

## REVIEW ARTICLE

## IMPLICATIONS OF COVID-19 PANDEMIC ON DIFFERENT SECTOR OF PEOPLE'S LIVELIHOOD: AN EYE IN CONTEXT OF NEPAL

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## ABSTRACT

Being a predominantly agricultural nation, Nepal is dominated by this sector of the economy, which employs thousands of people. When the pandemic hit Nepal, a developing country, there was a concern on a nationwide level since the government was compelled to announce a lockdown that lasted for 4 months employing a variety of tactics, including lockdown, social isolation, quarantine, contact tracking, etc. Because of the lockdown condition, many encountered mental health concerns. When obliged to maintain a specific distance between members of their own family, neuromuscular issues were profound among the people. Therefore, in order to assess the impact of COVID-19 pandemic on Nepal's way of life the case study was carried out. WHO, MoHP, and other organizations' publications, as well as other secondary sources of information, served as the sole data foundation for this review. Hence, the worst conditions in Nepalese society were reflected in the 25% income reduction and the 5% job loss rate, both of which have an impact on peoples' capacity to support themselves. In addition, there was a severe dearth of food, especially seed and fertilizer, which contributed to a food crisis and black marketing. By limiting tourism to Nepal, COVID-19 transformed the educational environment and had a negative impact on the country's economy. Other diverse effects were observed on remittance and local institutions that COVID-19 has exhibited. Benefits for the environment were also obvious.

## KEYWORDS

Covid-19, Education, Economy, Health, Livelihood

## 1. INTRODUCTION

A pandemic is a contagious illness that affects human populations and spreads across a significant geographic area, several continents, or the entire world. These illnesses can spread quickly and infect people. When pandemic resulted in numerous illness-related deaths, significant social and economic effects, or all three, they introduced as disasters. Knowing the consequences about future pandemic illnesses, including novel influenza strains like Middle East Respiratory Syndrome (MERS) and severe acute respiratory syndrome (SARS), an awareness is given to people around world relating to pandemics. Pandemics in the past have affected people with cholera, smallpox, leprosy, measles, polio, and yellow fever (Swedberg, 2014).

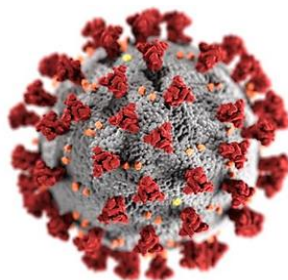


Figure 1: Picture retrieved from (Center for Disease Control and Prevention, 2020)

In December 2019, a new coronavirus infection known as COVID-19 began to spread from the Hunan seafood market in Wuhan, China, where live animals such as bats, frogs, snakes, birds, marmots, and rabbits get frequently sold. Within a few months, the outbreak had developed into a global health emergency (Wang et al., 2020). It is known as COVID-19, the viral sickness brought on by this new coronavirus disease of 2019 (Wu et al., 2020). During the early stages of the outbreak, several modeling studies got carried out to forecast the epidemic and the efficacy of numerous population-wide strategies, such as lockdown, social isolation, quarantine, testing and contact tracing, and media-related awareness, among others, to slow the spread of COVID-19 (Giordano et al., 2020).

Early vaccine development may be one strategy to prepare for future pandemics that cannot get altered. Development of appropriate treatments, other than vaccines, related to disease surveillance for detection of pathogens get carried out. This detection includes early warning systems, data collection, and modeling to enable tracking along with explaining the spread of pathogens, improvements to public-health guidance and communication gets introduced (Maxmen, 2021). Experts explicitly found a universal coronavirus vaccine that provides long-lasting protection against not only all SARS-CoV-2 variations. It also protects from additional coronaviruses, including already-known animal coronaviruses with pandemic potential in 2021 (Morens et al., 2022).

As a pandemic, it brought both positive aspects as well as negative aspects in a community that influence a society in a profuse way: good aspects for environment and bad aspects in human livelihood. Likewise on livelihood, pandemics creates a disturbance in economic and social status of

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community that had a tremendous effect in a society: as tens of millions of people fall under poverty and at the end of the year people are not getting proper nourishment rising up to 132 million (WHO, 2020).

Nepal, as an agricultural country, dominated by agriculture-based industry that encounters thousands of people providing employment opportunities. Not only employment, but it also highly impacted on the education sector, focusing to an agricultural student, whose way of education depends in the field not on only online classes or videoconferencing. Most of the households adopt subsistence farming that helps to sustain on crisis which is clarified on severe earthquakes on 2015 where diversified crops and income generating activities in the hills and mountains play a great role on facing a crisis (Epstein et al., 2017).

In order to retreat pandemic situation, Nepal had undergone partial as well as complete lockdown that eventually shutdown sundry of business and other aspects of economic sector. Hence, human casualties and mental illness, are not only COVID-19 implications but also it has affected a multiple sector such as agriculture, tourism, remittance, food security, transportation, etc. (Laudari et al., 2021). Despite both positive and negative aspects of COVID-19 in all categories of people in the community, majority of their impacts are based on economic and livelihood strategies in which its strength is considered by social, physical, human, natural and financial sectors (Wang et al., 2020).

## 2. METHODOLOGY

This review's data comes exclusively from secondary sources. The Ministry of Health and Population (MoHP) was utilized to gather and analyze pertinent reports, and the World Health Organization was one of the additional sources employed. The results were then presented. The reports that were concisely given throughout the COVID-19 pandemic's peak season served as the source of all the data for this study (the years 2019-2020).

## 3. RESULTS AND DISCUSSION

### 3.1 Status of Nepalese Livelihood

Due to COVID-19, the community has been affected disproportionately, making it crucial to gauge the impacts of the pandemic at the household level or rural livelihood (Kansiime et al., 2021). Survey conducted shows that within a month, food insecure households pushed to 23% from 8% along with 10% of households lost livelihood sources and 30% facing a reduction in income (Adhikari et al., 2021). Early analysis shows that the rural communities mainly faced two disruptions during the pandemic in two ways: loss of income of people working in informal sectors and reduction of remittance from migrants, both internal and international (Bhattarai et al., 2005; Thapa Magar et al., 2021). The influx of return migrants increases the consumption of forest products and the intensity of agricultural practices (Fox et al., 2020). Also, disrupt supplies of fertilizers and agricultural extension facilities that could hamper agriculture negatively (Adhikari et al., 2021; Kumar et al., 2021; Thapa Magar et al., 2021).

The study shows negative impacts on households with larger sizes, less land holding, return migrants and relying more on daily wage laborers, indigenous people, and marginalized caste groups. In the absence of a market, return migrants are likely to engage in subsistence agriculture-based livelihood due to a decrease in remittance income that leads to more consumption of forest products (Geist and Lambin, 2002). Similarly, in the case of Nepal, low-caste groups got an economic shock as they had limited land ownership and poor access to material and non-material resources.

It results in a crisis on the job, remittance loss, and reduction in income that further puts pressure on income generation and livelihoods (Ghimire and Researcher, 2020). The tourism sector mainly experiences this problem, and daily wage laborer in the off-farm sector, sell livestock and livestock products, followed by medium and small-scale businesses. A survey done by WPF in collaboration with the Ministry of Agriculture and livestock development shows that 16.8% of households had inadequate food consumption. In the same way, 2.5% had poor dietary diversity, 7.4% adopted negative livelihood coping strategies to address food shortages, and 2.7% had insufficient food stock to meet their needs.

Overall, around 33% of households reported a reduction in income in the last three months of Covid-19. Out of this, 8% reported a severe loss in income, 20.5% reported a moderate reduction in income, and nearly 5% noted that the income was too small. This data shows the observed decrease in households resorting to stressful livelihood coping strategies such as borrowing money or selling unproductive assets. There were

various problems like getting sick, disruption of medical services, shortages of medicines, reduction in income, increased food prices, lack of work, shortage of food, etc. These problems clearly show the influx of people increasing pressure on agricultural practices and forest resources (Singh et al., 2021).

According to the decision of local, provincial, and Nepalese government to prevent and control the COVID-19 infection, the Cabinet meeting passed an order to managing risk bonuses for the health personnel who were actively involved in airports, border points, quarantine management, labs, and other places (The Kathmandu Post, 2020a). The ministry first reported the 10,000 current cases. It developed emotional preparedness and reaction plans based on the availability of ICUs, hospital beds, ventilators, and isolation beds in public and private sector institutions (MOHP, 2020). According to the response strategy, Phase-I conditions persist until the maximum number of infection cases falls below 2000. If there are more than 5000 cases of infection, phase-II conditions were declared. The government would regard it as being in phase-III status if the nation had 10,000 instances of infection. The administration intended to seek international aids if the condition entered phase III (Kabita Kumari Shah et al., 2020).

**Table 2: The Capability of The Available Medical Resources (15th April, 2020)**

S. N	Descriptions	Total
1	Beds in Hospital	26930
2	Hospitals having Intensive care unit facilities	194
3	ICU beds available	1595
4	Ventilators available	840
5	Hospitals running COVID clinics	111
6	Level - I COVID hospitals	13
7	Level - II COVID Hospitals	12
8	Level - III COVID hospitals	3
9	Isolation beds	3076

Source: MOHP, 2020

### 3.2 Impact of Covid-19 Lockdown on Mental Health

Nearly all countries impacted by this virus had announced a total lockdown to stop its further transmission and had only recommended social isolation. In addition to social isolation (such as prohibiting large gatherings), border closures, school closures considered an special measures to isolate symptomatic individuals and their contacts along with an essential internal travel prohibition creating a noticeable significant impact on transmission reduction due to which people suffered physically and mentally (Flaxman et al., 2020). The most significant issue for Nepal, a country with a population of over 21.14 million, during the lockdown was to maintain social distancing when the lockdown got loosened for a few hours each day so people can go shopping for food and other necessities.

Since so many people live in different locations in Nepal, it was challenging to maintain social distancing as people rush to the nearby food stores. As a result of COVID-19's lockdown effects, homes in Nepal with lower levels of education, vulnerable households with a member with a disability, households headed by women, and households residing in rural areas were all found to have higher rates of food insecurity (Government of Nepal and World Food Programme, 2021). All sorts of these lead to affect mental health. The novel coronavirus's global spread rise neurobehavioral problems, including fatigue, distancing from others, and anxiousness. This problem often emerge when caring for severely acute patients, tiredness, hypersomnia, poor concentration and lack of direction, declining performance, and unwillingness to work or consideration of resignation (Brooks et al., 2020).

### 3.3 Covid-19 and its Impact on Livelihood Status

Significant effects of the COVID-19 crisis on Nepalese household livelihoods get noticed, with 5% of households reporting job loss and 21% reporting a decrease in income due to the crisis (Government of Nepal and World Food Programme, 2021). Province 2 (6.8%), Bagmati (5.4%), and Lumbini (5.1%) saw a tremendous loss of livelihood, and Provinces 2 (26.7%) and Province Karnali (23.6%) experienced the most significant income decline (Government of Nepal and World Food Programme, 2021). Nepalese households with a person with a disability, households headed

by women, and households residing in rural regions were more likely to have inadequate food consumption and food insufficiency; the COVID-19 crisis's loss of jobs and income had a severe effect on livelihood status.

### 3.4 Covid-19 and its Impact on Food security

In worldwide, millions of poor households suffered food and nutrition problems due to the epidemic, with vulnerable people in low-income nations suffering the most. As lockdown started, farmers had difficulty preparing the fields for cultivation and so, the supply of fertilizers, seeds, and agricultural equipment got hampered. The stay-at-home order caused the agro-vet centers to close, the shipment of agricultural inputs to cease, and other farming activities also got hindered because the local administration did not consider the agro vets as essential services during the lockdown (The Rising Nepal, 2020). The pandemic has significantly influenced food production and food security with the disruption of the market's supply chain by impairing production and distribution while also causing a labor shortage and input shortage (Stephens et al., 2020). Seeds and fertilizer were in scarce form, and the planting of vegetables and crops got delayed. Farmers could not grow crops and vegetables due to the local administration's refusal to permit agro-vet shops to operate and transport agricultural inputs.

The production of dairy products, livestock, poultry, and fish was all significantly impacted. The overall demand for milk, eggs, and meat decreased in Nepal due to COVID-19, which caused businesses, including restaurants, hotels, factories, and schools to close. The COVID-19 outbreak has disrupted the supply chain for livestock products. Animal production, handling, delivery, sale, and eating get negatively impacted. Reduced access to animal foods, inputs, services, markets, decreased processing capacity, and local domestic and international transportation are all COVID-19 consequences on the animal production industry. The channels that provide food inside and outside Nepal have been interrupted by the lockdown extension, significantly jeopardizing the country's capacity to obtain food. The epidemic is approaching the country as wheat is harvested and paddy planting was on the way. Farmers destroyed their crops since they could not sell them because of the coronavirus. In retaliation for the government's failure to guarantee a market for their goods, milk farmers threw away their milk on the highways (Chikanbanjar, 2017).

After all, the markets were only partially open. From 8 April 2020, Birendra Municipality in Surkhet district-imposed restrictions on the movement of dairy, fruit, and vegetable products from even the Palikas of Surkhet district, leading to a dearth of these products in the market (WFO, 2020). Vegetables were scarce in the markets, and during the lockdown, prices increased by an average of 30 to 60 percent throughout the mid-hill areas. The COVID-19 pandemic made it clear that it is crucial to recognize, gather, conserve, and research native plant, animal, and crop species and promote subsistence farming's resilience, particularly in the hills and mountains. Commercial or semi-commercial farming should also be encouraged to produce enough food (Burlingame et al., 2019). This step must get followed to prepare for future shocks brought on by pandemics or changes in the climate.

### 3.5 Covid-19 and its Impact on Education

During the COVID-19 outbreak, Nepal's educational system struggled to adjust to the new teaching techniques. The positive impacts for these techniques were students' access to online courses, as more than 70% of Nepal's population use the Internet. Most users connect it through their cellphones via their telecom providers' data services (Nepal Telecommunications Authority, 2019). A shift toward online virtual classrooms resulted from travel limitations, institution closures restriction to physical distance, and other lockdown requirements due to the COVID-19 pandemic.

During the pandemic, Nepal's internet speed was insufficient to facilitate e-learning, particularly as this type of learning typically calls for the access to and delivery of huge files and multimedia content. The Nepali government had requested service providers to refrain from restricting access if bills did not get paid when the country was under lockdown, but they did not entirely obey the request (Sigdel et al., 2021). Due to the hefty fees charged by the service providers, it took a lot of effort for many Nepalese students and citizens to afford to stay connected regularly using their gadgets.

### 3.6 COVID-19 and its Impact on Trade & Tourism

Nepal's main driver of economic growth, tourism, contributed 7.9% of the nation's GDP in 2018 and supported over one million employments, with projections for over one million jobs by 2029 (Prasain, 2019). In 2019,

Nepal welcomed 1.19 million foreign visitors and celebrated "Visit Nepal 2020" on January 1, which sought to welcome 2 million visitors, earn \$2 billion in revenue, and develop thousands of new employments (Sah et al., 2021). After the pandemic declaration, the government abolished all approvals for mountaineering excursions and all visas in response to the exponential increase in cases worldwide and growing public concern.

On March 3, the government also suspended the "Visit Nepal 2020" initiative (Sah et al., 2021). The ongoing crisis in worldwide tourism due to the COVID-19 pandemic is a pressing concern.

The COVID-19 pandemic outbreak has caused uncertainty and spillover effects on practically all industries. The enormous tourism sector accounts for 10.4% of the global GDP and 10% of all jobs worldwide (Menegaki, 2020). Similar to other countries, Nepal has also got negatively impacted by the epidemic. According to early data, travel restrictions and flight disruptions have caused 14.37% damage to Nepal's economy (The Kathmandu Post, 2020b). Massive hotel and tourist booking cancellations that followed put thousands of livelihoods in vulnerability, caused widespread jobless and resulted in income loss. In Nepal, there are about 200,000 individuals who work directly in hotels, restaurants, trekking, climbing, travel agencies, and other tourism-related industries (ADB, 2019).

All of them are adversely affected by the outbreak. In 2015, the trade and tourism industry got severely damaged by a catastrophic earthquake and trade difficulties along the southern border, which caused a 33% fall in tourism (ADB, 2019). Following the lifting of the lockdown and the resumption of business, the Nepal Tourism Board (NTB) has prepared guidelines on the tourism industry's safety measures to manage and combat the COVID-19 situation.

### 3.7 Covid-19 and its Impact on Remittance

Since 2009, the Department of Foreign Employment (DoFE) has issued more than four million work permits to Nepali nationals in 110 countries. Foreign remittances rapidly increased by 20% after the 2015 earthquakes, protecting people at home from the financial impact of the calamity (Sijapati et al., 2015). Also, the government has officially approved destinations for labor migrants; the top five are Malaysia, Qatar, the United Arab Emirates, Saudi Arabia, and Kuwait. In these countries, the availability of jobs for foreign workers has get facilitated by the countries' oil wealth or labor shortages (Suswopna et al., 2020).

Over the past ten years, remittances from overseas have nearly quadrupled from \$2.54 billion to \$8.79 billion. They play a significant role in Nepal's economy, which relies highly on labor migration (Suswopna et al., 2020). The labor migrants from Nepal not only sent money and skills back home, but they also strengthened the nation's fortune. Due to travel limitations, many migrants could not return to their home countries after being fired from their employment and placed on unpaid vacation. Nepal living overseas were advised to remain in their current locations and were pleaded with by the government's High-Level Coordination Committee for Prevention and Control of COVID-19 on March 24 (Sah et al., 2021).

### 3.8 COVID-19 & Local Institutions

Through local resources and indigenous knowledge, local institutions have shown their critical role in disaster response across the globe. Several local organizations, including CFUGs, farmer groups, mothers' groups, youth clubs, and irrigation groups, have been recognized for their potential to help Nepal adapt to and lessen the effects of climate-related disasters. These organizations also impact how risks get distributed due to climate change by setting up incentives for household and community-level adaptations and facilitating appropriate external interventions (Agrawal, 2008).

Following the effects of COVID-19 in Nepal, more than 500 CFUGs mobilized their personal, financial, and social resources for COVID-19 reaction through their institutional decisions. As of May 2020, 252 CFUGs had contributed close to 170,000 USD in cash to the COVID-19 response, including around 10 million USD to the local government's relief fund, which directly assisted more than 152,700 poor and vulnerable individuals. The offices and meeting spaces of more than 1400 CFUGs get offered as quarantine facilities (Gentle et al., 2020).

### 3.9 Positive Aspects of COVID-19

In the verse of negative impacts of COVID-19, positive aspects were also be confronted in community to some extent. In retrospect in community, crime such as embezzlements in house, street etc. was inflated along with retreated of traffics (Nelson, 2020). Due to complete or partial lockdowns

which was requested under severe development control made by several authorities worldwide, the release of emission substances, NO<sub>2</sub>, water contamination, noise pollution, and contamination in seashores had significantly decreased (Chakraborty and Maity, 2020; Saadat et al., 2020). Lockdowns had been highly beneficial because contamination levels have significantly decreased, including ozone-depleting chemical emissions, nitrogen dioxide (NO<sub>2</sub>), dark carbon, and water contamination (Chakraborty and Maity, 2020). The pandemic's aftereffects had effectively restored the environment to a significant extent, which should positively impact global climate change.

In order to prevent widespread infection, all local and national governments in Nepal had effectively banned individuals from leaving their homes. Mass gatherings for political, religious, cultural, social, and other festive events had also get canceled. An extraordinary environmental impact has resulted from efforts to stop the spread of the SARS-CoV-2 virus by restricting mobility. Industrial waste emissions have been lowered as a result of shutting down of industries. There were hardly any vehicles on the roads resulted into no emissions of harmful microscopic suspended particles or greenhouse gases into the atmosphere. The utilization of fossil fuels had significantly decreased due to a decrease in industrial power demand.

#### 4. CONCLUSION

Pandemics caused a drastic negative effect in Nepalese livelihood resulting in distortion of population taking millions of lives. The COVID-19 outbreak directly influenced Nepalese inhabitants' quality of life and affected every sector of the country's economy, including agriculture, tourism, remittances, trade, entrepreneurship, and mental health. The administration decided to prohibit gatherings for cultural, social, or religious purposes at the start of the lockdown. Even though these precautions were applied to safeguard people against COVID-19, Nepalese now feel scared, anxious, and apprehensive. Due to the lack of adequate quarantine services and the early development of health-related services, Nepal was not ready for a pandemic of this size. With increment in the number of infections, the government's performance in controlling the crisis and de-escalating the epidemic becomes difficult. Hydropower, trade, and tourism were some industries impacted by the coronavirus. Several ongoing projects had also been affected by a need for timely access to building materials, equipment, and labor.

The Government of Nepal and other non-governmental agencies assisted the most -affected households in a commendable fashion. Now, research should expand that covers the whole country as a geographical representation, focusing on how COVID-19 influenced different sectors of Nepalese livelihoods. The shutdown of business, social distancing, and immediate loss of employment has negatively impacted the country's economic sector. This situation pushes more people towards hunger, malnutrition, and food insecurity. That is why different economic recovery programs get launched for food-insecure households for everyone's well-being. The agricultural sector, the second largest contributor to GDP, must get commercialized to recover, strengthening and enlarging medium enterprises that lead to greater self-reliance in the long term. In order to promote the national goals towards prosperity, the bottom segment of individuals and groups have to get provided with various livelihood opportunities to achieve the minimum standard of living.

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