

ENVIRONMENTAL, SOCIAL AND ECONOMIC IMPACTS DUE TO THE COVID-19 OUTBREAK

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Abstract. The coronavirus (COVID-19) pandemic has disrupted daily life, challenging national health systems, stalling growth and affecting population in general. It was especially detrimental to vulnerable groups, which include people with disabilities, the elderly, impoverished people and indigenous populations. Additionally, crises in the food, health, security, employment and labor sectors have troubled the economic and social world structures. Consequently, the pandemic has seen workers suffered from malnutrition while exposing tens of millions to extreme poverty. Even today some are still stuck in these situations. Considering all the aforementioned, our document covers the global crisis caused by COVID-19 and proposes possible efforts that could be carried out to overcome its devastating consequences.

KEYWORDS: coronavirus / pandemic / socio-economic crisis

IMPACTOS AMBIENTALES, SOCIALES Y ECONÓMICOS DEBIDO AL BROTE DEL COVID-19

Resumen. La pandemia del coronavirus (COVID-19) ha trastornado la vida cotidiana, pues ha desafiado los sistemas nacionales de salud, estancado el crecimiento y afectado a la población en general. Específicamente, fue más perjudicial para los

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grupos vulnerables, que incluyen a personas con discapacidad, ancianos, personas que viven en la pobreza y poblaciones indígenas. Adicionalmente, la crisis alimentaria, de salud, de seguridad, de empleo y laboral ha perturbado las estructuras económicas y sociales del mundo. En ese sentido, durante la pandemia, los trabajadores sufrieron desnutrición y decenas de millones estuvieron en riesgo de pobreza extrema. Incluso algunos todavía están atrapados en estas situaciones. Considerando todo lo anterior, nuestro documento aborda la crisis mundial provocada por el COVID-19 y los posibles esfuerzos que se proponen realizar para superar sus devastadoras consecuencias.

PALABRAS CLAVE: coronavirus / pandemia / crisis socioeconómica

Códigos JEL: H12, I15

INTRODUCTION

The COVID-19 pandemic spread rapidly across the globe creating a state of stress, fear and panic among every individual (Saladino et al., 2020) but its effects on wellbeing and finances were primarily endured by the poor, refugees, migrants and displaced people (United Nations, 2020b). The homeless were highly exposed to the virus due to lack of shelter, but the displaced also stood to suffer from the pandemic and its aftermath due to limited mobility, reduced employment opportunities, etc. Inequalities were accentuated in a way that raised concerns over the unsustainability of the modern development pathway (United Nations, 2020a). No country was able to escape the dark shadow of the pandemic. It is worth noting that even the environmental benefits associated with it were not as positive as many believe them to be, as they were offset by some negative impacts. Reduced water pollution and an improvement in the air quality index were reported as a consequence to movement restrictions and slowdown of social and economic activities, but the increased use of Personal Protective Equipment (PPE) kits and the generation of huge hospital waste had a negative impact on the environment (Rume & Islam, 2020). This article contributes to the literature about the effects of COVID-19 on people's lives, social and economic structures and the environment. It presents some of the most important policy recommendations that were considered internationally overcome this crisis.

EFFECTS AND AFTERMATH OF COVID-19: PROLONGED INSTABILITY OF GLOBAL HARMONY

Environmental impacts

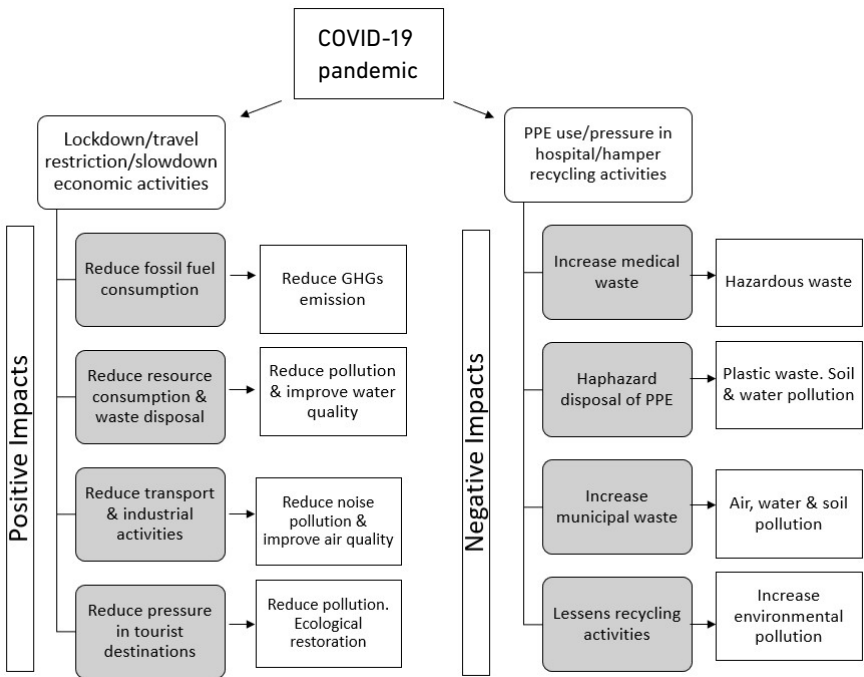
The drastic measures taken to halt the spread of coronavirus curbed socioeconomic and transportation activities. Consequently, a sharp decline in daily global CO₂ emissions was reported, while local air quality improved in different cities and regions (Nguyen et al., 2021). These factors alone saved 7000 lives in Turkey within three months of the country's lockdown. Production of nitrogen oxide (NO_x) and Green House Gas emissions (GHG) was reduced, with the formation of photochemical smog as the dominant source of impact on the ozone layer (Aydin et al., 2021). Other kinds of improvement in environmental conditions were observed across the globe. Air pollution in New York was reduced by 50 %, China recorded a 25 % drop in emissions, while significant decreases in nitrogen dioxide emissions were recorded in Spain, Italy and the United Kingdom. The imposition of quarantine measures also brought about a substantial reduction in noise pollution (Attia et al., 2021). Finally, in India, aerosol levels hit their lowest level in 20 years (Lokhandwala & Gautam, 2020).

On the downside, huge amounts of medical and plastic waste were generated that will have a long-lasting impact on the environment. On February 24, 2020, Wuhan, the epicenter of COVID-19, produced over 200 tons of said waste, four times the actual

allotted amount in the city (Bashir et al., 2020). The heavy volumes of infected residuals created a threat (Roy & Chaube, 2021) that could result in unprecedented levels of viral emissions to aquatic environment (Tarazona et al., 2021).

Figure 1

Environmental effects of the COVID-19 pandemic



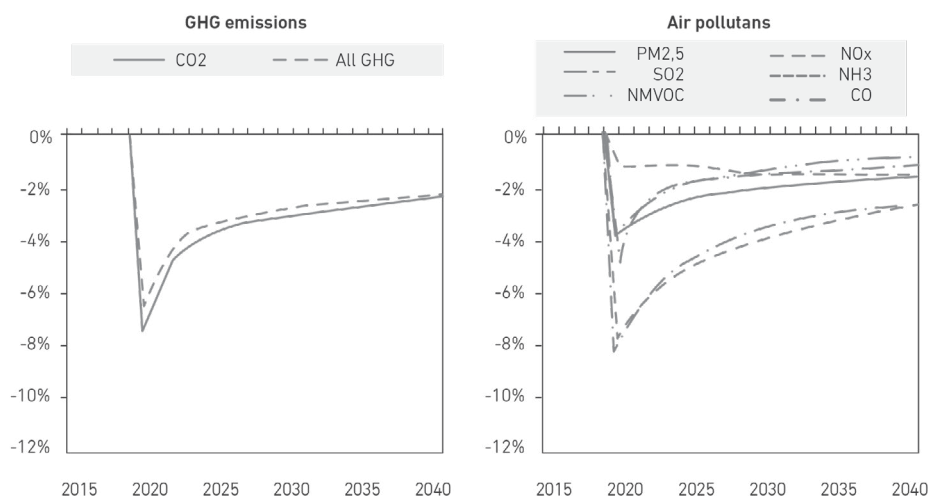
Source: Rume & Islam (2020)

Economic impact also translates into changes in environmental pressures. Service sectors that were impacted harder by the pandemic showed a tendency to produce less emissions and use fewer raw materials than most industrial sectors. This meant smaller reductions in GDP than those due to environmental pressures in the short run. The effect of lockdown measures on transportation heavily affected fossil fuel consumption which in turn reduced GHG and air pollutant emissions. Temporarily closed office buildings, malls and public places resulted in a decline in electricity demand.

The environmental pressures that most closely linked to energy use observed a sharp decline of 7-8 % in 2020 (Organization for Economic Cooperation and Development, 2021). This includes GHG, the air pollutants NO_x and sulfur dioxide (SO₂) emissions as well as the use of fossil fuel materials. A significant effect of regional differences on local air quality was also observed.

Figure 2

Effects on global environmental pressures are directly dependent on their economic drivers



Source: OECD (2021)

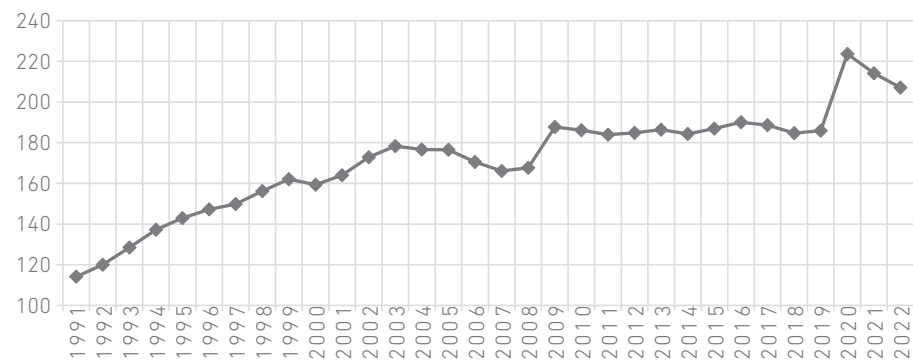
The COVID-19 pandemic aftermath also disrupted food and agriculture systems and endangered several families who depend on it for their livelihood. Food insecurity was already a challenge for developing nations, yet during the COVID-19 outbreak it became more severe among rural marginalized groups, including women and youths. Most countries depend on poor rural communities and small-scale producers for their national food security. These communities already face challenges such as poverty, limited access to resources and services and malnutrition. During the pandemic, they were forced to sell their grain produce much below the market price. Interruptions to the supply chain affected agricultural production. Moreover, lockdown measures caused disruptions in trade, travel and the market which further reduced availability.

Social and economic impact

The COVID-19 pandemic has challenged national health systems, shut down businesses large and small and confined millions to their homes, exposing society to its most destructive effects. Lockdown measures caused severe economic consequences generating a significant reduction in economic activity. The crisis has resulted in an unprecedented global loss of 8,8 % working hours, equivalent to 255 million full-time jobs in 2020 (International Labour Organization, 2021a). This has brought millions of people under poverty and made them economically vulnerable.

Figure 3

Global Unemployment

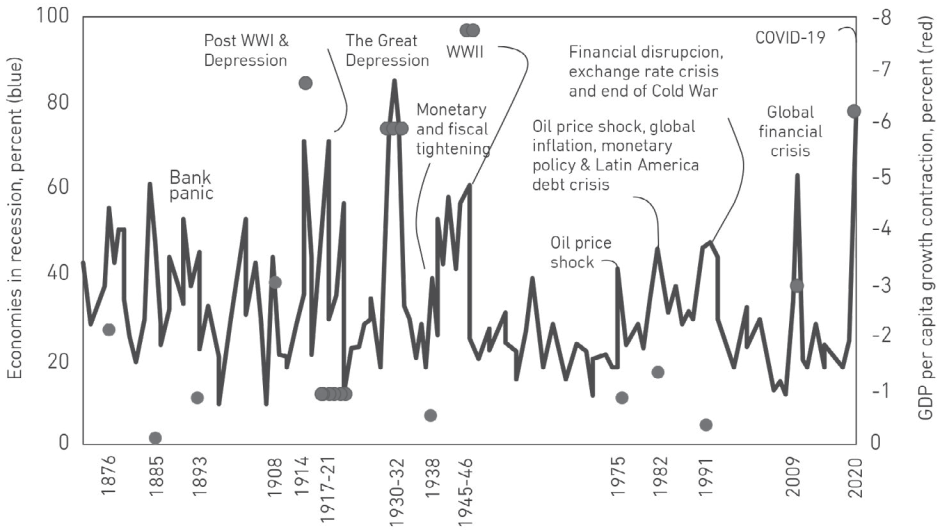


Source: International Labour Organization (2021b)

Low-skill workers were hit even harder than other groups. The enduring situation of distress in labor markets has badly affected workers and their families. Figure 4 shows that the COVID-19 pandemic has hit more economies than any other crisis faced by previous generations. This resulted in a contraction of the global economy by 6 % in 2020.

Figure 4

Crisis severity and contractions in growth



Source: Loayza et al. (2020)

In China, the epicenter of the outbreak, economic activity was slowed down due to disruptions in the global supply chains. Companies that depended on China for inputs' purchase experienced a large contraction in their production. Restricted transportation and panic among consumers and firms in turn has further slowed global economic activity and created market anomalies (McKibbin & Fernando, 2020).

The COVID-19 crisis led to an increase in poverty, as well as social and economic inequality. Urban areas were affected disproportionately because of the pandemic and subsequent lockdown measures, but also, lack of jobs caused a massive return of migrants toward their homes where most of them belong to rural communities.

At a societal level, racial discrimination was found to be one of the upstream factors among the causes of health-related inequalities. Reports have shown a big gap between black and white citizens' deaths in the USA. African American's death ratio is 2,4 times higher than that of white people (Kiran, 2020). On the other hand, the pandemic exacerbated gender inequalities. It increased the burden of domestic work, and produced higher rates of job losses, along with spikes in physical, sexual, and domestic violence, exploitation, increased risk for frontline health workers, increased risk of pregnancy and teen pregnancy, reduced financial independence, and so on. (Lebus et al., 2020).

The COVID-19 crisis has also wreaked a psychological impact on people, who experienced post-traumatic stress symptoms, confusion, anger, fear of infection, frustration, boredom, inadequate supplies, misinformation, financial losses and stigmatization (Weems et al., 2020). An international online survey in April 2020 shed light on the consequences that COVID-19 restrictions on social participation and lifestyle had on behavior and life satisfaction. The findings revealed that enforced confinement led to a reduction in social activities involving family (-58 %), friends and neighbors (-44,9 %) or entertainment (-46,7 %), placing the public under huge psychological strain. Lower life satisfaction (-30,5 %) is also associated with reduction in social participation (Ammar et al., 2020). On the other hand, social interactions and connection through digital technologies increased significantly during the confinement period.

COVID-19 also had a significant effect on international travel and tourism. Overall statewide traffic volume dropped compared to the same time of year in 2019 (Parr et al., 2020). There was also a significant social impact related to animal welfare and dairy production in low-income countries. According to a survey conducted between February 2020 to June 2020, farms reported a feed shortage due to lockdowns and an inability to access to essential and veterinary medications, which hampered the treatment of sick animals (Hussain et al., 2020). This in turn affected daily milk production and with it the economic flow and daily lifestyle of veterinarians.

A few insights on affected economic sectors that contribute a large share to national/ international economy include: (i) a reduction in international flights and tourism that has

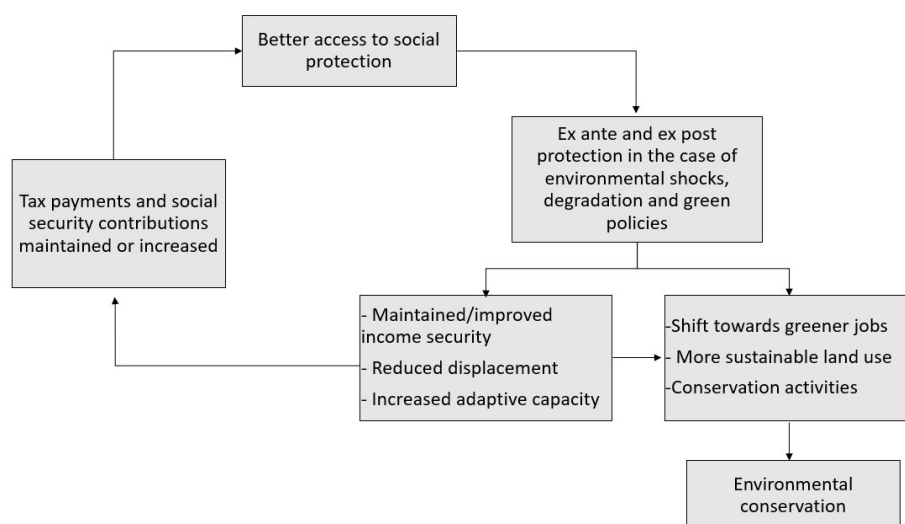
damaged the travel industry; (ii) millions lost in hospitality and hotel jobs, with many companies going bankrupt; (iii) an unprecedented decline in retail footfall as customers prefer to buy at online shopping platforms; (iv) big and small global tourism enterprises folded, losing billions of dollars; and (v) a significant rise in Moderna, Novavax and AstraZeneca shares during the COVID-19 pandemic (Jones et al., 2021).

The link between social protection, income security and environment

Risks and damages associated with environmental deterioration impact poor, indigenous, tribal and most vulnerable people first given that they possess a lower capacity to overcome difficulties. Often, most rely on a stable environment for their livelihood and wellbeing (Suich et al., 2015). Figure 5 shows how social protection and environmental sustainability are interconnected. Social protection decreases the economic impact of poor environmental laws and policies, environmental deterioration and natural disasters. Poverty mitigation and environmental protection can be achieved by means of secure income and an increased adaptive capacity (ILO, 2018b).

Figure 5

Socio-economic and environmental challenges are intricately linked



Source: ILO, 2018b

It has been reported that 45 % of indigenous women and men live outside of the agricultural sector and more than 86 % globally work in the informal economy –often associated with poor working conditions and a lack of social protection– compared to a 66 % for non-indigenous people. Moreover, indigenous peoples' wages and salaries are

18 % lower than their non-indigenous counterparts (ILO, 2020). In addition, some of these groups often find themselves forced into environmentally damaging activities, such as deforestation and illegal mining. Social security programs can therefore offer assistance to vulnerable groups and protect them from the effects of environmental deterioration by decreasing their reliance on this type of activities (Duraiappah, 1998).

For years now, most countries have pursued a failed version of social security, often with support and advice from the World Bank. Government support programs are usually directed at people identified as 'poor' by means testing, which often leaves out large numbers of people in need of support. In addition, the assumption that money is required as an incentive to improve people's behavior means that economic assistance is provided only on the condition that they act in certain ways. The lack of an adequate support structure left most countries ill-equipped to help their most vulnerable populations when the pandemic struck. Under these new circumstances, it is proposed that low- and middle-income countries increase their social expenditure by 2 % of the GDP, reduce poverty and inequality through effective social programs and raise taxes on the richest citizens and companies in order to lay the foundations for a functional universal social protection program and reduce the impacts of the pandemic (Oxfam International, 2020).

The rich could also play a major role in helping low- and middle-income countries by: (i) creating a global fund for social protection; (ii) increasing international aid directed to poor countries; (iii) extending debt relief; and (iv) allocating \$3tn in Special Drawing Rights through the IMF (Oxfam International, 2020).

The social and economic fallout of the pandemic has touched every aspect of people's lives, severely impacting vulnerable and disadvantaged groups. It is necessary that new policies address this in particular. Home schooling, for instance, will have different long-term impacts on children and youths depending on their socioeconomic background and available support from communities and decision-makers (OECD, 2020).

Green recovery efforts for people, the planet and prosperity: A response to environmental, social, and economic challenges

The pandemic has disrupted existing economic activities, creating global stress in terms of life loss, poverty and food scarcity for the poor and vulnerable. Governments took all possible and necessary efforts both nationally and internationally. The United Nations Environment Program (UNEP) took to sourcing and legislating COVID-19 relief and recovery measures by means of green fiscal policy, which could help countries achieve a better recovery. The green fiscal policy (UNEP, 2020a) consists in:

- i. Reallocating public finance resources and creating additional revenue through proper fiscal policy reforms.

- ii. Reducing environmentally harmful subsidies in order to expand fiscal space and redirect the savings to high priority sectors such as education, infrastructure and healthcare.
- iii. Imposing a carbon taxation and fossil fuel subsidy reform to take advantage of the current low oil price market. It is estimated that these measures could increase revenue streams by about 2,6 % of the global GDP.
- iv. Establishing the practice of green budgeting in governments, allowing for better management of green economy-compatible expenditures and taxes.

The policy asserts that environmental sustainability can actually help speed up job creation and have a multiplying effect on demand and economic activity. According to a World Bank study from 2011, “\$1 million invested in oil and gas in the United States creates just five jobs, compared to 17 jobs per million dollars invested in energy-saving building retrofits, 22 jobs for mass transit, 13 for wind and 14 for solar” (Cohen, 2020).

As the world grapples with COVID-19, adverse impacts on human health will continue to come from many fronts, such as excessive hazardous waste disposal (electronics, pharmaceuticals) and spikes in wastewater, while the massive use of detergent, disinfectants and antimicrobial solutions will impact natural climate and consequently human health in long run. Table 1 lists the UNEP’s response to COVID-19 emerging challenges (UNEP, 2020b).

Table 1
UNEP’s response to COVID-19

The medical and humanitarian emergency phase	A transformational change for nature and people
• Knowledge, information and awareness • Country medical waste management capacity assessments • Policy and legal frameworks for management of COVID-19 waste • New infrastructure and capacity for dealing with medical waste.	• Improve science and policy options to better understand and respond to zoonotic threats • Investment in nature for improved human health, sustainable socio-economic recovery, poverty reduction and livelihood recovery • Science technical support and advocacy to ensure progress on environmental issues through global processes
Investing to build back better	Modernizing global environmental governance
• Reaching real economy actors to rebuild, scale up and accelerate sustainable consumption and production, and create new green jobs. • Linking recovery efforts with clean energy transition, nature-based solution and the Paris Agreement. • Supporting governments to rebuild the next generation of social, ecological and productive infrastructure.	• Evaluate the opportunities for intergovernmental bodies with regards to virtual meetings. • Examine and work to overcome the logistical challenges of moving to online platforms.

Source: UNEP, 2020b

In regards to the GDP, projections show that spending on clean energy is more efficient than spending on non-ecofriendly energy. Investment on nature conservation has increased sevenfold over the last five years (Batini et al., 2021). The ILO reports indicate that 24 million new jobs will be created globally by 2030 if the right policies are put in place to promote a greener economy, compared to just 3 million jobs under BAU (ILO, 2018a). Global green recovery response suggests a possible future for many countries. Green energy, green buildings and green transportation are the natural capital of a nation, and its returns can be manifold if spent under the right policy. A few countries that are green recovery self-starters include Argentina, Brazil, China, Colombia, India, Mexico, Peru, Spain and Vietnam.

According to the United Nations Environment Management Group (2021), Argentina invested US\$ 390 thousand in renewable energy to strengthen its fishing industry. Colombia funded 27 strategic renewable energy projects with US\$ 4,3 million and credited US\$ 8 million to promote reductions in greenhouse emissions. In Brazil, the National Bank for Economic and Social Development is set to receive US\$ 5,3 million to finance its Energy Efficiency Guarantee Fund Credit. The Mexican and Peruvian governments invested in the construction of city cycling networks to promote the use of non-contaminant vehicles. Elsewhere, China funded US\$ 13,5 billion to a diverse array of environmental protection and pollution control programs as well as ecological restoration, energy resource conservation, green transportation and clean energy initiatives. The Indian government promoted clean transportation by sanctioning 670 electric buses and 241 charging stations while also funding US\$ 817 million for the Compensatory Afforestation Fund Management and Planning Authority and other green recovery efforts. Lastly, Spain spent US\$ 10 billion in biodiversity measures like green infrastructure, reforestation, green sanitation and the modernization of its transportation infrastructure.

CONCLUSION

The COVID-19 pandemic has shaken human life, social and economic structures and the environment. People lost loved ones, their jobs, struggled to survive and faced physical and mental health issues. This health, social and economic crisis highlights our need to formulate better policies in order to improve healthcare, reactivate the economy and promote social protection systems. The United Nations and associated organizations have stated their proposals to overcome the critical consequences of the COVID-19 outbreak within the smallest possible time frame. Green fiscal policy has proven a better way to recover from the damages caused by the economic crisis. Moreover, investing in people through unemployment protection schemes helps prevent and reduce poverty by providing immediate income replacement for lost wages. Firms and financial systems dynamics need to be recovered and stabilized by means of the necessary economic

policies, such as financial rescue programs. Lastly, policymakers need to implement targeted fiscal, monetary and financial market measures to support the affected households and businesses.

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Manjula Upadhyay: Conceptualization, methodology, validation, data analysis, data curation, writing - revision and editing, visualization, supervision, project management.

Swati Mishra: Conceptualization, methodology, software, data analysis, research, writing — preparation of the first draft, writing .— revision and editing, visualization, project management.

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