Land and livelihood in the age of COVID-19: Implications for indigenous food producers in Ecuador

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Abstract
Like many Latin American countries, Ecuador responded to COVID-19 by restricting trade and travel, a decision that disrupted the prevailing model of regional trade integration. Among some analysts, observations have been made that the lockdown represents a new opportunity to revitalize rural livelihoods and smallholder agriculture. This paper evaluates these claims by exploring the impact of COVID-19 on household food security and smallholder food production in Chimborazo, a highland province that is known for extremely high rates of poverty and the highest concentration of Kichwa-speaking Indigenous people in Ecuador. Drawing upon original empirical research, it makes the case that the prospects for revitalizing smallholder production remain structurally constrained by a legacy of land inequality and failed agrarian reform. According to our findings, the only sectors that thrived during the lockdown were ones that served local markets. For those requiring significant shipping and storage, merchants and traders were able to drive down farmgate prices, squeezing local producers. At the same time, new government legislation made it easier for employers to terminate wage labourers, undermining a vital source of income and employment for low-income households. Far from revitalizing smallholder agriculture,
the pandemic appears to have further entrenched an economic model of supporting agribusiness at the expense of family farms and migrant labour.

**KEYWORDS**
COVID-19, Ecuador, food security, indigenous communities, land reform

## 1 | INTRODUCTION

Like many Latin American countries, Ecuador’s response to COVID-19 entailed imposing strict travel restrictions, a decision that adversely affected international trade relations with European, North American and regional trading partners such as Colombia and Peru (Food First Information and Action Network [FIAN], 2020c). Between May 2019 and June 2020, the value of its imports dropped from US$5.4Bn to US$4.3Bn, a decline of 20% (Census and Economic Information Center [CEIC], 2020). Over the same period, exports dropped from US$5.3Bn to US$4.4Bn, a drop of 16% (CEIC, 2020).

Among some analysts, the disruption of regional trade integration represents a new opportunity to revitalize rural livelihoods and smallholder agriculture (FIAN, 2020c). López et al. (2020), for instance, argue that the disruption of regional trade relations will lead to better prices for smallholders whose crops typically compete with European, North American and Latin American imports. Hernández (2020) suggests that a revitalized food sector will enhance the availability of local employment and access to diverse and nutritious food. Others remain less sanguine. FIAN, for instance, warns that the pandemic will only exacerbate existing patterns of land concentration and household debt (FIAN, 2020c). One concern is that a prolonged crisis will lead to the kinds of destructive coping strategies (e.g., taking out usurious loans, selling off land and livestock and engaging in distress migration) that push low-income households into poverty and destitution (FIAN, 2020c). A second is that the pandemic will allow large agrifood companies to further consolidate control over land and agricultural production by incorporating capital-intensive technologies (e.g., GMOs) that eliminate and displace the need for agricultural labour (FIAN, 2020c).

Over the last three decades, Ecuador has become increasingly dependent upon a model of global trade integration that exports oil, bananas, shrimp, flowers and other commodities to Asia, Europe, North America and other parts of Latin America (FIAN, 2020c; Goodwin, 2020; Lyall et al., 2019). Smallholders (which are classified as family farms owning less than 5 hectares of land) account for 64% of the food that is produced for local consumption, but they own only 20% of the land (Food and Agriculture Organization [FAO], 2020a). By contrast, agribusiness controls over 80% of agricultural land in Ecuador, including an estimated 63% of all available water for irrigation (FAO, 2020a). According to recent statistics, 36% of the population live in rural areas but 40% are below the poverty line (FIAN, 2020c).

Within this context, many smallholders have either sold or abandoned their farms, supplementing household incomes with wages and remittances from temporary employment in construction, plantation agriculture and export processing (Azogue, 2017; Bretón, 2012; Cameron, 2010; FIAN, 2020c; Goodwin, 2017, 2020; Korovkin, 2003; Lyall et al., 2019; Lyons, 2006; North & Cameron, 2003; Ross et al., 2017; Striffler, 2002; Tuaza, 2018, 2020; Tuaza et al., 2020). Apart from oil (which accounts for more than 50% of Ecuador’s export revenues), Ecuador’s main exports are bananas (accounting for 27% of nonpetroleum export value), farmed shrimp (25%), seafood (7%), cut flowers (7%) and cacao (4%) (Republica del Ecuador, 2020b). Most of these are produced and processed in the coastal provinces of Guayas, Esmeraldas and Manabí and the highland province of Pichincha (where Quito is located) (Republica del Ecuador, 2020b). Ecuador also imports a large volume of agricultural commodities that are used in the
production, processing and final distribution of food products for supermarkets, restaurants, fast-food chains and other agrifood retailers (FIAN, 2020b). Most of Ecuador’s wheat, for instance, comes from Canada and the United States; most of its potatoes—long a staple crop of the Andean diet—are imported from Belgium and the Netherlands (FIAN, 2020c).

Given this context, a key question is whether the pandemic will alleviate or exacerbate an agrarian crisis that has been undermining smallholder agriculture for the better part of three decades (Bretón, 2012; Cameron, 2010; FIAN, 2020c; Goodwin, 2017, 2020; Korovkin, 2003; Lyall et al., 2019; Lyons, 2006; North & Cameron, 2003; Tuaza, 2018, 2020; Tuaza et al., 2020). The following article considers this question by exploring the impact of COVID-19 on household food security and smallholder food production in Chimborazo, a highland province that is known for extremely high rates of poverty and the highest concentration of Kichwa-speaking Indigenous people in Ecuador. According to recent surveys (FAO, 2017), more than 95% of its primarily Indigenous population lives below the poverty line (compared with a national average of 25%; Republica del Ecuador, 2019). It is also one of the provinces that was most badly affected by COVID-19. According to official statistics, the virus killed more than 13% of confirmed cases in 2020 (El Comercio, 2020a), which was well beyond the national and global death rate of 3% (Johns Hopkins, 2020). Despite the challenges of attribution and verification (El Comercio, 2020a), the high mortality rates point to a number of systemic factors, including comorbidity with hepatitis B, tuberculosis, malnutrition and anaemia, a lack of reliable testing and a lack of primary healthcare (El Comercio, 2020a; Herrera, 2020; Lightman, 2020; Sierra, 2020). They also reflect the impact of migrant workers returning from Guayaquil, a city that had one of the worst infection and fatality rates (per capita) in the world (El Comercio, 2020b; Labarthe, 2020; Neira, ).

Our analysis is based on a series of semistructured phone interviews that were conducted with nine Indigenous communities in June and July 2020. The communities in question were small, ranging in size from 100 to 500 inhabitants. All were engaged in livestock and smallholder (between 1 and 2 hectares) food production with limited access farm machinery and irrigation. Our interviews were conducted with male and female respondents with whom the authors have been working for many years. Drawing upon these primary interviews and official agency reports, the research suggests that regional trade restrictions improved returns on certain crops (e.g., potatoes and onions) but the benefits of higher prices were limited and offset by the collapse of dairy, construction and export processing, sectors that have come to provide an important source of income and employment for Indigenous communities in the Andean region.

Contrary to the more optimistic outlooks, our findings suggest that the prospects for strengthening livelihoods and local food systems remain structurally constrained by an enduring legacy of land inequality and failed agrarian reform. The only sectors that thrived during the lockdown were ones that were able to serve local markets. For those requiring significant shipping and storage, merchants and traders were able to drive down farmgate prices, thereby squeezing local producers. At the same time, new government legislation made it easier for employers to terminate employees, undermining a vital source of income and employment for low-income households. Far from revitalizing smallholder agriculture, the pandemic appears to have further entrenched an economic model that has promoted the needs and interests of agribusiness at the expense of family farms and migrant labour.

The article proceeds as follows. The following section first explores the government’s response to COVID-19, situating the pandemic and Ecuador’s food system within a wider context of land inequality and failed agrarian reform. Section 3 then explores the impact of COVID-19 on household food security and smallholder food production in Chimborazo. The final section concludes the article by reflecting on the preliminary findings and offering questions for future research.

2 | ANATOMY OF A CRISIS: ECUADOR’S RESPONSE TO COVID-19

Ecuador was already in the midst of a major macroeconomic crisis when the pandemic was first declared on 11 March 2020. In 2019, the government of Lenin Moreno (2017–present) had signed a US$4.2Bn loan agreement with the
International Monetary Fund (IMF) that entailed removing price subsidies on oil and gas, a decision that prompted widespread demonstrations (led primarily by indigenous parties and organizations, such as Pachakutik and CONAIE) and ultimately a reversal of the policy in October 2019. The deal marked a departure from the preceding administration of Rafael Correa, whose citizen’s revolution (revolución ciudadana) used fossil fuel revenues to underwrite extensive public investment in health, education and infrastructure, while at the same time distancing itself from the IMF and the World Bank (Latorre et al., 2015; Morley, 2016). However, its ability to uphold the revolución was (and remains) deeply constrained by the inherent volatility of international oil and gas markets, whose exports account for more than 50% of Ecuador’s foreign exchange earnings (Kingsbury et al., 2018; Martin, 2011; Morley, 2016; Republica del Ecuador, 2020b).

Following the lockdown, the government introduced a series of timebound measures that were aimed at assisting families adversely affected by the pandemic. One of these was a cash transfer programme (Bono de Protección Familiar) that provided a one-off payment of $US120 to nearly a million households in 2020 (FAO, 2020d). Another was a food provisioning programme that provided food kits (Kits Alimantarios) and solidarity baskets (Canastas Solidarias) to low-income communities and households (FIAN, 2020b). According to FIAN (2020b), more than a million Canastas Solidarias were delivered to schools, shops, villages and individual households in the months of April and May 2020 (FIAN, 2020b). However, the food and cash transfers were too low to cover the cost of living, which escalated rapidly after the lockdown was first declared in March (El Universo, 2020; FAO, 2020c; FIAN, 2020b). Between May 2019 and May 2020, the price of housing, water, electricity, gas and other fuels reached an all-time high of 116.396 (2014 being the baseline of 100) in July 2020 (CEIC, 2020). Over the same period, the price of food and nonalcoholic beverages also hit a record high of 110.884 for April 2020 (CEIC, 2020).

At the same time, the government introduced another set of measures whose principal aim was to help medium and large companies cope with the loss of domestic and international markets. One of these was the Ley de Apoyo Humanitario (‘Humanitarian Support Law’) that effectively made it easier for employers to terminate and reduce paid employment without compensation (FIAN, 2020b; Republica del Ecuador, 2020a). Justified on the grounds of ensuring economic stability and public health, the act was clearly designed to support Ecuador’s business sector. According to government statistics, commercial sales in Pichincha and Guayas (Ecuador’s two largest commercial provinces) dropped by 39% and 43% after the lockdown (Republica del Ecuador, 2020b). At the same time, the new legislation destabilized a livelihood stream that has come to provide a critical source of income and employment for many young people (FIAN, 2020b). According to one recent survey, 74% of those seeking work after the lockdown were under the age of 40 (El Universo, 2020).

For large landowners and agrifood corporations, the growing pool of increasingly flexible labour appears to have contributed to higher yields. According to the FAO, maize production after COVID-19 was roughly 5% higher than the 5-year average, reflecting expanded production (FAO, 2020d). Paddy yields and the production of farmed shrimp also improved, but these were largely confined to the export processing zones of the coastal provinces (FAO, 2020d; Lozano, 2020). Although some of these crops were intended for agricultural export markets, higher yields and slowing global demand resulted in larger-than-normal domestic surpluses that had a negative effect on farmgate prices (whose impact on smallholders we explore below). Maize prices, for instance, were roughly 10% lower than the average price for 2019 (FAO, 2020d).

As Ecuador prepares for the next wave of COVID-19, the FAO has warned that further ‘restrictions on movements, combined with supply chain disruptions, may limit farmers’ access to inputs as well as the availability of labour force for land preparation and sowing’, (FAO, 2020c, p. 15). In theory, the reversal of rural–urban migration flows provides a larger pool of agricultural labour, but the ability of returning workers to actually improve farm productivity remains an open question. For one, many migrant workers have little or no experience in farming. Second, there are systemic factors—including access to land, capital and agricultural markets—that undermine the viability of smallholder production, highlighting the legacy of failed agrarian reform.²

Ecuador’s first round of land reforms took place in the early 1960s, but government support for land redistribution has been limited (Becker, 2013; Bretón, 2008, 2012; Cameron, 2010; Goodwin, 2017, 2020; Lyons, 2006;
Subsequent land reforms in 1973 extended new land rights to Indigenous hacienda workers (huasipungeros) but the land they received was often located in marginal and unproductive areas (Bretón, 2012; Goodwin, 2017, 2020; Lyall et al., 2019; Lyons, 2006). The reforms also placed new limits on individual land holdings, which fostered a process of land fragmentation that further reduced the availability of open lands for grazing and cultivation (Korovkin, 1997; Martínez & Martínez, 2019; Ross et al., 2017). In 2017, the government of Lenín Moreno introduced a rural development policy (la Gran Minga Agropecuaria) that aimed to strengthen land tenure, provide credit, and extend other forms of technical assistance, including insurance, to smallholder farmers (Espinosa, 2017; FIAN, 2020c). However, the reforms failed to regulate farmgate prices, making smallholders even more dependent upon agribusiness for supply chains and agricultural inputs (Clark, 2018; FIAN, 2020c; Herrera, 2020).

Understanding the structural determinants of poverty and inequality is important for evaluating the viability of smallholder food production in Ecuador. Turning to the case of Chimborazo, we next explore the impact of COVID-19 on household food security and smallholder production.

3 | REVITALIZING THE LAND? EMPIRICAL EVIDENCE FROM CHIMBORAZO

As noted in Section 1, Chimborazo is one of Ecuador’s poorest provinces. Over the last three decades, the province has become increasingly dependent on livestock, labour migration and the application of chemical fertilizers, pesticides and slash and burn practices (Hofstede et al., 2002; Ross et al., 2017; Tuaza, 2014, 2018; Tuaza et al., 2020). Between 1979 and 2014, more than 75% of grassland ecosystems (páramo) were converted to agriculture and forests (Ross et al., 2017). Most of these were the result of government policies promoting pine, eucalyptus and cash crops (Ross et al., 2017). Potatoes, onions, barley, garlic and maize remain staples, but new niches have emerged in the production of broccoli, quinoa and vicuña, whose wool is highly valued for handicrafts and textiles. They were also the result of a land reform process that fragmented landholdings, pushing smallholders into smaller and higher elevation production zones (over 3500 m above sea level) (Tuaza, 2018).

According to our interviews, the pandemic and subsequent lockdown had a number of immediate impacts on agricultural households. First, the restrictions on travel and trade quickly disrupted regional supply chains, creating new challenges and opportunities for the families that were fortunate enough to have planted potatoes, onions, radishes and turnip before the onset of the pandemic. According to local accounts, declining imports had a positive impact on prices, which in turn led to higher production. However, the size and value of economic returns varied in relation to land-use decisions and farmgate prices. Onions and potatoes, for instance, fared well because they could be harvested and sold locally within 6 to 8 weeks of planting. Cereals and maize, on the other hand, had wider value chains that compete with other grain-producing regions, where yields rebounded after the pandemic (FIAN, 2020c). Others still were never harvested in the first place. According to one of our respondents, ‘(the government) blocked the roads so that no one could enter … many lost their products in the fields’.

Second and related, COVID travel restrictions disrupted many of the channels that farmers have used to sell their produce. As one farmer told us, ‘We cannot go out and sell our animals or grains. Before this disease, we went to the market in Riobamba every Saturday to sell our products … (now) we are very afraid to go to the city’. Although some were able to sell their products in local markets, most remained dependent upon merchants and traders, whose prices were typically lower than downstream markets (cf. FIAN, 2020c). In the words of another respondent, ‘the disease has favored the merchants and intermediaries’.

Third, downturns in exports, construction and dairy had a negative effect on household incomes and employment. Particularly vulnerable to the restrictions on trade and mobility were the regional export processing zones that employed large numbers of people in the area. Road and housing construction also experienced downturns, as did dairy production and distribution, creating adverse effects for the large number of families that rely on remittances.
and the sale of milk to supplement household incomes. Evidence of farmers dumping milk to shore up dairy prices were widely reported (Ecuavisa, 2020). According to local accounts, the price of milk dropped from 40 to 25 cents per litre after the pandemic, devastating a sector that provides a critical source of income and nutrition for low-income households (cf. Martínez & Martínez, 2019).

Fourth, communities witnessed an influx of migrant workers returning from plantations, factories and export processing zones in and around Quito and on the coast (Neira, ). As noted earlier, many families have responded to diminishing returns in agriculture, forestry and livestock by moving or sending their children for work in the plantations, factories and export processing zones of Guayaquil, Ambato, Quito and other regional centres (Tuaza, 2018; Tuaza et al., 2020). After the lockdown, the sudden collapse of regional labour markets created a ‘surplus’ of agricultural labour. However, the return of migrants brought new infections and additional costs for agricultural households. Many returning family members had never worked in agriculture, raising questions about the viability or desirability (on the part of younger populations) of returning to land-based livelihoods (a question we take up below).

Fifth, strong feelings of fear and resentment were expressed and directed primarily towards local government officials and the Ecuadorian state. As one respondent told us, ‘we are totally abandoned and can’t do anything about it’. According to another, we ‘are so f*cked and sad. We never thought the disease was going to be like this’. Responses such as these reveal a deeper sense of despair about losing friends and family to the pandemic and anger towards a state that had clearly failed to address the crisis. All of our respondents expressed fears about future waves but apart from isolated instances of communities resurrecting traditional customs of barter and trade (trueque), their ability to break or reduce their dependence on cash crop production and wage labour appeared limited.

4 | CONCLUSIONS

This article has explored the impacts of COVID-19 on smallholder producers in the Ecuadorian highlands. Its principal and very preliminary observation is that local and Indigenous households were directly and significantly affected by the pandemic, and despite the temporary gains that have been made in certain sectors, the outlook remains far less optimistic than some analysts would suggest. The sectors that provide a critical source of livelihood and employment (e.g., dairy, construction and export processing) have all but collapsed. The return of migrant workers has expanded the pool of agricultural labour, but unusually good harvests and ongoing travel restrictions have diminished household returns on dairy, quinoa and maize.

Given the volatility of the situation, it is difficult to predict with any level of certainty the longer term implications for labour and capital, but there are clearly a number of questions that emerge from this rapidly changing agrarian context. One concerns the disruption of the migratory labour circuits that have been so central to Ecuador’s export and service sectors. Although the government’s new labour law is intended to be temporary, it is difficult to avoid concluding that the state has responded in a way that effectively protects the interests of agribusiness over labour. A second concerns the suspension of regional trade integration. Although some producers were able to use informal customs of barter and exchange to improve sales, their dependence on local merchants and traders clearly undermined their ability to improve farmgate prices and agricultural returns.

Moving forward, much will depend on the scale and magnitude of subsequent waves. Indigenous communities have experienced some of the worst rates of infection and fatality (per capita) in the world, highlighting systemic comorbidities with labour migration, a lack of testing and a lack of access to primary healthcare. Reversing these trends will entail providing new forms of support for smallholder producers, including measures that reduce their dependence on merchants and traders (e.g., minimum support prices), better access to good quality land, irrigation, stronger labour rights and a comprehensive plan for enhancing the quality of education and healthcare in rural areas. All of these, it bears repeating, imply a much larger role for the Ecuadorian state.
In the meantime, and within the current context, much more needs to be known about the longer term impacts of the pandemic on labour organization, agricultural production and household food security. Particularly important will be empirical research that documents and explains longer term changes in farmgate prices, cost of living expenses and labour relations within the agrifood sector. Identifying new forms of organization (including political mobilization) and social differentiation among rural producers will also be crucial.

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ENDNOTES
1 According to the government’s most recent figures, its largest agricultural export markets are in Russia, China, Colombia and the United States (Republica del Ecuador, 2020b).

2 Drawing upon Putzel (1992), we distinguish between land reform, which implies redistributing land to the tiller and agrarian reform, which entails providing the organizational and institutional means (including access to credit, information and technology) of making land sustainable and productive.

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