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Impact of Post Pandemic on Environmental World Disorder

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Abstract

In general it has been observed that the Preparedness levels against the corona virus disease 2019 (COVID-19) pandemic were relatively poor in South Asian countries. However, South Asian countries have lower mortality levels compared with other world countries. COVID-19 has revealed the vulnerabilities of the health system as a whole. In addition, the high burden of non-communicable diseases in South Asia multiplies the complexities in combating present and future health crises. The advantage offered by the younger population demographics in South Asia may not be sustained with the rising burden of non-communicable diseases and lack of priority setting for improving health systems. Thus the COVID-19 pandemic has provided a window for introspection, scaling up preparedness for future pandemics, and improving the health of the population overall. The COVID pandemic arrived in South Asia at a much later stage compared with other countries. As such, the South Asian countries may have been able to learn from countries that had early peaks, and therefore achieved better preparation in terms of the public health response. For example, this could have resulted in a lower viral load due to more people wearing masks. South Asian countries lift lockdowns despite rising case numbers. Healthcare facilities and hospitals are stretched due to the increase in the number of cases. It has been reported that testing levels in Pakistan and Bangladesh have fallen dramatically. Social distance is much prevalent in sangha members of Buddhism and caste system in Hindu and its associated communities. That help much to such communities during COVID-19 pandemic. Further requires strong leadership and great political will to allocate substantial resources to prepare for future pandemics. The region needs to scale up the existing social 'safety nets' rapidly, such as cash transfers for food. South Asian countries have also resorted to the use of online portals, social media, working from home, online learning, direct benefit transfers, delivery of health services through 'virtual doctors', deploying facial recognition, and use of thermal scanners for identification of infected people. Delayed vaccine campaigns in Japan, South Korea, and Taiwan have brought more negative attention to their governments as other developed countries surge ahead. Since a huge extent of PM 2.5 can be credited to traffic vehicle's gas and mechanical consuming of fills, this overall decrease of AQI information by implication shows an impact of lockdown in these nations. Urgent advanced training of both mental and physical health by way of yoga and meditation require.

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Compared to many other parts of the world, the nations of Southeast Asia have weathered the pandemic year with remarkable, and somewhat unexpected, success. Only four of the region's 11 nations – Indonesia, the Philippines, Malaysia, and Myanmar – had recorded more than 100,000 cases of COVID-19 cases as of March 11, the anniversary of the pandemic, and only five sat in the top 100 nations for total COVID-19 cases. Even the Philippines and Indonesia, which have seen the region's most serious outbreaks, sit outside the circles of the world's worst affected nations. Indonesia has recorded the 18th most cases globally, and the Philippines currently sits in 30th place, yet neither is in the top 100 for total infections per capita. At the same time, Cambodia, Laos, Brunei, and Timor-Leste have recorded caseloads numbering merely in the hundreds, while Vietnam's success in swiftly containing COVID-19 has seen it accrue global plaudits and invaluable "soft power" reserves.

The reason for Southeast Asian nations' relatively strong showing, given the ramshackle health infrastructure in many parts of the region, remains something of a mystery. A number of theories have been adduced, from the region's tropical climate to the prevalence of social norms (mask wearing, the lack of handshaking, etc.) that have stemmed the spread of the disease. It is possible that an as-yet-unknown scientific factor has aided some of Southeast Asian nations; preparation and timely lockdowns have also no doubt played a role, as has simple luck. Yet COVID-19 has nonetheless shaped Southeast Asia in important ways over the past year. The pandemic has triggered the most severe economic recession since the Asian financial crisis of 1997-98. Every economy in the region bar that of Vietnam contracted during the pandemic year, led by a whopping 9.5 percent drop in the Philippines and 6.1 percent in tourism-dependent Thailand. Indeed, in many countries, the economic downturn of the pandemic may end up eclipsing the public health cost. The statistics fail to communicate the personal hardship that has resulted from COVID-19. In September, the World Bank predicted that the number of poor people in Asia is set to rise for the first time in 20 years, and that a combination of "sickness, food insecurity, job losses, and school closures could lead to the erosion of human capital and earning losses that last a lifetime." As in nearly every country, this has fallen most heavily

on marginalized groups, including women, migrant workers, and those eking out a living in the informal sectors of the region's economies.

Although Southeast Asia's economies are expected to return to positive growth this year, the scale and speed of the recovery is highly dependent on the efficacy of governments' vaccination campaigns. All 11 nations have now begun distributing vaccines. Most have begun with frontline health workers and the elderly, while heads of government have received early doses, often on live television, in order to encourage the public to embrace the new vaccines. But vaccine rollouts are already facing hurdles, from the challenge of procuring enough doses to the difficulties posed by logistics and cost of distributing them into the most remote corners of the region.

Recently announced plans for a possible ASEAN vaccine certificate will be an important step in the region's recovery, but until widespread vaccine coverage is reached, present gains will remain fragile and subject to sudden reversals. Myanmar saw spikes late in 2020, after months of low case numbers, which now threaten to spiral out of control in the midst of the country's deteriorating political crisis. Meanwhile, Cambodia is currently battling its first serious outbreak of the disease. Even once vaccination is complete it is likely that the pandemic has set in motion political and economic forces that will likely continue to echo through the coming decade. One result has been to accelerate Vietnam's rise and increase its regional strategic prominence. It is now the fourth-largest economy in the Association of Southeast Asian Nations (ASEAN), and the pandemic year saw it eclipse the Philippines in terms of per capita GDP, with Indonesia now within its sights. This has emboldened Vietnam's communist leadership to take a more active role on the regional and global stage.

COVID-19 also underscored the brute fact of Southeast Asia's geographic proximity to and economic entwinement with a rising China, whose own economic recovery will be important in the region's attempt to pull itself from the pandemic slump. The likely result will be a growing tension between Southeast Asian nations' concern about Beijing's growing power and belligerence, and the desire to benefit from economic partnership with their giant regional neighbor. The domestic effects in many countries will be profound, yet hard to predict in their specifics. Economically, the disease has increased concentrations of income and economic power. Politically, it has helped accelerate the reactionary wave of the past decade, giving autocratic leaders from the Philippines' Rodrigo Duterte to Cambodia's Hun Sen a pretext to equip themselves with sweeping new powers, and impose curbs on political opponents. This trend has been opposed by the emergence of an incipient regional anti-authoritarian protest movement, setting the stage for political crises in many Southeast Asian countries.

In 1997, the Asian financial crisis touched off a range of political crises in Southeast Asia: it brought down the New Order of Suharto in Indonesia, spawned the reformasi movement in Malaysia, and catalyzed the rise of Thaksin Shinawatra in Thailand. By heightening pre-existing conflicts and tensions, COVID-19 has set the stage for a decade of tumult. A year since the World Health Organization (WHO) declared COVID-19 a pandemic, it is hard to escape the conclusion that, in a manner of speaking, South Asia has managed to beat the odds when it came to dealing with the immediate first-order effects of the disease – especially against the dire prognoses that were made about the region around this time last year. Concurrently, the pandemic has opened new geopolitical opportunities for countries like India. It has also enabled consolidation of ruling forces' grip on power across the region, through measures fair and foul.

Let us start with raw numbers to see how South Asia has done thus far in containing the pandemic in the form of a single metric: the number of deaths from COVID-19 per million people. As of March 11, statistics provider Statista reports Sri Lanka's tally stands at 23.44, Bangladesh's at 52.11, Pakistan's at 61.77, Nepal's 105.28 and India's 115.77. Computing Afghanistan's COVID-19 deaths per million using Johns Hopkins fatalities numbers puts it at 64.5. The Maldives has reported 64 deaths from the novel coronavirus to date, and the Himalayan kingdom of Bhutan just one so far (in January this year). Comparing these numbers to those from key advanced Western economies – the United Kingdom's deaths per million figure stands at 1,863.74, the United States' 1,600.88, France's 1,314.75 and Switzerland's 1,175.77 – one is left with a puzzle best left to medical and public health specialists: that despite stressed and underdeveloped medical infrastructure, rampant poverty, and middling state capacity, South Asia has emerged from the pandemic bruised, but not broken.

India's vaccine manufacturing capacity has also seen it emerge as a leading contributor to the WHO-led COVAX program, with the country committed to producing 1.1 billion doses for global distribution in total. Already through COVAX, Indian vaccines have been shipped as far as Africa, while bilateral (commercial) arrangements have been made for India to supply vaccines to Brazil. Interestingly, an India-made vaccine will also make it to Pakistan through the COVAX distribution system. In Bangladesh, COVID-19 restrictions provided the ruling Awami League government an opening to intensify its crackdown of dissenting voices; Nepal has also seen the ruling K.P. Sharma Oli-led government (whose future is anybody's guess now, amid deep political turmoil) use the pandemic to go after voices that it deems inimical, including journalists. The pandemic has also exposed the majoritarian impulses of certain South Asian governments, with Sri Lanka's Rajapaksa brothers banning the burial of Muslims in the island state for months on ostensible public-health grounds – a ban that was only recently lifted following months of protests and international pressure. A medical specialist, wearing a protective suit, checks a young woman's, lung X-ray inside a restaurant that was converted into a clinic in Bishkek, Kyrgyzstan, Wednesday, July 22, 2020. AP photo by Vladimir Voronin.

Central Asia

Plus ça change, plus c'est la même chose — The more it changes, the more it's the same thing. To say that COVID-19 changed Central Asia would be a stretch. What changes we can observe are on the surface, mere tinkering with rhetoric, or at the deepest extent, the acceleration or deepening of processes already in progress. Like much of the world, when the coronavirus was first detected in Central Asia – in Kyrgyzstan, Kazakhstan, and Uzbekistan in mid-March – the first response was to shut down. Borders were closed, flights halted, and people ordered to stay home under states of emergency. The Kazakh government went a step further, pursuing "fake news" charges against an activist criticizing the government's pandemic response; the Uzbek government amended its criminal code in late March to criminalize the distribution of "false information" and the Tajik government approved amendments criminalizing the same in the summer of 2020. The Kyrgyz parliament passed its own "fake news" law in the summer of 2020, too, but then-President Sooronbay Jeenbekov

rejected it in August. Arguably these legal changes were already coming – mirroring laws passed in Russia in 2019 – but the pandemic provided a handy excuse and immediate use cases.

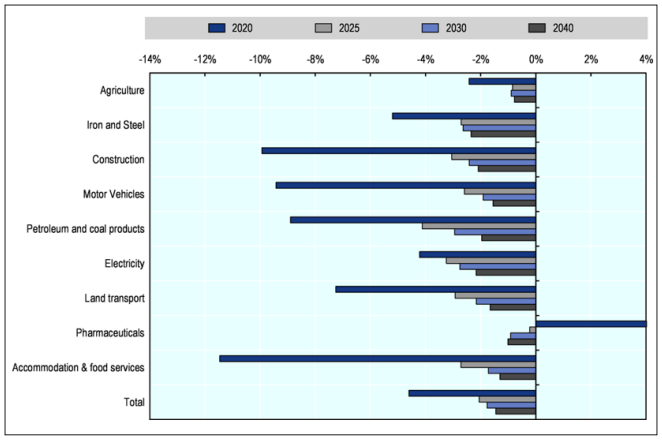
The economic realities of the region motivated re-openings by the summer of 2020, but World Bank analysis indicates that the region experienced a contraction during the pandemic year. Broken out by country, however, it's clear other dynamics were also in play: Kyrgyzstan's estimated 8 percent contraction in 2020, which dragged the region's stats down, arguably has roots in COVID-19 but deeper links to its political turmoil. The wider pandemic situation continues to hammer regional economies, but in predictable ways. For example, Tajik migrant workers are always among those who suffer when the Russian economy wobbles. COVID-19 has shaken the Russian economy, for sure, and with the addition of continued travel restrictions making it difficult for labor migrants to move about the region Central Asia's migrant workers still face employment woes. The pandemic hasn't necessarily made the countries of Central Asia more autocratic, nor has it changed the realities of the region's economies. So what has changed?

To those in Central Asia who have had loved ones pass away, the above analysis may appear heartless. Plenty has changed for those whose grandfathers and grandmothers have died, or mothers or aunts or friends – especially those in countries like Turkmenistan, which continues to deny the existence of the virus within its borders, or Tajikistan, which delayed admitting the virus and now claims to be COVID-free. But that, also, is par for the course: lack of transparency, gaslighting whole populations, and the disregard by governments of the pain and suffering of individuals.

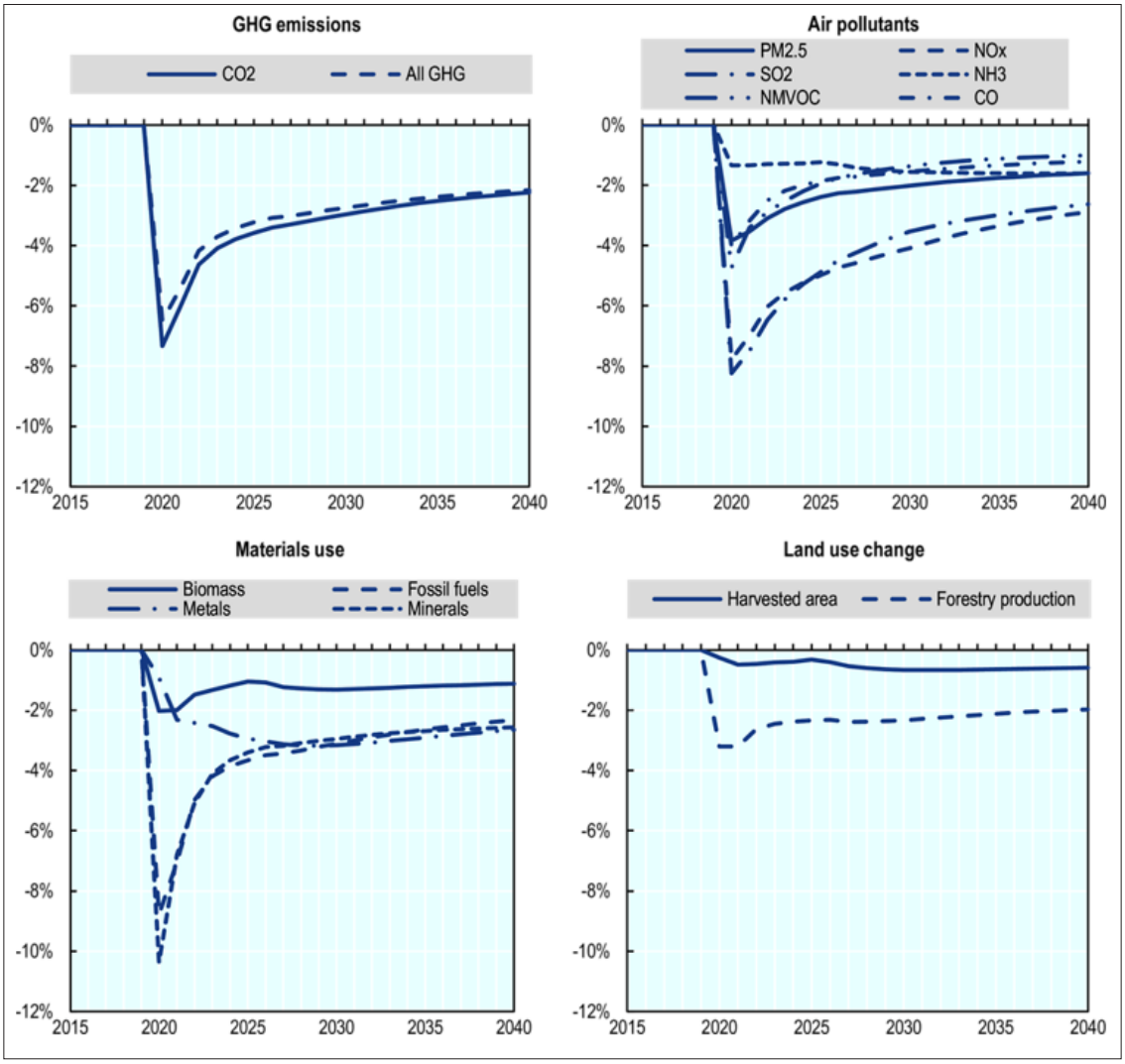
Recent analysis of global mortality rates, by Ariel Karlinsky at Hebrew University in Israel and Dmitry Kobak at the University of Tübingen in Germany, highlighted in a Eurasianet article last month suggests that the human cost of the pandemic in Central Asia is much greater than state statistics demonstrate. In Karlinsky and Kobak's preprint paper (meaning it has not yet been peer-reviewed), the researchers compared the ratio of excess mortality during the pandemic with officially reported COVID-19 death counts and identified the highest undercount in Uzbekistan, with Kazakhstan also displaying a high undercount. "Such large undercount ratios strongly suggest purposeful misdiagnosing or underreporting of COVID-19 deaths," the authors wrote. Kazakhstan and Kyrgyzstan were among the countries with the highest relative increases in deaths per 100,000 people, too. With time and more data (and, critically, more accurate data) the true human cost of the pandemic in Central Asia may become more clear. The lasting impact, however, is hard to chart at this juncture. As vaccines enter the region, regional propaganda – either that the pandemic has been well-controlled by regional governments, has passed (as Tajikistan claims), or never arrived, as in Turkmenistan – may undermine efforts to cajole populations into volunteering for a vaccine.

Reduction of air Pollution and GHGs Emission

As industries, transportation and companies have closed down it has brought a sudden drop of greenhouse gases (GHGs) emissions. Compared with this time of last year, levels of air pollution in New York has reduced by nearly 50% because of measures taken to control the virus [1]. It was estimated that nearly 50% reduction of N_2O and CO occurred due to the shutdown of heavy industries in China [2]. Also, emission of NO_2 is one of the key indicators of global economic activities, which indicates a sign of reduction in many countries (e.g., US, Canada, China, India, Italy, Brazil etc.) due to the recent shut down [3-6]. Usually, NO2 is emitted from the burning of fossil fuels, 80% of which comes from motor vehicle exhaust (USEPA, 2016). It is reported that NO2 causes acid rain with the interaction of O2 and H2O, and several respiratory diseases suffered by humans (USEPA, 2016). The European Environmental Agency (EEA) predicted that, because of the COVID-19 lockdown, NO2 emission dropped from 30-60% in many European cities including Barcelona, Madrid, Milan, Rome and Paris [7]. In the US NO2 declined 25.5% during the COVID-19 period compared to previous years [8]. The level of NO2 demonstrated a reduction across Ontario (Canada) and found to be reduced from 4.5 ppb to 1 ppb (Adams, 2020). Up to 54.3% decrease of NO2 was observed in Sao Paulo of Brazil [9]. It was also stated that, the levels of NO2 and PM2.5 reduced by almost 70% in Delhi, the capital of India (Thiessen, 2020). Overall, 46% and 50% reduction of PM2.5 and PM10 respectively, was reported in India during the nationwide lockdown (IEP, 2020).



The structure of the economy plays a key role in how economic effects translate into changes in environmental pressures. Services sectors, which are among the most severely hit by the pandemic (Figure 1), tend to produce less emissions and use fewer raw materials than most industrial sectors. This suggests that overall reductions in environmental pressure in the short run are smaller than the reductions in GDP. Fossil fuel demand, which links to GHG and air pollutant emissions, is heavily affected, not least through the effects of the lockdown measures on transport. Electricity demand also declines, especially in production, as firms close down temporarily, but less than fuel use. Construction activities are among the most severely affected in the short term, while the metals processing sectors are mostly through reduced demand for metals in e.g. construction and motor vehicles production. The only sector that increased output in 2020 was pharmaceuticals, as demand spiked. But in the medium term the overall slump in economic growth also drags down this sector, although it will probably continue to perform better than other manufacturing sectors. In the longer run, services and agricultural sectors are projected to recover faster and more completely than manufacturing. This is linked to the capital intensity of these sectors (and the basic goods nature of food): in the short run the negative effects are largest in labour-intensive sectors (as labour productivity is directly affected) while in the long run the opposite is true (as capital growth is affected).



The environmental pressures that are mostly linked to energy use observed a sharp decline in 2020 of 7-8%, followed by a gradual recovery to 2-3% below the pre-COVID baseline projection. This includes emissions of GHGs (Figure 2; top-left panel), the air pollutants nitrogen oxide (NOx) and sulfur dioxide (SO2) (Figure 2; top-right panel) and fossil fuel materials use (Figure 2; bottom-left panel). In contrast, air pollutant emissions, materials use and land use change related to agriculture are less affected, both in the short and long run: ammonia (NH3) is the least affected air pollutant; for materials use the biotic resources are less affected, and for land use change especially the change in harvested area is very small (Figure 2; bottom-right panel). In the short run, the area devoted to cropland (harvested area) is more or less fixed, and the relatively rapid rebound of food demand ensures land use change remains very close to the baseline levels. This and the small effects on forestry, suggest that biodiversity and ecosystem services may not benefit significantly from the reduced economic activity. Other environmental pressures have a different set of economic drivers, and have a distinct pattern of impacts. Emissions of particulate matter (PM2.5), which includes black carbon and organic carbon, are linked to transport (heavily affected) and residential activities (less affected), among others. Metals use is linked to industrial activities, which are less heavily impacted in the short run but have gradually started performing worse than other sectors – the immediate decline is very small, but increasing over time. The effect for non-metallic minerals is linked to the sharp decline in construction activities in 2020.

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