

Full Length Research Paper

Impact of Covid-19 on mobile pastorals livelihood: A review

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COVID-19 pandemic affects almost all pastoralists around the world are highly marginalized and ignored attentions. The extent of pastoral vulnerability towards COVID-19 pandemic was very high. The objective of the review is to show the impacts of COVID-19 on mobile pastorals livelihood. Pastorals have always lived with vulnerable situations like droughts, climate variability, climate change, market instability, water scarcity, food insecurity and conflicts are among other shocks and stresses. COVID-19 and its associated restrictions made gatherings created unprecedented contests for markets, customers, and traders. This reduced the pastoral capacity to purchase food consumption at the household level, which resulted due to the declining of pastoralist's income. As the demand of pastoral production in the market is low, they cannot afford to buy crops from the market. Significantly, restrictions and lower demands in the markets result in lower levels of milk consumption, which is an important indicator of food security in pastoral communities. The COVID-19 pandemic has also resulted in school closures across the world. Families kept children out of school to avoid infection and spreading of the disease, which made students to stay at home and some never go back to school specifically due to marriage and other reasons. Generally, strengthening pastoral area infrastructures and building their resilience capacity towards such shocks and stress will be alternatives towards all outbreaks.

Key words: COVID-19, education, income, mobility, market, pastorals.

INTRODUCTION

Coronaviruses are a group of viruses belonging to the family of Coronaviridae, which infect both animals and humans (WHO, 2020). Human coronaviruses can cause mild disease similar to a common cold, while others cause more severe disease (such as MERS - Middle East Respiratory Syndrome and SARS - Severe Acute Respiratory Syndrome). COVID-19 has cruelly made vulnerable situations, deep structural inequalities and

insecurities in societies across the world. Regardless of wealth, age, gender health condition, ethnicity, race or knowledge COVID-19 affects almost all human beings across the world (EPHI, 2014; Giulia et al., 2020; Liu et al., 2020; Fischer et al., 2020; Mendes and Carvalho, 2020; Wenham et al., 2020). Most studies has focused on the macro consequences of the pandemic on national economies and the impacts on poverty (Sumner et al.,

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2020; Wright et al., 2020) or wider questions of the pandemic's impact on development (Oldekop et al., 2020; Peeri et al., 2020) Health (Li, 2013; Sui et al., 2014; Spruth et al., 2006) and social justice (ROAPE, 2020). The social effect of the pandemic is being and will be felt across countries and communities at global level. Containment and social distancing measures adopted to slow the spread of the virus taken also by governments whose countries did not necessarily show the highest numbers of COVID-19 cases caused a production slowdown and a reduction in consumption (COOP, 2022).

The lives and livelihood of millions people especially those living in remote areas of different countries experience humanitarian crisis are (and will be) heavily affected. As there is no means of communication, lack of health facilities, electricity, Medias and other infrastructure, such areas will undergo devastating challenges. Alaa and Abd (2020) stated in their study that knowledge creation, sharing and management are considered core issues in the management of information during pandemics. Above all, due to the pandemic transportation was stopped and movement were also restricted. Such restrictions of movement's impacts communities well beings, through hindering people from markets to buy and sell goods, send their children to school, movements of livestock to search for water and pasture is restricted. Reports according to ELRH (2020) crisis always affect populations which remain at serious risk of exclusion from essential services.

According to John (2021), as of May 26, 2021, the outbreak of coronavirus disease (COVID-19) had spread to six continents, and almost 3.5 million people had died after contracting the respiratory virus. Almost 126,000 of these deaths occurred in Italy. Approximately 215 countries and territories worldwide have been affected by the COVID-19 disease. The virus is still circulating at very high rates, and many countries have reintroduced lockdown rules to slow the spread recorded over the winter months. Furthermore, fresh travel restrictions have been implemented following the discovery of new variants, particularly those first identified in the UK and South Africa. Even though the pandemic affects more of developed countries, pastoral communities that occupy most part of dry land areas are also never free from its impacts.

Pastoralism is a subsistence living pattern of tending herds of large animals. Pastoralism is a predominant livelihood in less favoured landscapes, such as dry lands, mountains and cold areas, where natural pastures are a primary resource. Dry lands are traditionally used and managed by pastoralists and host nearly one-third of the world's human population and about half of the world's livestock (McDermott et al., 2010; Boval et al., 2017). According to FAO (2017) reports in 2006 a study published by the Food and Agriculture Organization put the number at 120 million, which includes some people who also grow crops (known as "agro-pastoralists"). Of

these, 50 million are in sub-Saharan Africa, 31 million in the Middle East and North Africa, 25 million in Central Asia, 10 million in South Asia, and five million in South and Central America.

The livelihood of pastoral communities contains high mobility that is largely dependent on rearing livestock. These lifestyles remain the most feasible options of livelihood for these vulnerable and underserved communities (Flintan et al., 2019; Abdilahi et al., 2020). Nikola (2006) stated in his study that due to their life styles, pastorals are always vulnerable to the different pandemic. The vulnerability of pastoral communities is not only limited to the lifestyle but also the ecological behaviour of the area, temperature, rainfall, and other factors is there. A large pastoral community that lives in Sub-Saharan Africa is more likely to spread the infection to the agrarian population of city dwellers due to high crowdedness in urban areas (Dzinamarira et al., 2020). As the pastoralists have always lived with and in uncertainty and COVID-19 presented another challenge, layered on responding to climate variability, market volatility, insecurity, and conflict, among other shocks and stresses (Giulia et al., 2020).

According COOPI (2020), lives and livelihood of millions of people - especially those living in countries experiencing humanitarian crisis - are and will be heavily affected. As most pastoral areas lives under the poverty line, it's one of the areas which experiences humanitarian crisis. Majority of the pastoral areas, with the El Niño weather front, variability of rainfall, drought and other factors pastorals live under humanitarian crises (Flintan et al., 2019). World Food Program (2020) states East Africa, estimates that some 24 million people are food insecure in the region, including 3.3 million refugees and 6.2 million internally displaced persons. Giulia et al. (2020) also shaped in his study that commentary on the viruses' impact has rarely focused on populations who depend on mobility for their livelihoods in marginal and remote rural areas. Lockdowns as the core public health measure to prevent the spread of COVID-19, have especially dramatic consequences for already marginal populations where mobility is essential for livelihoods (Dubale and Mariam, 2007). Such groups include artists, travellers, refugees (Kluge et al., 2020), migrant workers (Liem et al., 2020) and pastoralists (Giulia et al., 2020). Therefore, this review was conducted to show the impact of COVID-19 on mobile pastorals livelihoods.

METHODS

This review was conducted to collect evidence on impacts of the pandemic on mobile pastoral livelihood and deliver an indication of its consequences. Journals, working papers, articles, books and personal experiences were considered appropriate evidence along with peer-reviewed publications in order to capture rapidly evolving updates. Published and unpublished literatures from the listed sources was included that related to impacts of COVID-19 pandemics on Pastoral Livelihood.

Identify research question

1. How has the COVID-19 pandemic affected the mobile pastoral livelihood?
2. Impacts of COVID-19 on pastorals livelihood.

FINDINGS AND DISCUSSION**Mobility halted**

Mobility is a critical element in the pastoral way of life, and when it is halted, disaster strikes. Mobility of livestock, either in search of water and pasture or market is halted, which means livelihood is in difficulty. The importance of mobility in generating production and livelihoods in most dry rangelands is being ignored in public health policy making (Giulia et al., 2020). However, during this COVID 19, mobility has its own effects which puts pastoral livelihood on risks. According to Fang et al. (2020) and Rocklöv and Sjödin (2020), COVID-19 transmissibility is directly related to population density and mobility, as both of these factors increase contact between infectious and susceptible people. As the number of population density increases the chance of COVID-19 transmission is high. Human health programmes often fail to reach pastoralists in the Horn of Africa due to their inherent mobility and marginalization, and the limited health infrastructure in the region's arid and semi-arid lands (Dubale and Mariam, 2007; Griffith et al., 2020). The dry land areas where pastoral community lives most of time they never live without challenges that related to rainfall variability, drought and climate change. Across 12 countries in West Africa, substantial livestock losses were predicted due to reduced mobility and limited access to grazing and water, with related impacts on food security and hunger (APESS, 2020).

The Food and Agriculture Organization of the United Nations (FAO, 2020) listed the most relevant economic negative trends affecting the economy at the global level due to COVID-19 pandemic: The supply shock (due to morbidity and mortality), containment efforts restricting mobility, higher costs of doing business (due to restricted supply chains and tightening of credit), they all have an impact on economic growth. According to Giulia et al. (2020), Borana pastoral in southern Ethiopia has shown restrictions on mobility due to the pandemic have hit pastoralists hard. As the area is always affected by recurrent drought, such restriction never left without putting its impact to extreme level. COVID-19, at least the measures employed to restrict the spread of the virus, is surely an enemy of mobility. This is having a major impact on pastoralists across southern Ethiopia; yet despite the importance of the pastoral sector for the wider Ethiopian economy, the importance of mobility in generating production and livelihoods in the dry rangelands of southern Ethiopia is being ignored in public health policy-making.

According to Dada (2020) In Maharashtra, India, due

to COVID-19 situation, the migration to the traditional migratory route was not as usual. The strict lockdown had put sudden restrictions on their age-old nomadic system which had paralysed the pastoral production system and added double vulnerabilities in the life of pastoralists.

Movement restrictions are compromising transport, which is reducing the supply of livestock and livestock products. In the Philippines, delays of vehicles transporting raw materials for processing meat threatened to cause a shortage until movement bans were loosened. In China, milk processing and transport were disrupted by tight road traffic controls, leading to milk dumping (FAO, 2020). Such restriction of movement always affects the mobile pastorals livelihood in any direction. Specifically, during drought-induced time the pastoral community migrate from dry areas to more favourable places to search for water and pasture but if restriction is made they will be in risk for all their lives. Restriction always made movement hard that no pastoralist move to search for water and pasture.

Market

COVID-19 and its associated restrictions around in-person gatherings created unprecedented challenges for markets (customers and traders). Market is where people gather to buy and sell their goods. In pastoral area livestock market is mostly known, that pastorals sell their livestock's to the markets and buy home food consumptions. East Africa's livestock are integral to the region's culture, as well as food security and livelihoods, particularly in arid and semi-arid lands, and contribute significantly to annual GDP, including approximately 20 and 25% in Ethiopia and Kenya, respectively (USAID, 2020). However, during the pandemic pastoralists selling and buying livestock is much harder because formal markets have closed, so they increasingly rely on third-party brokers. If pastorals cannot find a market to sell their product to the customers, they will face different challenges from its impact. As the pastoral livelihood depends on the rearing of livestock, all what they have depends on them. For example, to buy different food items for medical treatment, to fulfil different basic needs, a pastoral needs to sell their livestock to the market. Therefore, the lack of market availability will make them vulnerable to different challenges. According FAO (2020), in mid-March, the borders were closed between Mauritania and all neighbouring countries, as well as between the country's willayas or regions. For mobile pastoralists, this is a situation fraught with consequences. They are unable to move their livestock and earn money, and it exacerbates their already difficult situation. This case is also true between Ethiopia and Kenya borders, where Borana pastoral lives, that Kenya government excavates big ditches that no one can pass to their border with Ethiopia.

According to the Centre for Effective Global Action

(2020), pastorals often inherit their livestock, or obtain their herds through breeding and exchanging. Kenyan pastoralists maintain their livestock by herding them over many hundreds of miles before selling them in formal markets. Normally, these markets are vital for pastoralists, selling livestock is their primary way of earning income, and the markets also provide herders an opportunity to buy groceries. Unfortunately, formal markets also make pastoralists vulnerable to shutdowns during COVID-19. Unlike the informal, one-to-one livestock trade on which pastoralists have historically relied, formal markets bring many buyers and sellers together in one place, making markets a health risk during viral outbreaks. Therefore that lockdown made pastorals not go to the formal markets, this made pastorals not buy and sell their livestock which results in decline their economic capacity and reduces their income. This not only affects an individual but also countries like Ethiopia and Kenya that livestock provide to their GDP. Not limited to this, but during COVID-19 most of the pastorals want to sell their livestock to the market, at this point the supplier will be increased but unfortunately and very low demand resulted. This means as the pastorals need money, they will sell to whatever they get in the market to secure their needs at home. According to the FAO (2020), closure of live animal markets in many countries means small-scale producers cannot sell their goods. The disruption of the logistical channel and the drop in demand are reducing sales and lowering prices. For example, American pigs prices dropped by roughly 27% in just over a week. As a result of limited access to markets and slaughterhouses/processing plants, farmers have to keep their stock longer or dump milk, leaving them with higher production costs or important losses. Some products will deteriorate if kept for a longer time at home; this again affects pastorals economy.

Food security

According to the United Nations' Committee, food security is defined as meaning that all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life. Pastoralism is a predominant livelihood in less favoured landscapes, such as dry lands, mountains, and cold areas, where natural pastures are a primary resource (Charles, 2017). Such kinds of environments are always vulnerable to the impacts of climate change, which makes pastoral life hard to live. If there is restriction of the movements one cannot find his interest or will. As the compartments of COVID-19 always restrict mobility, such situation affects food security at household and community level too. According to LEGS (2020), Karamoja region of Uganda describes how COVID-19 has affected a livestock-owning population that was

already food insecure and malnourished. The case study shows the wide-ranging impacts of COVID-19 restrictions on livelihoods, especially financial, human, and social capital, and some of the specific impacts on livestock production.

According to UN Ethiopia (2020), Ethiopia produced in November 2019; 8.5 million people were projected to face a high level of food insecurity (IPC Phase 3) or in emergency (IPC Phase 4) situation between February and June 2020. From this almost all pastoral areas in the country, households reported to suffer from poor food consumption in infected areas have deteriorated to 41% in February 2020 compared to 37% in August 2019. As the demand of pastorals production in the market is low in opposite, the pastorals cannot afford to buy crops from the market. This leads them to face challenges from food security. According to Dada (2020) in India's pastoral areas at the onset of the epidemic, there were rumours about the spread of COVID-19 due to meat consumption of livestock, poultry, etc. spreading. Due to the rumour, meat consumers became reluctant to eat meat. Such condition also leads pastorals to face food insecurity. Generally, COVID-19 continues to disrupt global trade, increase transportation costs from the major port cities, and lead to the closure of many local markets, which all contribute to a substantial increase in food prices. Pastoralists report significantly lower levels of milk consumption, as an important indicator of food security in their communities.

Education

The COVID-19 pandemic has resulted in school closures across the world. It is estimated that learning for 89% of the world's student population had been disrupted (UNICEF, 2020a). To avoid infection and spreading of the disease, the pastoral areas also kept children out of school. Even though different countries develop distance learning education like radio, television, and other social medias due to the absence of different facilities and marginalization in most of pastoral areas, many children do not get access to radio or television-based distance education. Such conditions give the potential negative impact on economic activities of the pastorals community. COVID-19 response such as lockdown and social distancing, low income households are likely to be impacted the worst (UNICEF Ethiopia, 2020). The impact of the pandemic is already taking a toll on communities already vulnerable or marginalized the poor, rural, illiterate, women and girls. According to UNICEF (2020b), lack of access to remote education during the COVID-19 pandemic is a problem in most countries. In most remote areas, infrastructure and facilities are highly limited, which enhance vulnerable to any man-made and natural disasters too. Pastorals in most parts of the world are downgraded groups. Herring et al. (2020) stated in his studies for most of the population of Somalia/Somaliland,

the deeper problem is not that they could not continue learning during the pandemic; it is that they had no access to education at all before it anyway. According to the Herring et al. (2020) in Somalia, education has stopped. Students are at home. The schools are almost all private, financing themselves from the tuition fees they raise from students. When the education stopped, the schools became bankrupt and many of them have closed forever. Students were struggling with the new online form of conducting education. Many of them cannot even access the online systems. People are not adopting online classes. Even for those who can access them, the quality is low, and they cannot be monitored. This case is also similar to Ethiopia, Sudan and Kenya where pastoral largely settled. Most Pastorals are poor's and illiterate. In the other cases even due to the remoteness of the areas, much attention is given to the area that lacks in different facilities. This results in worsening pastoral education.

In West Africa, Similarly to the Ebola epidemic, education has been one of the first casualties (Josephine, 2020). As Ebola disease affects and killed thousands, schools were closed at the time. Therefore, the current pandemic (COVID-19) also affects education the same way as the Ebola. In Uganda, closure of schools, more children to feed at home and fears that older girls would not return to school, e.g., due to marriage or pregnancy; increased marriage of girls to secure bride wealth as a coping strategy (LEGS, 2020). School closures also negatively impact children's nutritional status as many cannot access school feeding programmes, especially in settings of humanitarian response (COOPI, 2020). Almost all schools in pastoral areas of Africa closed due to the consequences of the pandemic. In schools where children feeding activities take place in such pastoral areas, they lost such feeding benefits and became susceptible to different nutrition-related problems. Therefore the closure of schools because of COVID-19 affects pastoral teaching and learning's process.

Incomes

Pastoral Income is also one factor which affected by the pandemic. A disruption to income earning opportunities during important events affects pastoral communities. As demand and supply side shocks, the crisis may disrupt food systems, thus threatening income in each part of the system. Because of pandemic the demand of the market is low, and this is due to the restriction, low market demand and high market supply. Therefore, the pastoralists cannot sell their stock and communities' purchasing power dwindles.

According to the Dada (2020), restrictions on markets have badly hit the pastoralists. Lockdown, livestock markets were closed; therefore pastorals could not sell their livestock. Transportation was completely stopped, and butcher shops and food shops were closed. Informal trade was affected during the lockdown. Therefore it

resulted in economic losses. FAO (2020) also states disruptions of income from small ruminants or poultry are hitting women the hardest, by reducing their purchases of household essentials and nutrition. On-going conflicts (e.g. Iraq, Libya, the Syrian Arab Republic and Yemen) and economic hardships (that is, Lebanon and Sudan) are exacerbating matters. Losing incomes specifically for pastoral communities that their life is depends on livestock production result them to poverty situations. According to Xinshen and Kristi (2020) poor households are likely to remain poor due to permanently lost income from agriculture, non-agriculture, and remittances. Therefore, the poverty rate is expected to rise even as many economic activities return to close to normal. Moreover, many poor households will not only remain in poverty, but become further impoverished in 2020.

SUMMARY AND CONCLUSION

Pastoralists have always lived with vulnerable situations like climate variability, climate change, market instability, insecurity, food security, and conflict among other shocks and stresses. COVID-19 is another challenge which affects mobile pastorals livelihood. As pastoral areas are always characterized by erratic and undependable rainfall, they always move from place to place, but currently due to this pandemic all movement was restricted. This restriction affects pastoral daily activities. In drought seasons, pastorals cannot migrate to any other areas, so livestock mortality and morbidity result in such cases, which indirectly affect pastoral livestock market. Always restrictions limit the pastoral assets to the market and decrease the pastoral capacity to purchase food for their consumption. The pastoral income is reduced to the capacity that they cannot purchase crops to secure food at home. This results in food insecurity. Schools were closed students were restricted from gathering, which some of them never back to school for marriage and other reasons.

Generally, pastorals in most of the world were marginalized and not given attention, so this enhances pastorals vulnerability towards any natural and man-made disasters. Strengthen pastorals areas, infrastructure and building pastorals communities' capacity will be alternatives towards all outbreaks.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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