://graphics.reuters.com/world-coronavirus-tracker-and-maps/countries-and-territories/papua-new-guinea/

Healthcare workers are among the hardest hit, with 10 per cent of workers in Port Moresby General Hospital testing positive. With an already overworked and under-resourced health workforce of 4,000 nurses and 500 doctors for 9 million people, essential health services are being adversely impacted.

Moreover, these numbers are widely acknowledged to be the tip of the iceberg, with a test rate of 6.8 per 1,000, compared with more than 500 per 1,000 in Australia. Twenty of PNG's 22 Provinces have now confirmed COVID-19 cases, however testing in many provinces remains extremely limited or sporadic, often available only in provincial hospitals and due to various factors, there is a low uptake of testing.

Last week the COVID-19 pandemic controller approved the use of the PanBio rapid antigen test (for symptomatic cases only) and it is hoped that this will increase testing rates. The highest number of recent infections has been reported in NCD, Western, East New Britain and Eastern Highlands Provinces.

Last week, Queensland Health confirmed the existence of a PNG variant of COVID-19 (B. 1.466.2 lineage). This is not a variant of concern and not known to be associated with higher transmissibility or severity. However, the emergence of a PNG-specific strain is a concerning indication of high levels of community transmission, which increase the risk that variants of concern may arise in the near future.

Over 8,400 AstraZeneca vaccines provided by the Australian Government have arrived in Port Moresby and vaccination of front-line health workers in NCD is planned to begin on Monday 29 March. Australia has also requested that a further one million doses of AstraZeneca vaccine contracted from Europe be redirected to PNG, however it is unclear when or if this contract will be honoured.

Planning of the national vaccine rollout plan is progressing, with the arrival of the first 288,000 doses of AstraZeneca vaccine through the COVAX facility due in late April/early May. This roll-out will prioritise health care workers and other front-line essential workers such as police and airport staff in all provinces across PNG. The second shipment of 300,000 doses through COVAX is due in June with further allocations through COVAX in the second half of 2021.

Concern already voiced regarding the situation in PNG by numerous scientific experts concerned about the impact that recent mass gatherings would have, is now being echoed by many politicians and the PNG media. However, misinformation, misunderstanding, mistrust and politicisation of the crisis continue to be a serious threat to an effective public health response.

The PNG Prime Minister James Marape, Pandemic Controller David Manning and health leaders are strongly urging people to adhere to new restrictions and health measures, including wearing masks, physical distancing, frequent handwashing, avoiding large crowds or limiting time spent in enclosed spaces.

Border Region of Papua New Guinea, Indonesia and Australia | Asia-Pacific Region

Indonesia, Papua New Guinea (PNG) and Australia share an interconnected land and sea border. This spans between Papua Province of Indonesia, West Sepik and Western Province of PNG, and the Torres Strait Islands of Queensland in Australia. The northernmost Torres Strait Islands are around 120 km east of the PNG-Indonesian border, and are just a 15-minute dinghy trip from coastal villages in Western Province, PNG.

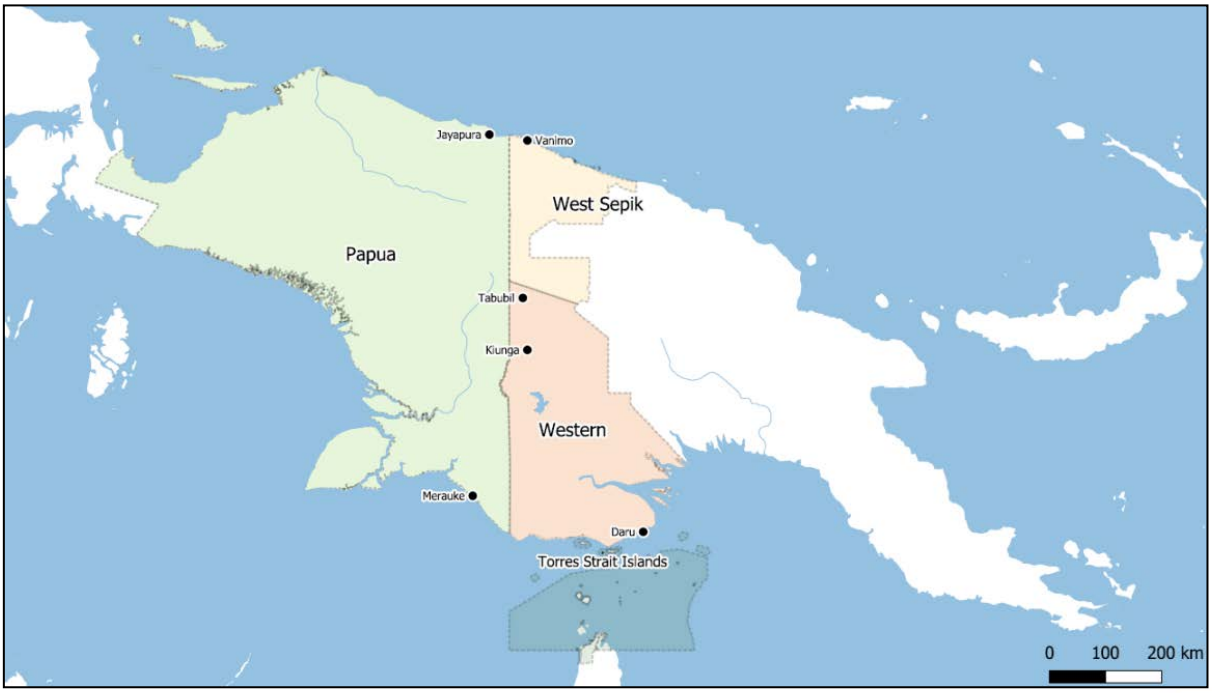
This unique and complex "borderland" region is interconnected in its historical, cultural and economic ties, and therefore presents a unique regional health security challenge for the 3 countries involved. There have been multiple infectious disease outbreaks in the border region, such as multidrug-resistant tuberculosis, cholera and measles. Surprisingly, there is limited data or analysis to know whether these spread across the border, or to guide potential interventions. These health security vulnerabilities may be exploited again by COVID-19.

The exact burden and pathway of COVID-19 spread in the border region is unclear due to the low access to testing, limited surveillance (including cross-border), and the fact that whole genome sequencing has not been conducted to date at multiple sites. Outbreaks in other border regions have demonstrated that this data is essential for understanding and responding to health security risks, such as during the Ebola crisis in western Africa.

COVID-19 in PNG and Indonesia

Indonesia has had the 3rd highest case numbers in the Asia-Pacific region since mid-2020 with 1.49 million cases. By late March 2021, Papua Province had reported over 19,000 cases and 200 deaths. As of 15 February, 2021, there were 610 cases and 32 deaths reported in Merauke Province which borders PNG's Western Province in the South.

PNG had comparatively few reported COVID-19 cases until the recent alarming surge in cases. As of 26 March, Western and West Sepik provinces have had the 2nd and 3rd highest COVID-19 caseloads in PNG, 926 and 336 cases respectively. The first 3 cases of COVID-19 in Western Province, in April 2020, were reported in 'traditional border crossers' returning from travel to Indonesia. Subsequent cases have centred on Tabubil, the operational base for the Ok Tedi mine and a known destination for cross-border movement. In addition, there are a large number of fly-in fly-out workers from other parts of PNG and international countries, including Australia. The mine has suspended operations and charter flights in July 2020 and more recently due to COVID-19 cases. Concerningly, COVID-19 cases are being reported in the crowded town of Daru, which is the main connection between the capital Port Moresby and the remote villages of Western Province.



The PNG-Australia Border

PNG gained independence from Australia in 1975. The 'Torres Strait Treaty', ratified in 1985, established a Protected Zone to protect the traditional way of life of Torres Strait Islanders and the coastal peoples of PNG, and thereby allow free movement over the border. Numerous PNG nationals cross over for trade, work, visiting family, and accessing health services. Since 2000, more restrictions were added including restricting free movement to inhabitants of just 14 villages, and prohibiting commercial activities. The number of PNG nationals crossing the border fell from an estimated 59,000 in 2009 to 27,000 in 2017-2018.

Due to COVID-19, the PNG-Australian border has been closed since early 2020, with minimal cross-border movement. Since PNG's COVID-19 crisis escalated last month, there has been increasing Australian media and government concern. The response has involved 'almost constant border patrols' and a rapid vaccination program in the Torres Strait Islands. Australia has committed increased resources to assist PNG, including rapid provision of COVID-19 vaccines for healthcare workers and deployment of an Australian Medical Assistance Team.

The PNG-Indonesian Border

Simultaneously over the last 20 years, there have been substantial, growing, unregulated flows of people across the PNG-Indonesian border, that spans 760 kilometres. This border is regulated by a 1973 Treaty, which permits cross-border mobility for traditional purposes. There are multiple army and police posts on the Indonesian side, but in practice, there is minimal border enforcement. There are few immigration or public health facilities, and little PNG government presence.

The historical increase in PNG-Indonesian border crossings have been driven primarily by the differential in economic opportunity. Along most of the border, the Indonesian side is more socio-economically developed, including two Indonesian cities that function as regional economic centres: Jayapura (population 280,000) in the north and Merauke (population 97,000) in the south. There is a thriving official trade route between Vanimo, PNG, and Jayapura, Indonesia, with a sealed road and border posts on both sides. In 2017, approximately 4,000 PNG nationals were documented to cross the border monthly to access markets. Elsewhere, the PNG-Indonesian border is much more remote and difficult to traverse, with no sealed roads, and much less regulation of border-crossers. In 2018, approximately 300 Papuans per month travelled across rugged terrain to the Indonesian border town of Sota to purchase basic commodities and sell goods. Other than a few examples, there is little quantitative data available about PNG-Indonesian border crossings.

Uniquely, the PNG side is more socio-economically developed than Indonesia near the Ok Tedi mine. Despite providing a significant revenue stream to the PNG government, and regular royalty and compensation payments to landowners, this influential mining company has been responsible for a widespread, devastating ecological disaster for the province and its inhabitants. The mine and its associated towns, Kiunga and Tabubil, are also central destinations for fly-in, fly-out workers. This forms a hub for surrounding communities, and Indonesians cross the border by foot to access shops in the area.

The PNG-Indonesian border has been officially closed since March 2020, and military personnel have been deployed to enforce this, although there have been reports of ongoing people movements.

Contributors

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Reference: Moran M, Curth-Bibb J. Too Close to Ignore: Australia's Borderland with Papua New Guinea and Indonesia. 1st ed. Melbourne, Australia: Melbourne University Press; 2020. Available from: https://www.mup.com.au/books/too-close-to-ignore-paperback-softback

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