Victual Vulnerability: Determinants, Targets and Mitigations of Food Insecurity in Latin America

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While every effort was made to avoid presenting a bias in this thesis, I acknowledge my positionality as a white settler of North America. My intentions are to not cause any harm or offence to any cultures or peoples included in this research.

Table of Contents

Introduction

The onslaught of a pandemic amidst climate change, political instability and economic inequalities contribute to the perpetuation of these phenomena, the heightened global fragility to poverty and the deterioration of global food security (FS). This coveted status of FS is identified from the 1996 World Food Summit as "when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."[1] The Food and Agricultural Organisation (FAO) expanded upon this definition in 2009, to declare that FS is contingent upon four pillars; availability, access, utilisation and stability.[2] Food insecurity (FI) is termed for when the requirements to FS are not achieved.

The dimension of availability is "the sufficient quantities of food of appropriate quality, supplied through domestic production or imports (including food aid)."[3] Examples include humanitarian aid and the necessary infrastructure to cultivate food. Succeeding, access is the ability to acquire adequate and appropriate resources and food for nutritious diets.[4] Resources include any legal, political, economic and social commodities facilitating the acquisition of groceries, such as access to transportation and markets. Thirdly, utilisation refers to the production "of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met."[5] The last pillar and perhaps the foundation of FS is stability. Stability is having access to adequate food at all times even during periods of sudden shocks (e.g., an economic or climatic crisis) or cyclical events (e.g., seasonal FI)."[6] An adversary that threatens each pillar of FS is poverty. Poverty cripples FS and "is regarded as the major obstacle to achieving FS at the household level"[7] because it impedes the ability to realise the needed requirements of FS. Hence, mitigating poverty and its ripple effects is integral in combating FI and preserving the durability of its dimensions.

The repercussions of FI reveal global vulnerabilities that threaten the United Nations' Sustainable Goal #2 of reaching Zero Hunger by 2030.[8] To achieve this objective, it is integral to tackle FI's incidence, including in the Latin American region. Within the region, rural Indigenous women are particularly impacted by its ramifications. Thus, this paper analyses the adverse effects of FI throughout Latin America and within this demographic.

The 2020 State of Food Security and Nutrition in the World report asserts Latin America's perilous state, as the region has seen a 9 million increase of the number of undernourished people between 2015 and 2019.[9] In fact, the region is expected to share 6.9% of hunger in the world by 2030.[10] These devastating figures illustrate the importance of understanding of FI in the region. The pandemic only adversely affects each marker of FS, and its stability through decreasing the availability, accessibility and utilisation of food. The Prevalence of Undernourishment Rate (PoU), an indicator of FS, reveals the rate of the

[1] "World Food Summit 1996, Rome Declaration on World Food Security.," *World Food Summit 1996, Rome Declaration on World Food Security.*
[2] FAO (2009). *Declaration of the World Food Summit on Food Security* (PDF). Rome: Food and Agriculture Organization of the United Nations.
[3] FAO, Agriculture and Development Economics Division (2006). Food security (Policy Brief 2), 1.
[4] Ibid.
[5] Ibid.
[6] Ibid.
[7] World Food Summit, 1996 Rome Declaration on World Food Security, *supra note* 1.
[8] FAO, IFAD, UNICEF, WFP and WHO. 2020. *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets*. Rome, FAO, xviii.
[9] Ibid.
[10] Ibid., 16.

population of a country that is not consuming sufficient dietary energy to sustain their daily livelihoods.[11] As it stands now, the PoU will increase in the region from 7.4% in 2019 to 9.5% in 2030, and these projections do not yet incorporate the impact of the pandemic; alluding to the catastrophic effect the pandemic will have on FS in the region. [12]

FI has two classifications. Moderate insecurity is when there is a "reduction in food quality, monotonous diets, reduced portions and skipped meals," and severe insecurity is when it is a habit of "going without food for an entire day."[13] Women in Latin America experience greater proportions of moderate or severe FI, with around 32.5% in 2019 compared to around 25% of men.[14] These percentages grew by about 8% for women since 2014.[15] Thereby, the statistics of the increase of hunger and experience of FI in the region are more disparaging when observing them in a gendered context.

These figures illustrate a worsening crisis of FS among women. When dissected even further, the sub-populations of rural Indigenous women are identified as even more vulnerable and at-risk to FI. FI is typically higher in rural areas due to more constraints in terms of access and availability to food.[16] In a closer examination, 8% of the region's population identify as Indigenous, and over fifty percent of live in rural areas, increasing their susceptibility to FI.[17] Due to the marginalisation and oppression of rural Indigenous women, their access to social services such as health care are impeded.[18] The absence of services that provide assistance to nutritional deficits, increases the extent and vulnerabilities of FI for rural Indigenous women.

Nevertheless, women represent one the most vulnerable populations to FI. To mitigate the perpetuating crisis, exploring how partnerships are an empowerment catalyst is important because "empowering Indigenous women is an effective route for reducing social exclusion and poverty, as well as for creating innovative ways of self-development."[19] One approach that will be analysed is cooperatives. This approach centres around the empowerment of rural Indigenous women and promoting collective solidarity for the sustainability of FS.

The objective of this paper is to conduct an analysis of FI in Latin America and the threat it poses to the region's populations. Rural Indigenous women are considered to be one of the most vulnerable populations to FI in the region. In analysing vulnerabilities and pressures that are experienced by rural Indigenous women, the ability to employ collective solidarity and partnerships will be highlighted as a key component in the collaborative fight against FI in Latin America. The cooperative approach could perhaps lead to a fruitful domino effect in mapping out future potential partnerships (both during and post-pandemic) to prevent an increase of food-insecure people in the region.

[11] Ibid., 4.
[12] Ibid., xix.
[13] Saint Ville, A., Po, J.Y., Sen, A. *et al.* Food Security and the Food Insecurity Experience Scale (FIES): ensuring progress by 2030. *Food Sec.* 11, (2019)., 485.
[14] FAO, et. al. *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets, supra note* 8, 4.
[15] Ibid., 25.
[16] Freire, German Nicolas et al. 2015. *Indigenous Latin America in the twenty-first century: the first decade (English).* Washington, D.C.: World Bank Group, 10.
[17] Ibid., 22.
[18] Ibid., 14.
[19] Ibid., 52.

Food Security to Insecurity in Latin America

As described above, FS is deconstructed into the four pillars of availability, access, utilisation and stability. FI in Latin America currently affects 205 million people and is augmenting, with the number of undernourished people increasing by 9 million between 2015 and 2019. [20],[21] In order to understand this exponential growth and the perpetuation of FI, each pillar and its determinants will be examined.

Availability

The first pillar of FS is associated with the quality and quantity of food produced. Latin America is currently facing "three major threats to food availability: reductions in national or local production, disruptions in domestic distribution of food, and restrictions on international trade."[22] The availability of food has been threatened in the region due to industrial farming (large-scale intensive agriculture production primarily for exports) stripping land ownership and hindering the production of small-holder farmers. [23]

Already, small-holder farmers hold less than 13% of productive land in the region.[24] Small-holder farmers rely on their own subsistence, and "when people lose their land, they are forced to rent plots or depend on waged work, which is nearly always temporary and precarious, in order to provide food and other basic essentials for the household."[25] The availability of their own food production affects their consumption of nutritious food. Another consequence to limited land ownership is the decline in crop diversity. For example, Colombia is dependent on imports of corn, rice and beans, since 7.1 million of the 8.5 million hectares used for agriculture are occupied by large coffee, oil palm and sugar cane plantations producing for export.[26] Industrial agriculture restricts the domestic availability and diversity of food to nourish the population, and in the case of Colombia, perpetuates dependency on international trade and transport. When subjected to external shocks, food availability is hindered as international borders are compromised and regular distributions are interrupted, inhibiting market deliveries. External shocks are defined as unpredictable events that cause adverse effects on a particular sector and population and contribute to the incidence of poverty in the country.[27]

International trade-offs threaten food availability. For instance, poultry, a staple for protein in the region, was subjected to import tariffs to "shield domestic poultry producers from cheaper imports" however this in return drove "up the local retail price of chicken, making one of the main sources of animal protein less affordable for consumers."[28] Due to a

[20] Freire, German Nicolas et al. 2015. *Indigenous Latin America in the twenty-first century: the first decade (English)., supra note 16*., xvii.
[21] Ibid., 14.
[22] Rezende Machado de Sousa, Luna, Arlette Saint-Ville, Luisa Samayoa-Figueroa, and Hugo Melgar-Quiñonez. "Changes in Food Security in Latin America from 2014 to 2017." *Food Security* 11, no. 3 (2019): 505.
[23] Altieri, Miguel A., and Victor Manuel Toledo. "The Agroecological Revolution in Latin America: Rescuing Nature, Ensuring Food Sovereignty and Empowering Peasants." *Journal of Peasant Studies* 38, no. 3 (July 8, 2011): 607.
[24] Guereña, Arantxa. Publication. *Unearthed: Land, Power and Inequality in Latin America*. Oxfam America, November 30, 2016, 18.
[25] Ibid., 16.
[26] Ibid., 38.
[27] Hoddinott, John F. 2014. *Understanding resilience for food and nutrition security*. 2020 Conference Paper 8. May 17-19, Addis Ababa, Ethiopia. Washington, D.C.: International Food Policy Research Institute (IFPRI), 19.
[28] FAO, et. al. *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets, supra note* 8, 134.

scarcity of poultry and a rise in its price, buying it proved difficult. Filled with protein-enriched nutrients, its limited availability compromises the capacity for those experiencing poverty to realise a healthy diet. Additionally, external shocks threaten availability, as illustrated by border closures and transportation difficulties caused by COVID-19.

Furthermore, a study by the World Food Programme (WFP) reports that rural areas experienced a significantly lower availability of food commodities compared to urban settings by 18%.[29] Markets in rural areas are sparse, and when there are constraints in the territory, "they limit farmers access to productive inputs and transport services in a timely manner...and in consequence, harvest or planting seasons could be missed, production could be lost or reduced, and agricultural cycles could be disrupted."[30] Hence disruptions to transportation and trade attribute to how the pandemic has impacted the population's food obtainability and illustrate the manner that food availability in the region proliferates FI in Latin America.

Access

In the FS framework, access refers to the physical and economic "ability of a household to produce and/or purchase food."[31] Income determines the household's purchasing power for nutritious food. Hence, income is an important determinant for having sufficient access, yet in Latin America and the Caribbean (LAC), 104.2 million people could not afford a healthy diet in 2017.[32] The LAC region has the highest cost for a healthy diet in the world with an average cost of USD $3.98, in comparison to Oceania (USD $3.06), Northern America and Europe (USD $3.21), Africa (USD $3.75), and Asia (USD $3.97).[33] The COVID-19 pandemic triggered a spike in the cost for a healthy diet as 76% of WFP survey respondents in Latin America reported a general increase in food prices due to the pandemic.[34]

Overall, the FAO generally defines a healthy diet as when a person's "needs for macronutrients (proteins, fats and carbohydrates including dietary fibres) and essential micronutrients (vitamins and minerals) are met, specific to their gender, age, physical activity level and physiological state."[35] Although, this can vary depending on "cultural context, locally available foods and dietary customs."[36] A consequence of an unaffordable healthy diet is needing to defer to cheaper but unhealthier alternatives, increasing the risk of obesity. In the region, 25.2% of adults are considered obese (in 2016), a 2 percentage points increase from 2012.[37] As access to healthy and nutritious food declines, at least a quarter of the population is experiencing its ramifications.[38]

Moreover, rural areas are disproportionately affected by the affordability of food in comparison to those in urban areas due to higher cases of poverty and external shocks.

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[29] World Food Programme. Rep. *Remote Assessment COVID-19 Migrants in Colombia, Ecuador and Peru.* World Food Programme, June 2021., 2.
[30] Salazar, Lina, and Gonzalo Muñoz. "Ensuring Food Security in LAC in the Context of COVID-19: Challenges and Interventions." Inter-American Development Bank, June 2020., 9.
[31] Ibid., 4.
[32] FAO, et. al. The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets, *supra note* 8, 84.
[33] Ibid., 77.
[34] World Food Programme. Rep. *Remote Assessment COVID-19 Migrants in Colombia, Ecuador and Peru*., *supra note* 29, 2.
[35] Ibid., xxi.
[36] Ibid.
[37] Ibid., 30.
[38] Ibid.

Poverty is a critical factor in having sufficient access to food as one study in Guatemala showed that "in rural areas of Guatemala, the budgetary share spent on food is 65% for the extremely poor (those living on less than USD $1 per day) to 13.5 percent (those living on USD $6 to $10 per day)."[39] Those who experience greater levels of poverty are sacrificing more of their income for less accessibility of food, when over a period of 30 days, they will spend around USD $19.50 on food, whereas those with a higher one will have more flexibility for their food choices, spending between USD $24.30 to $40.50 on food. It is salient to observe that the majority of Guatemala's Indigenous population, who is 43.5% of their total population, is living in the rural regions of Guatemala (Central, North, Northwest and Southwest).[40] Thus, a rural Indigenous person in Guatemala has a heightened risk to experiencing FI because a higher income increases the purchasing power for a healthy diet and other wellbeing services, such as healthcare and education. [41]

Education is a determinant of poverty because it affects the ability to secure a sufficient income to access nutritious food. In evaluating FI in the Latin American region, it was found that "being poor and poorly educated increased the chances of being food insecure by factors of 3 and 2, respectively."[42] These factors reaffirm how living in a rural area disproportionately affects the incidence of FI with a further report illustrating that a higher income and education are factors that affect recurrent FI amongst farmers in Central America.[43] In Latin America, a high incidence of poverty corresponds to high food costs, resulting in limited purchasing power and access to markets.

A survey revealed that rural respondents reported higher difficulties in accessing markets and food shops due to long distances (10%) compared to urban areas (4%);[44] illustrating that FI due to limited access to markets is more prominent in rural areas. This is supported by another study assessing FI in the Latin American region, revealing that "public transportation lowered the likelihood of FI by 3.0 percentage points and severe food insecurity by 0.8 percentage points."[45] Yet in rural areas access to public transportation is more restricted, meaning that public transportation is only worsening this likelihood.[46] As external shocks, such as the COVID-19 pandemic, affect these phenomena, the access pillar of FS is unsettled in the region, contributing to its prevalence of FI.

Utilisation

The third pillar revolves around the physiological environment that affects the intake of sufficient food. Exogenous shocks of climate change such as droughts in the Dry Corridor (regions in Guatemala, El Salvador, Honduras and Nicaragua), has triggered large amounts of

[39] Smith, Michael D., Woubet Kassa, and Paul Winters. "Assessing Food Insecurity in Latin America and the Caribbean Using FAO's Food Insecurity Experience Scale." *Food Policy* 71 (August 2017): 50.
[40] Instituto Nacional de Estadística Guatemala, "Portal De Resultados Del Censo 2018," Portal de Resultados del Censo 2018 (Instituto Nacional de Estadística Guatemala, 2018).
[41] Ministerio de Salud Pública y Asistencia Social (MSPAS), Instituto Nacional de Estadística (INE), ICF International, 2017. Encuesta Nacional de Salud Materno Infantil 2014-2015. Informe Final. Guatemala, MSPAS/INE/ICF, 2.
[42] Rezende Machado de Sousa, Luna, Arlette Saint-Ville, Luisa Samayoa-Figueroa, and Hugo Melgar-Quiñonez. "Changes in Food Security in Latin America from 2014 to 2017.," *supra note* 22, 509.
[43] Alpízar, F., Saborío-Rodríguez, M., Martínez-Rodríguez, M.R. *et al.* "Determinants of Food Insecurity among Smallholder Farmer Households in Central America: Recurrent versus Extreme Weather-Driven Events." *Regional Environmental Change* 20, no. 1 (2020), 7.
[44] World Food Programme. Rep. *Remote Assessment COVID-19 Migrants in Colombia, Ecuador and Peru.*, *supra note* 29, 3.
[45] Smith, Michael et. al., Assessing Food Insecurity in Latin America and the Caribbean Using FAO's Food Insecurity Experience Scale." *supra note* 39, 57.
[46] Ibid.

crop losses and low levels of safe and clean water. [47] Deprived of sufficient water sources and sanitation facilities, rural populations are unable to sufficiently prepare and consume nutritious food due to contamination risks.[48] These limitations cause health consequences because nutrition is not being consumed properly, perpetuating FI.[49] Extreme consequences of poor health is malnutrition, which is visible through the prevalence of stunting in Latin America. Stunting is a consequence of not receiving enough nutrients causing an impediment in their physical growth and development.[50] An affliction in rural regions, stunting affects 9.95% of children in the region and is about three times more prevalent amongst low-income children compared to higher-income children;[51],[52] reaffirming the idea that income determines food security because of it affects the purchasing power of consuming nutrient-rich food.

During periods of income constraint, households alter their food consumption. For instance, the study of smallholder farmers in Central America reported that "61.5% of farmers decrease the quantity of food per serving or reduce the number of meals per day"[53] to cope with the effects of FI. The study further observed that another strategy employed by 36.9% of farmers "was to change the composition of their meals, for instance by removing meat from their diets" which deteriorates the nutritional value of food by households in their daily diets.[54] These adaptations incite health issues, including anaemia and obesity. The FAO concluded that "increasing healthcare costs linked to increasing obesity rates are a trend across the world."[55]

Healthcare in the region is disparate amongst populations who are wealthy and poor and living in urban and rural areas. Most of the privately-owned hospitals (which provide the most adequate care) "are geographically concentrated in larger and wealthier urban areas, and are often unaffordable or not accessible to a vast part of the population."[56] Furthermore, there is an average of 2 doctors per 1000 people in the region compared to the average of 3.5 doctors amongst the rest of the Organisation for Economic Cooperation and Development countries.[57] The difficulty for rural populations to access doctors and receive adequate health care affects their ability to maintain their livelihoods, such as with employment, which overall influences their ability to consume nutritious diets for sustenance.

Additionally, the onset of the Covid-19 pandemic brought about "shortages in the supply of nutritious food, fruits and vegetables as they have more complex distribution chains" and also has reduced the household's income in the region. [58] In return, limiting the

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[47] Wheeler, Tim, and Joachim von Braun. "Climate Change Impacts on Global Food Security." *Science* 341, no. 6145 (2013): 512.

[48] Cordero-Ahiman, Otilia Vanessa, Jorge Leonardo Vanegas, Pablo Beltrán-Romero, and María Elena Quinde-Lituma. "Determinants of Food Insecurity in Rural Households: The Case of the Paute River Basin of Azuay Province, Ecuador." *Sustainability* 12, no. 3 (2020): 12.

[49] Ecker, Olivier; Breisinger, Clemens. 2012. The food security system: A new conceptual framework. IFPRI Discussion Paper 1166. Washington, D.C.: International Food Policy Research Institute (IFPRI)., 7.

[50] FAO, et. al. *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets*, *supra note* 8, 34.

[51] Ibid., 36.

[52] Ibid., 38.

[53] Alpízar, Francisco, et., al. "Determinants of Food Insecurity among Smallholder Farmer Households in Central America: Recurrent versus Extreme Weather-Driven Events," *supra note* 43, 8.

[54] FAO, et. al. *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets*, *supra note* 8, 67.

[55] Ibid., 64.

[56] The Organisation for Economic Co-operation and Development (OECD) and The World Bank, *Health at a Glance: Latin America and the Caribbean*, OECD Publishing, 2020., 11.

[57] Ibid., 10.

[58] Salazar, Lina, and Gonzalo Muñoz. "Ensuring Food Security in LAC in the Context of COVID-19: Challenges and Interventions," *supra note* 30, 13.

consumption of a nutritious diet and encouraging the consumption of high caloric but low in nutrition foods, diminishing the utilisation of food in the region.[59] With climate change and the pandemic heavily affecting the third pillar of FS, the stability of FS in the region is deteriorating and threatening the region's vulnerable populations, including rural Indigenous women - an analysis that will be evaluated further into this paper.

Stability

This fourth pillar of FS functions as the foundation on which the three previous pillars stand on and is compromised when there are external shocks that threaten the physical, social, political and legal environment.[60] The shocks magnify the vulnerabilities of a population - vulnerability being the "likelihood that at a given time in the future, an individual will have a level of welfare below a certain benchmark."[61] In Latin America, these recurrent shocks threaten FS, as they subvert the equilibriums of the other pillars.

In the Latin American region, the COVID-19 lockdown imposed during the containment phase restricted the movement of people and inhibited employment opportunities, causing incomes to plunge.[62] Consequently, Latin American unemployment reached a high of 44 million people.[63] Thus, the COVID-19 containment strategies have caused lower-income households to reduce their food intake, experience hunger, and shift towards less nutritious diets.[64] Specifically, three studies by Action Against Hunger shows a correlation between the increase in FI and COVID-19 in the region; 9 out of 10 interviewed families had serious difficulties feeding themselves in the area of the Dry Corridor; 8 out of 10 families in Colombia are unable to cover their basic needs; and household incomes decreased by 33%, especially among Venezuelan families in Peru.[65] Given the diminished access to necessary foods because of the pandemic, low-income households' health, economic development and overall FS is jeopardised.

Climate change threatens FS, especially in the Dry Corridor where in the past two years, "acute food insecurity in El Salvador, Guatemala, Honduras and Nicaragua increased almost fourfold - from 2.2 million people in 2018 to nearly 8 million people in 2021," as a result of the economic crisis triggered by COVID-19 and years of extreme weather events.[66] Of this figure, 1.7 million people are in the 'emergency' category of FI and require urgent food assistance.[67] Therefore, the high vulnerability of Central American smallholder farmers to extreme weather events contributes to the concerningly high incidence of episodic FI.[68] In November 2020, Hurricanes Eta and Iota destroyed more than 200,000 hectares of staple

[59] Ibid.
[60] Hoddinott, John F. *Understanding resilience for food and nutrition security., supra note* 27, 4.
[61] Hoddinott, John, and Agnes Quisumbing. "Methods for Microeconometric Risk and Vulnerability Assessment." *Risk, Shocks, and Human Development*, 2010, 72.
[62] Salazar, Lina, and Gonzalo Muñoz. "Ensuring Food Security in LAC in the Context of COVID-19: Challenges and Interventions," *supra note* 33, 6.
[63] "El Hambre Aumenta a Medida Que Los Casos De La COVID-19 Se Disparan En América Latina: World Food Programme." UN World Food Programme. UN World Food Programme, July 29, 2020.
[64] Ibid.
[65] "El Hambre Aumenta Por La COVID En América Latina." Acción contra el Hambre, February 24, 2021.
[66] "Choques Climáticos y Económicos Empujan a Millones Más En Centroamérica a La Inseguridad Alimentaria: World Food Programme." UN World Food Programme. UN World Food Programme, February 22, 2021.
[67] Ibid.
[68] Alpízar, Francisco, et., al. "Determinants of Food Insecurity among Smallholder Farmer Households in Central America: Recurrent versus Extreme Weather-Driven Events," *supra note* 43, 9.

food and cash crops in the four countries.[69] These hurricanes struck during the pandemic, wreaking havoc on their ability to sell and consume food, adversely affecting FS.

However, building resilience against climate change and the repercussion of the pandemic is not the only front that *agricultores* face; the encroachment of drug trafficking violates their land ownership and consequent food intake. Violence in the region ravages FS and its pillars. The particular conflicts to support narco-trafficking enterprises result in violent confrontations between gangs and vulnerable populations, including smallholder farmers and Indigenous peoples. In particular, in Honduras, the Garífuna population along the coastal region had their territory incurred upon for smuggling routes; in Mexico, fertile lands were violently taken or bought up by drug cartels from communities for illicit crop productions; and in Colombia, drug traffickers and paramilitary groups led campaigns of purchasing land, of which they now own approximately 5 million hectares (15 percent of the total area of the country). [70] Violence and land-grabs are also deeply entrenched with political instability of the region, affecting the determinants of FS such as adequate crop production, employment and food consumption.

Political instability affects the stability of the economic markets, which directly impact income, unemployment, and regulate the currency. An example of rising FI as a result of political insecurity is in Brasil, where the 2016 presidential impeachment of Former President Luiz Inácio da Silva compromised the political stability of the country.[71] In response to this crisis, unemployment rose, with only 26% of households relying on more than one minimum wage; and then consequent inflation led "to increases in national food prices, mostly affecting staple foods (rice, beans), vegetables, fruits and meat." [72],[73] The Brasilian government, which previously saw success with its Bolsa Família programme that encouraged nutritional and stable food intake, "responded with austerity measures, which led to reduced funding for many social and FS policies."[74] These measures contributed to the sharp decline in FS, from 76% in 2013 to 49% in 2017, with severe FI reaching an unprecedented high of 12%.[75] Demonstrating the immense impacts of stable governance on FS; as the Latin American region suffers from political and economic downturns, FS stability is threatened.

The economic crisis in Venezuela has augmented its PoU from 2.5 % in 2010–2012 to 31.4 % in 2017–2019.[76] Most of the food supply of the country is imported, and the devaluation of the Bolivar currency is making food imports increasingly expensive, impacting its internal crisis of FI as hyperinflation curbed the purchasing power of households and their ability to access food and other basic goods.[77] The economic insecurity in Venezuela has resulted in the outward migration of over 5.4 million Venezuelans to neighbouring countries and worldwide.[78] As a result of their migrant status, Venezuelans have suffered from spikes in FI due to the Covid-19 pandemic. A study by WFP amongst Venezuelan migrants revealed that 72% of migrants were engaging in food shortage coping

[69] Ibid.
[70] Guereña, Arantxa. Publication. *Unearthed: Land, Power and Inequality in Latin America*., *supra note* 24, 18.
[71] Sousa, Luna Rezende, Ana Maria Segall-Corrêa, Arlette Saint Ville, and Hugo Melgar-Quiñonez. "Food Security Status in Times of Financial and Political Crisis in Brazil." *Cadernos de Saúde Pública* 35, no. 7 (July 29, 2019): 2.
[72] Ibid., 5.
[73] Ibid., 2.
[74] Ibid.
[75] Ibid., 5.
[76] United Nations High Commissioner for Refugees. "Venezuela Situation." UNHCR. UNHCR, 2021
[77] Ibid.
[78] Ibid.

mechanisms such as reducing their daily intake of meals to only one meal or none at all.[79] FI incidence in Latin America is becoming recurrent among transient and non-transient populations due to external shocks. As households respond to each shock, the most extreme coping measure of out-migration may be taken. Currently, migration from the region is approaching an unprecedented peak, demonstrating the inverse relationship between FS and migration.

Migration as an extreme consequence of food insecurity

The importance of building resilience through solidarity to combat FI lies in the extreme consequences of it. One of the current and notorious consequences in Latin America to FI, is the vast intra-regional and international migration flows. At the United States (U.S.)-Mexico, U.S. Customs and Border Protection reported a 274% increase of migrants arriving at the border from 36, 687 in February 2020 to 100,441 migrants in February 2021.[80] The direness of the instability of the region, especially in rural areas, is demonstrated with these surges.

Deducing the reasons for emigration and connecting them to FI is a tangle way to substantiate the direness of the situation. Emigrants from the region describe poverty as the lack of capacity to adequately feed family members and pay for other basic needs.[81] A framework delineated from Watts' evaluation of households' responses to food shortages in Nigeria establishes that as food shortages worsen and different coping mechanisms are effectuated, the ultimate action resorted to is outmigration.[82] Over time, the household employs adaptation strategies including diet changes, but as FS digresses, the household's vulnerability is exacerbated to a threshold where migration is the only coping mechanism left.[83] While developed over twenty years ago, this framework is supported by WFP's reports that identify migration as the ultimate coping strategy to external shocks to income and food production.[84] Push factors that are identified by WFP are economic (debt, unemployment, dependence on agricultural day labour), environmental (climate variability, extreme weather, natural disasters) and social (violence) in nature.[85] When one of these categories is compromised, households first adopt strategies to build resilience, however, it reaches a point where emigration emerges as the ultimate coping strategy to FI.[86]

One case study of the impact of climate change and extreme weather events is the Honduran household responses to the damages of Hurricane Mitch, caused between October 26-27, 1998.[87] There were catastrophic economic consequences for Hondurans as "rural households lost 30-40% of their crop income and measured poverty immediately increased

[79] World Food Programme. Rep. *Remote Assessment COVID-19 Migrants in Colombia, Ecuador and Peru*., *supra note* 29, 3.
[80] United States Customs and Border Protection. "U.S. Border Patrol Southwest Border Apprehensions by Sector." U.S. Customs and Border Protection. U.S. Customs and Border Protection, 2021.
[81] World Food Programme. Rep. *Remote Assessment COVID-19 Migrants in Colombia, Ecuador and Peru*., *supra note* 29, 16.
[82] Framework Modified by Thomas Bodman after: Watts M (1982) Silent violence. Food Famine and Peasantry in Northern Nigeria. Berkeley, CA, USA: University of California Press.
[83] Ibid.
[84] World Food Programme. Rep. *Food Security and Emigration: Why People Flee and the Impact on Family Members Left behind in El Salvador, Guatemala and Honduras*. WFP, Inter-American Development Bank, IFAD, IOM, OAS, August 2017., 9.
[85] Ibid.
[86] Ibid., 9.
[87] Carter, Michael R., et al. "Poverty Traps and Natural Disasters in Ethiopia and Honduras." *World Development*, vol. 35, no. 5, 2007, 836.

5.5 percentage points - rising from 69.2% of households to 74.6%."[88] After the Hurricane, emigration to the U.S. rose, as the U.S. Census recorded 108, 923 Honduran immigrants in 1990 and 282,852 Hondurans in 2000.[89] This 178.2% increase contextualises the relation of environmental-caused poverty and emigration, which is exemplified by the Garífuna people from Northern Honduras. Garífuna migration "tripled due to Hurricane Mitch in 1998"[90] and and the "majority of migrants [were] young men from rural areas,"[91] displaying the lack of employment after Hurricane Mitch. These economic shocks spotlight the extreme reverberations of the Hurricane on the household and the necessity to emigrate as a coping mechanism to FI, especially for rural Indigenous Hondurans. Rural populations who rely on the food that they produce for nutrients and income may resort to migration as a response to climate catastrophes.

Identified as a sending destination, rural localities are the origin for 52% of migrants from Latin America who returned home in 2014.[92] This supports the theme of migration as an extreme coping mechanism for rural areas in Latin America, as WFP reported that 15% of those surveyed in the region in January 2021 were making concrete plans to migrate because their homes and crops were destroyed, food was running out and employment opportunities were decreasing.[93] These observations correspond with another study by WFP that amongst their surveyed population affected by emergencies in the region, 76.3% say "no food is the most important reason." that they decided to emigrate from their origin.[94] Migrants in rural areas are also suffering from FI as a result of their migrant status. A recent study by the WFP, reported that in response to the COVID-19 pandemic, 81% of migrants in rural areas show a ten-percentage point higher than those in urban areas in their usage of food-coping strategies.[95] Rural poverty has impacted outward migration but also impacts the region's vulnerable populations including migrants, women and Indigenous peoples.

Women are also disproportionately affected by migration in tandem with FI. It was reported that during the stressful period between the start of the emigration journey and receiving assistance, women have to take care of all family needs, including feeding the family.[96] Consequently, this increases coping strategies amongst female migrant respondents (76%) compared to males (70%) in the region.[97]

The impacts of FI are substantial and unforgiving. A gendered lens' analysis cognises the compounding factors of the social norms, power structures and inner workings of the society that impacts each pillar of FS. Power structures amongst sub-populations in the region, such as Indigenous peoples, relay vulnerabilities that contribute to FI. Hence as FI and emigration are increasing, their repercussions target rural Indigenous women.

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[88] Ibid., 841.
[89] Blanchard, Sarah, et al. "Shifting Trends in Central American Migration: A Demographic Examination of Increasing Honduran-U.S. Immigration and Deportation." *The Latin Americanist*, vol. 55, no. 4, 2011., 63.
[90] Endo, Isaku, et al. "The United States-Honduras Remittance Corridor." *World Bank Working Papers*, 2009, 49.
[91] Ibid.
[92] World Food Programme. Rep. *Food Security and Emigration: Why People Flee and the Impact on Family Members Left behind in El Salvador, Guatemala and Honduras*., *supra note* 84, 9.
[93] "Choques Climáticos y Económicos Empujan a Millones Más En Centroamérica a La Inseguridad Alimentaria: World Food Programme," *supra note* 66.
[94] World Food Programme. Rep. *Food Security and Emigration: Why People Flee and the Impact on Family Members Left behind in El Salvador, Guatemala and Honduras*., *supra note* 84, 10.
[95] World Food Programme. Rep. *Remote Assessment COVID-19 Migrants in Colombia, Ecuador and Peru*., *supra note* 29, 3.
[96] World Food Programme. Rep. *Food Security and Emigration: Why People Flee and the Impact on Family Members Left behind in El Salvador, Guatemala and Honduras*., *supra note* 84, 18.
[97] World Food Programme. Rep. *Remote Assessment COVID-19 Migrants in Colombia, Ecuador and Peru*., *supra note* 29, 4.

Food Insecurity Amongst Rural Indigenous Women in Latin America

Discerning the vulnerability of rural Indigenous women to FI, begins, by investigating two facets of their identity in rural settings: being a woman and being an Indigenous person. Gender inequality's impact on FI is substantial in Latin America. One study illustrates that women are 1.5 times likelier to experience FI than men because of gender disparities in access to education, employment, productive resources and income. [98],[99] When analysing the perceptions of gender inequalities and its association with FI in Latin America, a study revealed that "respondents who were food insecure, were 30% to 50% more likely to perceive that women are not treated with respect and dignity," suggesting that women in the region are "more exposed to an environment where women face greater disrespect."[100] FI consorts with gender inequalities to exacerbate and determine rural Indigenous women's extreme vulnerabilities to FI in Latin America.

Particularly in Latin America, *machismo,* is a compounding factor when it comes to FI experienced by women in the region. *Machismo* is defined as the attitude of male dominance in respect to females and is embedded in social norms of masculinity throughout Latin America. [101] In extreme senses, the concept illustrates how women are thought to be submissive in all spheres of their lives. *Machismo* when further fleshed out, not only refers to the dominance of genders, but also hierarchies amongst societies, cultures, and ethnic and racial groups.[102] One implication of the domestic role rural Indigenous women are boxed into is demonstrated in a study in Guatemala where the majority of surveyed Indigenous women revealed that their spouse or partner did not trust them to manage the household's income.[103] Henceforth, it will be apparent in the analysis of the pillars of FS, that rural Indigenous women who are confined by gender and racial hierarchies in Latin America are one of the most vulnerable populations to FI.

Availability

On the onset, Indigenous women concentrated in rural areas are more likely to experience food security as it was studied that rural females are 3.1 times more likely to experience FI than women in urban areas.[104],[105] This is a result of the lack of, if not absence, of "government and other institutional support."[106] Without external support, rural women are

[98] Smith, Michael et. al., Assessing Food Insecurity in Latin America and the Caribbean Using FAO's Food Insecurity Experience Scale." *supra note* 39, 17.
[99] Sinclair, Kate, Davod Ahmadigheidari, Diana Dallmann, Meghan Miller, and Hugo Melgar-Quiñonez. "Rural Women: Most Likely to Experience Food Insecurity and Poor Health in Low- and Middle-Income Countries." *Global Food Security* 23 (December 2019): 109.
[100] Quiñonez, Hugo Melgar, Luna Rezende de Sousa, and Luisa Samayoa Figueroa. "P37 Food Insecurity and Gender Inequality in Latin America." *Journal of Nutrition Education and Behavior* 51, no. 7 (2019): S49
[101] Asale, Rae -, and Rae. "Machismo: Diccionario De La Lengua Española." "Diccionario de la lengua española" - Edición del Tricentenario. Accessed April 3, 2021.
[102] Felitti, Karina, and Andrea Rizzotti. "El 'Machismo Latinoamericano' y Sus Derivas En La Educación Internacional: Reflexiones De Estudiantes Estadounidenses En Buenos Aires." *Magis. Revista Internacional de Investigación en Educación* 9, no. 18 (2016): 19.
[103] Ministerio de Salud Pública y Asistencia Social (MSPAS), Instituto Nacional de Estadística (INE), ICF International, 2017. Encuesta Nacional de Salud Materno Infantil 2014-2015., *supra note* 41, 479.
[104] Smith, Michael et. al., Assessing Food Insecurity in Latin America and the Caribbean Using FAO's Food Insecurity Experience Scale." *supra note* 39, 17.
[105] Sinclair, Kate, Davod Ahmadigheidari, Diana Dallmann, Meghan Miller, and Hugo Melgar-Quiñonez. "Rural Women: Most Likely to Experience Food Insecurity and Poor Health in Low- and Middle-Income Countries.," *supra note* 99, 109.
[106] Smith, Michael et. al., Assessing Food Insecurity in Latin America and the Caribbean Using FAO's Food Insecurity Experience Scale." *supra note* 39, 17.

forced to overcome availability constraints. The inadequacy of resources in rural regions due to distance is tied with transportation and distribution problems, an example of which can be illustrated by Indigenous Canadian females. When they encounter transportation-related difficulties, their access to reliable and sufficient food resources is restricted, overall worsening their FI.[107] In conjunction, this affects the cost of nutritious food in rural areas, where "the cost of a basket of food in Igloolik is twice as high,"[108] in comparison to that of urban centres. Higher food prices compromise households' access to affordable, nutritional and essential food. In Peru, the Awajun community relies on long-distance trade, which is susceptible to weather disruption, thus raising food prices and simultaneously increasing their dependency on exports.[109],[110] These externalities translate to less quantity and quality of fresh produce in stores, constraining Indigenous women's ability to have the option to substitute locally-produced food with healthy stores foods, when needed.[111],[112] In the face of availability constraints, Indigenous women are increasingly adopting coping mechanisms to FI.[113]

Recently, traditional foods that Indigenous peoples collect, hunt and fish are depleting due to climate change. The hunting periods, when "animals are both accessible and available to local hunters" are contracting, reducing the availability of traditional foods, implicating food sharing, affordability and harvesting for Indigenous peoples.[114],[115] Awajun women collect fruits, fruit trees, larvae and insects for food, but overharvesting due to limited availability of other foods, reduces the quantities of locally produced food. This only increases anxiety for Indigenous women, further pushing them towards adopting coping mechanisms of FI.

In rural societies, when women are coping with the lack of availability of resources, their health and available capital are compromised.[116] Not only does this reduce their ability to endure external shocks that threaten that stability of their FS but also jeopardizes their resilience to these stressors. When evaluating the effects of the limited availability of food, the consequences trickle down into the other pillars.

Access

In the second pillar, education is integral for employment and a commensurable income. In some Latin American countries gender inequalities are evident in the education sector. In Low-Middle Income Countries, including Nicaragua and El Salvador, more than

[107] Beaumier, Maude C., and James D. Ford. "Food Insecurity among Inuit Women Exacerbated by Socioeconomic Stresses and Climate Change." *Canadian Journal of Public Health / Revue Canadienne De Sante'e Publique* 101, no. 3 (2010): 198.
[108] Ibid.
[109] Kuhnlein, Harriet V., Hilary Creed-Kanashiro, Marion Roche, and Irma Tuesta Cerrón. "Traditional Food System of an Awajun Community in Peru." Essay. In *Indigenous Peoples' Food Systems: the Many Dimensions of Culture, Diversity and Environment for Nutrition and Health*, 67.
[110] Ford, James D, and Maude Beaumier. "Feeding the Family during times of Stress: Experience and Determinants of Food Insecurity in an Inuit Community." *The Geographical Journal* 177, no. 1 (2011): 58.
[111] Ibid.
[112] Beaumier, Maude C., and James D. Ford. "Food Insecurity among Inuit Women Exacerbated by Socioeconomic Stresses and Climate Change," *supra note* 107, 199.
[113] Ford, James D, and Maude Beaumier. "Feeding the Family during times of Stress: Experience and Determinants of Food Insecurity in an Inuit Community.," *supra note* 110, 47.
[114] Ibid., 46.
[115] Ibid., 50.
[116] Beaumier, Maude C., and James D. Ford. "Food Insecurity among Inuit Women Exacerbated by Socioeconomic Stresses and Climate Change," *supra note* 107, 200.

two-thirds of rural women have only completed elementary school or less.[117] In relation to FI, a lesser level of education increases one's likelihood of experiencing food by 15.9% in this region.[118] Elementary education is a determinant of a child's familial status of FS and of the resulting FI they experience as an adult. For instance, in Guatemala 21% of children's mothers do not have an education, and experience malnutrition. Contrastingly, only 5% of children whose mothers possess a superior education face a similar situation.[119] The intergenerational cycle of FI continues when education levels remain at the status quo. Amongst Indigenous women, this is a prominent issue as their limited access to education throughout the region restricts access to human capital. This is supported with the statistical evidence that 11% of Indigenous women in Guatemala are more likely to be without education compared to non-Indigenous women.[120] Being Indigenous is a predisposing factor of limited education attainment, affecting income level and the utilisation of resources for sustenance.

Moreover, having a higher income allows for increased possession of assets, making it easier to "have access to better infrastructure, providing opportunities for non-agricultural employment and reducing dependence on agricultural sources of income."[121] Decreasing dependency for agricultural wages is key because its instability (from external shocks) threatens the livelihoods of rural Indigenous women, whose households rely on the income from this sector. Thus, having a greater access to the labour market is crucial for women, but due to ingrained gender roles, they have a weak attachment to it and are paid less than men. Pay gap is an issue for women in the workforce as women in Latin America are on average paid 25% less than men. This supports a study on FI in the region which found that a single woman is 1.7 times more probable to experience severe FI as opposed to married ones.[122],[123] Meaning that as women are predisposed to a lower wage, it disproportionally affects their ability to afford and utilise nutritious food.

Another rationale to explain the causal relation between women's lower incomes and higher societal FI states that women are more likely to "spend 90% of their money on food, health care and education, while men spend between 30-40%."[124] Women in charge of the disbursement of the household's resources are reinvested into the children's wellbeing and that of the household - breaking the intergenerational cycle of FI.[125]

Furthermore, extreme coping mechanisms due to limited resources have broader implications for the community. Rural women frequently participate in neighbourhood committees that typically involve themselves in some form of sharing of food as they are also

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[117] Sinclair, Kate, Davod Ahmadigheidari, Diana Dallmann, Meghan Miller, and Hugo Melgar-Quiñonez. "Rural Women: Most Likely to Experience Food Insecurity and Poor Health in Low- and Middle-Income Countries.," *supra note* 99, 111.
[118] Smith, Michael et. al., Assessing Food Insecurity in Latin America and the Caribbean Using FAO's Food Insecurity Experience Scale." *supra note* 39, 19.
[119] Ministerio de Salud Pública y Asistencia Social (MSPAS), Instituto Nacional de Estadística (INE), ICF International, 2017. Encuesta Nacional de Salud Materno Infantil 2014-2015., *supra note* 41, 293.
[120] Ibid., 47.
[121] Smith, Michael et. al., Assessing Food Insecurity in Latin America and the Caribbean Using FAO's Food Insecurity Experience Scale." *supra note 39*, 19.
[122] United Nations. "More Women in Latin America Are Working, but Gender Gap Persists, New UN Figures Show | | UN News." United Nations. October 28, 2019.
[123] Smith, Michael et. al., Assessing Food Insecurity in Latin America and the Caribbean Using FAO's Food Insecurity Experience Scale." *supra note* 39, 18.
[124] Sinclair, Kate, Davod Ahmadigheidari, Diana Dallmann, Meghan Miller, and Hugo Melgar-Quiñonez. "Rural Women: Most Likely to Experience Food Insecurity and Poor Health in Low- and Middle-Income Countries.," *supra note* 99, 111.
[125] Chilton, Mariana, Molly Knowles, and Sandra L. Bloom. "The intergenerational circumstances of household food insecurity and adversity." *Journal of hunger & environmental nutrition* 12, no. 2 (2017): 6.

typically caretakers of children, the elderly, the sick and those with disabilities.[126] In rural areas where resources and incomes are more limited for households, especially those of single women, fewer children obtain an adequate diet.[127] For example, in rural areas of Guatemala, 51% of children from 6 to 23 months old are not consuming an adequate diet, compared to 41% in urban areas.[128] Therefore, in a single parent households, communal networks are integral in favouring access to affordable and sufficient food, especially when women are carrying for multiple community and familial members.

In Indigenous communities in Latin America, households rely upon community networks for food assistance, however, due to recent external stressors, these networks are experiencing access constraints. Inuit women in Canada reported that due to FI stress "individuals drop friends and extended kin from food sharing networks, restricting generalized reciprocity to close relatives."[129],[130] Due to constricted resources and income, food is becoming less accessible through the traditional food sharing network, only perpetuating the FI the community experiences. In the Awajun community, access to markets contribute to limited communal sharing as "12 of the total foods listed...are industrially produced" and there is a "lack of commercialisation in the area, as well as low cash resources" so the population "rarely, if ever, went to a market or local urban centre to buy food."[131] Thus, having an income influences the ability to afford sufficient food, as transportation constraints experienced by rural Indigenous women increase food prices and limits the access to other resources.

Utilisation

Indigenous women are marginalised and subjected to horrific abuses that impact their livelihoods.[132] For instance, in their communities, land conflicts lead to "increasingly frequent intervention of military, police, and private security to contain resistance to extractive activities" of rural territories that threaten the safety of rural Indigenous women who live in these regions. [133] In their households, Indigenous women face violence, as evidenced by the 33% of Guatemalan Indigenous women who reported suffering from domestic violence.[134] Violence against Indigenous women threatens their safety and health, exacerbating their ability to obtain the proper nourishment needed for their wellbeing.

Gender disparities influence the distribution of food within the household. In rural areas of Latin America, the distribution of nutrients typically favours men rather than women due to ingrained gendered hierarchies.[135] Interviewed Indigenous women described how women were last to eat in the household to "ensure that members of their family, especially

[126] Guereña, Arantxa. Publication. *Unearthed: Land, Power and Inequality in Latin America*., *supra note* 24, 27.
[127] Ibid.
[128] Ministerio de Salud Pública y Asistencia Social (MSPAS), Instituto Nacional de Estadística (INE), ICF International, 2017. Encuesta Nacional de Salud Materno Infantil 2014-2015., *supra note* 41, 315.
[129] Dirks, Robert, George J. Armelagos, Charles A. Bishop, Ivan A. Brady, et., al. "Social Responses During Severe Food Shortages and Famine [and Comments and Reply]." *Current Anthropology* 21, no. 1 (1980): 28.
[130] Ford, James D, and Maude Beaumier. "Feeding the Family during times of Stress: Experience and Determinants of Food Insecurity in an Inuit Community.," *supra note* 110, 53.
[131] Kuhnlein, Harriet V., Hilary Creed-Kanashiro, Marion Roche, and Irma Tuesta Cerrón. "Traditional Food System of an Awajun Community in Peru.," *supra note* 109, 68.
[132] Guereña, Arantxa. Publication. *Unearthed: Land, Power and Inequality in Latin America*., *supra note* 24, 50.
[133] Ibid.
[134] Ministerio de Salud Pública y Asistencia Social (MSPAS), Instituto Nacional de Estadística (INE), ICF International, 2017. Encuesta Nacional de Salud Materno Infantil 2014-2015., *supra note* 41, 482.
[135] Sinclair, Kate, Davod Ahmadigheidari, Diana Dallmann, Meghan Miller, and Hugo Melgar-Quiñonez. "Rural Women: Most Likely to Experience Food Insecurity and Poor Health in Low- and Middle-Income Countries.," *supra note* 99, 104.

children, eat enough."[136] Prioritising men and children feed into the notion of women as the caretakers of the family who suffer more often from hunger. To cope with hunger, Indigenous women modify their eating patterns such as "drinking more tea or coffee to hide hunger or getting used to not eating breakfast."[137] Indigenous women pushed to the periphery of society because of ethnic and gender roles are forced to compromise their nutritional intake and health – increasing the incidence of FI.[138]

It is disparaging that 25% of the rural population in Latin America do not have access to basic sanitation facilities.[139] Basic sanitation affects the physiological environment of maintaining cleanliness for one owns health and food preparation. One example where healthcare is disparate for Indigenous women is maternal care. In Latin America, in 2015, there were 7,300 maternal deaths relating to the birth or the time right before it.[140] Needless to say that 54% these deaths were preventable, as access to proper maternal care was the causal factor.[141] Because children receive nutrients from their mothers, when the mother's health is compromised, it's not only her who becomes food insecure, but also her child, illustrating the importance of proper maternal care.[142] Furthermore, the accessibility and quality of maternal care is unequal between ethnicities. In Guatemala, only 50% of Indigenous women were attended by skilled personnel compared to 82% for non-Indigenous women;[143] detailing the broader issue of healthcare access the vulnerabilities of rural Indigenous women.

Additionally, the adverse utilisation of food in Indigenous communities hinders Indigenous children's nutrition. Between the absence of external support and ethnic hierarchies, Indigenous children are also not receiving proper nutrition and health care. In Guatemala, 58% of Indigenous children are chronically malnourished compared to 34% of non-Indigenous minors.[144] An aforementioned indicator of malnourishment is stunting, and amongst Guatemalan Indigenous women, 37% are stunted compared to 15% of non-Indigenous women. These statistics illustrate the disproportionate suffering of Indigenous women from health complications and the consequences it has on their children. Thus, the physical, mental, educational, and social statuses of women are critical to the nutrition situation in families and populations, and therewith, the development potential of societies.[145] Hence, it is crucial that with these compounding factors, a mitigation intervention is employed targeting the physiological environment that is affecting FS sustainability.

Stability

[136]Beaumier, Maude C., and James D. Ford. "Food Insecurity among Inuit Women Exacerbated by Socioeconomic Stresses and Climate Change," *supra note* 107, 198.
[137] Ibid., 200.
[138] Ford, James D, and Maude Beaumier. "Feeding the Family during times of Stress: Experience and Determinants of Food Insecurity in an Inuit Community.," *supra note* 110, 49.
[139] The Organisation for Economic Co-operation and Development (OECD) and The World Bank, *Health at a Glance: Latin America and the Caribbean, supra note 58,* 16
[140] Grupo de Trabajo Regional para la Reducción de la Mortalidad Materna (GTR). Rep. *Panorama De La Situación De La Morbilidad y Mortalidad Maternas: América Latina y El Caribe*. United Nations Population Fund, 11.
[141] Ibid.
[142] Gross, Rachel S., Alan L. Mendelsohn, Mayela M. Arana, and Mary Jo Messito. "Food Insecurity During Pregnancy and Breastfeeding by Low-Income Hispanic Mothers." *Pediatrics* 143, no. 6 (2019): 6.
[143] Ministerio de Salud Pública y Asistencia Social (MSPAS), Instituto Nacional de Estadística (INE), ICF International, 2017. Encuesta Nacional de Salud Materno Infantil 2014-2015., *supra note* 41, 220.
[144] Ibid., 154.
[145] Ecker, Olivier; Breisinger, Clemens. 2012. The food security system: A new conceptual framework, *supra note* 49, 7

Ensuring that Indigenous women are building resilience rather than vulnerability against FI in Latin America will contribute to a "reduction in poverty, improved child nutrition, lower fertility rates, and improved productivity" across the region.[146] However, without building resilience to the vulnerabilities experienced by rural Indigenous women, food insecurity will still coexist. The vulnerability of climate change affects rural Indigenous women's FI as Inuit women describe how there is little availability of country foods due to ice disparities from climate change, endangering the ecosystem that they hunt in.[147] Women cope with these vulnerabilities through resource allocation, however with the increasing frequency of climate-related shocks, these coping mechanisms are exacerbated and causing detrimental harm to the health of Indigenous women.[148]

Conjointly, in Latin America, climate-change-induced droughts cripple agricultural production for exports and subsistence.[149] One gender-influenced peril of climate change is women not having access to the necessary resources to mitigate the fallouts that extreme weather patterns bring. Yet, when women have these resources, one study found that "female-headed households had lower probabilities of experiencing food shortages after an extreme event than male-headed households."[150] Women who are in charge of their land, household meals, and the households' financial decisions are more likely to prepare for extreme weather events or take immediate action to cope with any food shortages arising from such events, demonstrating the broader benefits of that are associated with female empowerment in the community.[151]

Furthermore, limited land ownership threatens the FS of rural Indigenous women because it inhibits the physical availability and access to food commodities and perpetuates gender inequalities. It is stated that:

> "A woman who has her own land and makes decisions about it has greater economic autonomy because she can access other financial assets such as credit, her work as a producer is recognized, her participation in political organizations and decision-making spaces is increased, and she will be less vulnerable to gender-based violence."[152]

While women owning land is beneficial for society, they still own less than men, explaining the perpetuating gender disparities causing FI. More specifically, in Latin America a study conducted by the Central American Network of Rural, Indigenous and Farming Women found that women only hold 12 % of land in Honduras; 13% in El Salvador; 23% in Nicaragua (of which are less than 10 hectares) and in Guatemala, "women work 15% of the land in although it does not always belong to them."[153] Accordingly, women's access to the market due to limited land ownership is usually "based on their marital status and their position as mothers, rather than as productive or working women."[154] Revealing the minimal amount of land holdings in women's names illustrates the extensive exclusion of women from the broader access to other economic responsibilities, resources, and services. The

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[146] Sinclair, Kate, Davod Ahmadigheidari, Diana Dallmann, Meghan Miller, and Hugo Melgar-Quiñonez. "Rural Women: Most Likely to Experience Food Insecurity and Poor Health in Low- and Middle-Income Countries.," *supra note* 99, 105.
[147] Beaumier, Maude C., and James D. Ford. "Food Insecurity among Inuit Women Exacerbated by Socioeconomic Stresses and Climate Change," *supra note* 107, 199.
[148] Ibid., 200.
[149] Hoddinott, John F. Understanding resilience for food and nutrition security, *supra note* 27, 11.
[150] Alpízar, Francisco, et., al. "Determinants of Food Insecurity among Smallholder Farmer Households in Central America: Recurrent versus Extreme Weather-Driven Events," *supra note* 43, 11.
[151] Ibid.
[152] Guereña, Arantxa. Publication. *Unearthed: Land, Power and Inequality in Latin America*., *supra note* 24, 18.
[153] Ibid.
[154] Ibid.

exclusion of women is keeps them in a submissive capacity. On the account of women's sparse land ownership and thus limited power to make household decisions, gender inequalities perpetuate FI.

Moreover, Indigenous peoples' holdings in Central America are limited to "just one fifth of the land that is rightfully theirs."[155] This means that of the vast territories and land that Indigenous peoples hold ancestral rights to, and in many tribes are considered important culturally and spiritually, they only own 20% of it.[156] Indigenous land ownership is not respected, causing more frequent land conflicts, especially due to government-complicit extractives' activities. For instance, the expansion of "mining and petroleum activities in Colombia, Ecuador, Bolivia, Peru, and Chile is giving rise to increasingly frequent and intense conflicts with Indigenous peoples, because such activities either directly impact their territories, or affect their water sources."[157] Not only do these activities harm the resources utilised for nutrition, but these conflicts also may become violent, where Indigenous women are the most vulnerable, as they "defend their land and natural resources" throughout Latin America. [158]

For women, access to and control over land facilitates the fulfilment of other rights, as it contributes to changing power relationships in the personal, social and political spheres.[159] It is critical to integrate gender into interventions that are working to mitigate FI in the region. Working in partnerships with Indigenous women, prove fruitful in terms of building resilience to the threats to each pillar of FS. While this analysis focused on rural Indigenous women's vulnerabilities to FI, the next section will explore rural Indigenous women's empowerment through cooperatives - a business and social organisational structure and intervention that promotes collective solidarity.

[155] Ibid.
[156] Ibid.
[157] Ibid., 52.
[158] Ibid.
[159] Ibid.,18.

Can cooperatives be used to mitigate food insecurity?

To increase awareness of the FS crisis in Latin America and amongst one of its most vulnerable populations to it, the aforementioned analysis centred on establishing FI's presence and how it affects rural Indigenous women in the region. In this consciousness, this final section is an examination of how the cooperative framework promotes empowerment and assistance in FI mitigation strategies for rural Indigenous women. Furthermore, the importance of cooperatives to enable partnerships between external actors and rural Indigenous women support the objective of empowerment and mollifying the consequences of FI. For this paper, external actors are defined as any entity that is not a member of the cooperative and its community.

Cooperatives are community-based local organisations that exist in social, political, and economic contexts and serve as a way to enhance the livelihoods of its members.[160] A local cooperative is centralised where individual producers entail its membership, have an ownership interest and are entitled to equal voting rights in its affairs.[161] In Latin America there are already 84,000 cooperatives in action, assisting various sectors, and of this number, 24,000 target the rural sector.[162] Meaning that this is not an innovative initiative, but an established one amongst rural populations. Its primary benefit is the increase in the empowerment of its members, while it decreases the dependency on outside actors and *latifundistas* - those who own large estates that *campesinos* work on.

The Campesino a Campesino Movement

Cooperatives in Latin America find the origin of its value of collective solidarity in the *Campesino a Campesino (CAC)* movement. The mission behind the *CAC* (Farmer to Farmer) movement is "to improve smallholder livelihoods and rural environments through farmer-led, sustainable agricultural development."[163] The movement emerged in the early 1970s in Guatemala amongst the Kaqchikel Mayan *campesinos*. During this period, they were suffering from a combination of poor agricultural output and continuous debt cycles, resulting in environmental degradation and limited utilisation of resources for food sustenance.[164] However, with the involvement and technical knowledge such as World Neighbours and Oxfam, a partnership and knowledge dissemination campaign fomented the local agricultural production.[165]

These organisations also helped the Kaqchikel people "take advantage of the government's agricultural cooperative program to establish Kato-Ki, a 900-member cooperative that bought supplies, sold the farmers' basic grains and provided farmer-to-farmer training in basic conservation and fertility techniques."[166] The *CAC* movement illustrates where grassroots organisations and empowerment intersects to promote the most

[160] Vásquez-León, Marcela. "Introduction: Walking the Tightrope: Latin American Agricultural Cooperatives and Small-Farmer Participation in Global Markets." *Latin American Perspectives* 37, no. 6 (2010): 4.
[161] United States Department of Agriculture Rural Development. Rep. *Understanding Cooperatives: The Structure of Cooperatives* 45. 3rd ed. Vol. 45. Washington, D.C.: United States Department of Agriculture, 2011, 1-4.
[162] "Cooperativistas Celebran Junto Con La FAO Su Contribución a La Seguridad Alimentaria En El Día Mundial De La Alimentación." FAO Regional Office for Latin America and the Caribbean. FAO, October 16, 2012.
[163] Holt-Giménez Eric. *Campesino a Campesino: Voices from Latin America's Farmer to Farmer Movement for Sustainable Agriculture*. Oakland, CA: Food First Books, 2006., xvii.
[164] Ibid., 4.
[165] Ibid., 5.
[166] Ibid.

suitable business and agricultural practices for the populations' needs. Regarding FI, this supports the finding that "rural households are less likely to suffer from FI when they acquire new knowledge."[167] The partnership between external actors and the Kaqchikel people establish the benefits of capacity building and the sharing of technical knowledge.

Empowering the smallholder population supports their FS by promoting independence rather than dependence through diversifying each aspect of their agricultural production for the individual's, household's and community's benefit.[168] Another important aspect is that *CAC* supports the reclamation of land and promotes land ownership because it increases "access to land, credit, markets."[169] *CAC* promotes *campesinos* to "develop their own tools, technologies and agroecosystem management strategies to reclaim ecologically degraded land and give them greater control over production factors."[170] The varied set of agricultural production techniques build resilience to the catastrophic and frequent weather events due to climate change, promoting the stability of FS.[171]

The *CAC* movement encourages gender equality, especially amongst rural Indigenous women through political participation in community organisations. NGOs focus on gender and provide opportunities to address broader roles for women in sustainable agricultural development."[172] These opportunities provide a wider platform for women's equality to be at the forefront of cooperatives' policies in Latin America. It is in this context that the *CAC* movement relies on "community-oriented approaches that look after the subsistence needs of its members,"[173] exemplified by cooperatives.

Cooperatives as a catalyst for Empowerment

Empowerment through cooperatives (also known as coops) lies in the ability to gain power in local, regional, national and international levels.[174] For example, in a Brasilian recycling coop, community leaders reported that the most significant empowerment process that emerged from their participating "was the strengthening of leadership skills, collective autonomy, and...political participation between the leaders of the cooperative."[175] Leadership and enfranchisement are integral to encouraging individual and communities to express and reinforce their needs in public dialogues, especially when in the presence of entities who marginalise them.

Subsequently, Indigenous women's empowerment is crucial to their role as a determinant of their household's FS. Cooperatives implement gender policies to promote

[167] Cordero-Ahiman, Otilia Vanessa, Jorge Leonardo Vanegas, Pablo Beltrán-Romero, and María Elena Quinde-Lituma. "Determinants of Food Insecurity in Rural Households: The Case of the Paute River Basin of Azuay Province, Ecuador," *supra note* 48, 12.
[168] Holt-Giménez Eric. *Campesino a Campesino: Voices from Latin America's Farmer to Farmer Movement for Sustainable Agriculture*, *supra note* 163., 33.
[169] Ibid., 37.
[170] Ibid., 39.
[171] Woodgate, Graham. "Agri-cultural Practice and Agroecological Discourse in the Anthropocene: Confronting Environmental Change and Food Insecurity in Latin America and the Caribbean." In *Provincialising Nature: Multidisciplinary Approaches to the Politics of the Environment in Latin America*, edited by Coletta Michela and Raftopoulos Malayna. London: University of London Press, 2016., 77.
[172] Holt-Giménez Eric. *Campesino a Campesino: Voices from Latin America's Farmer to Farmer Movement for Sustainable Agriculture*, *supra note* 163., 121.
[173] Altieri, Miguel A., and Victor Manuel Toledo. "The Agroecological Revolution in Latin America: Rescuing Nature, Ensuring Food Sovereignty and Empowering Peasants," *supra note* 23, 589.
[174] Burke, Brian J. "Cooperatives for "Fair Globalization"? Indigenous People, Cooperatives, and Corporate Social Responsibility in the Brazilian Amazon." *Latin American Perspectives* 37, no. 6 (2010): 46.
[175] Tremblay, C., and J. Gutberlet. "Empowerment through Participation: Assessing the Voices of Leaders from Recycling Cooperatives in Sao Paulo, Brazil." *Community Development Journal* 47, no. 2 (2010): 290.

female inclusion and empowerment. For instance, three of the largest Fair-Trade cooperatives in Nicaragua are guided by female general managers, and the Soppexcca cooperative increased its female membership to 40%.[176] In a domino effect, women assuming leadership roles and membership in cooperatives encourage others in the community to follow suit.

Collective solidarity amongst women impacts their own socio-economic status by increasing their bargaining power. The Manyakabi Area Cooperative Enterprise, a Ugandan cooperative, is 95% female and developed a widow group to support single-female households. The cooperative enables them to improve their livelihoods through high income opportunities…to reduce their...vulnerabilities.[177] Furthermore, their membership with the cooperative is attributed to their sentiments of having both a stronger voice and greater command of respect from males in the community.[178]

Women who gained greater control of agricultural management through the cooperative reported that they had more control over the utilisation of food in the home in particular "in making decisions on how the produce is divided and distributed."[179] Cooperatives build the capacity of rural Indigenous women to take charge of household decisions, including access to nutritious food and allocating the income to other social determinants of FS, including education for their children. In cooperatives, when women earn their own income, their status on the individual, household and communal level improves, translating into higher FS.

Moreover, the women involved in cooperatives develop a collective consciousness for the support of their rights "civil society, based initiatives...and local organising practices"[180] with the financial support of the cooperative and external organisations. Their empowerment enables them to champion for the necessary social-development projects to not only support social determinants of FS, but also to augment the standard of living of their family and in particular to break the intergenerational transfer of FI.[181]

Access to Financial Markets and Technical Knowledge

At the onset, cooperatives mitigate issues that threaten access to and availability of food because access to markets increases the income that is reinvested into its members' wellbeing. For instance, the Body Shop - a cosmetic and skincare enterprise - partnered with AmazonCoop to sell raw materials, including Brasilian nuts, for their products. The cooperative serves approximately 2,000 Indigenous peoples, including the Kayapo people, illustrating the widespread ability for cooperatives to reach rural Indigenous peoples in remote and dispersed regions.[182] Cooperatives producing for local markets "shorten the circuits of food production and consumption, and hence avoids the high energy needs of 'long-distance food'."[183] Mitigating transportation issues for rural communities also translates

[176] Bacon, Christopher M. "A Spot of Coffee in Crisis: Nicaraguan Smallholder Cooperatives, Fair Trade Networks, and Gendered Empowerment." *Latin American Perspectives* 37, no. 2 (2010): 64.
[177] Ferguson, Hilary, and Thembela Kepe. "Agricultural Cooperatives and Social Empowerment of Women: a Ugandan Case Study." *Development in Practice* 21, no. 3 (May 24, 2011): 424.
[178] Ibid., 425.
[179] Ibid.
[180] Bacon, Christopher M. "A Spot of Coffee in Crisis: Nicaraguan Smallholder Cooperatives, Fair Trade Networks, and Gendered Empowerment," *supra note* 176, 65.
[181] Chilton, Mariana, Molly Knowles, and Sandra L. Bloom. "The intergenerational circumstances of household food insecurity and adversity," *supra note* 123, 290.
[182] Burke, Brian J. "Cooperatives for "Fair Globalization"? Indigenous People, Cooperatives, and Corporate Social Responsibility in the Brazilian Amazon," *supra note* 174, 34.
[183] Altieri, Miguel A., and Victor Manuel Toledo. "The Agroecological Revolution in Latin America: Rescuing Nature, Ensuring Food Sovereignty and Empowering Peasants," *supra note* 23, 589.

into improved quantity and quality of the food that is available to them. Furthermore, cooperatives provide access to money and goods through a higher income. The Asurini people, members of the AmazonCoop, reported that without the commercialisation of the Brasilian nuts from the cooperatives, it would be difficult to afford and obtain sugar, milk, coffee and beans, and other foods and medicines.[184] Supporting the idea that with a higher income, food is more affordable and accessible.

Women also experience more empowerment with their connections to the financial market. The Manyakabi Area Cooperative Enterprise in Uganda brought its commodities of beans and maize to the global market through its partnership with WFP.[185] Securing this contract connects female farmers to a steady income and integral knowledge about commercial markets, improving their social standing and bargaining power in negotiations because these business practices are "typically dominated by men."[186] The augmented power and respect women gain in the business sector improves the cooperative's trade because these women can enhance market linkages that are formed through collective business ventures between community members, traders from local and external regional markets and contracts with large-scale buyers.[187] Each partnership increases the capital that is available to the cooperative, building their capacity to contribute to a more food secure household.

Conjointly, through collective knowledge and technical support, individuals develop skills in business enterprises, marketing, and improve the capacity of their agricultural production.[188] Fedecovera, the Agricultural Federation of Cooperatives of Verapaces in Guatemala, provides training and technical assistance on agriculture, livestock, farming, forestry and the environment, with support from experienced professionals in the field.[189],[190] The federation also established the Rural Agroforestry Business School to promote community organisation, particularly among its female members, and production with a "focus on the appropriate management of natural resources based on market dynamics."[191] By training its female members on environmentally sustainable practices, Fedecovera is building resilience, ensuring the productive use of its resources and promoting female empowerment, all of which foment FS.

Cooperative-led Community Programmes Building Resilience to Food Security

Utilising social development programmes to target community vulnerabilities is positively linked to FS.[192] Cooperatives' social development projects "tap into local institutions' extensive traditional knowledge, skills, practices and risk reduction strategies for

[184] Burke, Brian J. "Cooperatives for "Fair Globalization"? Indigenous People, Cooperatives, and Corporate Social Responsibility in the Brazilian Amazon," *supra note* 174, 41.
[185] Ferguson, Hilary, and Thembela Kepe. "Agricultural Cooperatives and Social Empowerment of Women: a Ugandan Case Study," *supra note* 177, 424.
[186] Ibid., 425.
[187] Ibid.
[188] Ibid., 426.
[189] Moran, Hugo. *Forest Business Incubation: Towards Sustainable Forest and Farm Producer Organisation (FFPO) Businesses That Ensure Climate Resilient Landscapes*. Report. Edited by Macqueen Duncan and Bolin Anna. International Institute for Environment and Development, 2018, 99.
[190] Food and Agriculture Organization of the United Nations, and AgriCord. Rep. *Forest and Farm Producer Organizations – Operating Systems for the SDGs*. Rome, Italy: Food and Agriculture Organization of the United Nations, AgriCord, 2016, 32.
[191] Moran, Hugo. *Forest Business Incubation: Towards Sustainable Forest and Farm Producer Organisation (FFPO) Businesses That Ensure Climate Resilient Landscapes*., supra note 189, 100.
[192] Sinclair, Kate, Davod Ahmadigheidari, Diana Dallmann, Meghan Miller, and Hugo Melgar-Quiñonez. "Rural Women: Most Likely to Experience Food Insecurity and Poor Health in Low- and Middle-Income Countries.," *supra note* 99, 112.

disaster preparedness and management, emphasizing the relevance of local networks and safety nets before, during and after disasters."[193] Latin America is currently suffering from adverse climate patterns that threaten its FS, however cooperatives and collective partnerships foster environmental preservation through development programmes.[194] For instance, projects that promote agroforestry, such as those sponsored by Fedecovera, benefit agricultural production through: climate change mitigation via carbon sequestration (removing carbon from the air); biodiversity conservation; soil health enrichment; and air and water quality improvement.[195] Furthermore, collaborating with outside organisations can provide insight into climate change adaptation techniques, as observed with the partnership between the Kaqchikel people, World Neighbours and Oxfam that catapulted the *CAC* movement.

Another social support programme sponsored by cooperatives is education. Women in the Fair-Trade cooperative in Nicaragua reported that a higher percentage of primary-school-aged children attended class, supporting the notion that women's empowerment and education positively affects their children, breaking a FI mould within the community.[196] Correspondingly, Fedecovera has a scholarship programme for its "members' children, from primary school to university studies"[197] promoting higher education amongst its cooperative. Education builds the capacity of the community, lowering poverty incidence and thus improving FS. Women empowering one another ensures the sustainment of their technical capacity, children's education and overall wellbeing and FS of the community because they have the capacity to support their individual households' needs.

Moreover, healthcare is another service that cooperatives can provide, which is integral due to the insufficiencies of it in Latin America. Fedecovera offers basic healthcare to its members as they "run preventive health services (consultations with doctors, vaccinations) and dentistry, subsidised by the federation."[198] The health services are integral in the utilisation of food and by providing these services at a discounted rate, the cooperative is not only advancing the sustainability of FS, but also that of gender equality. Access for rural Indigenous women to healthcare services was previously identified as restrictive and perpetuating the adoption insalubrious coping mechanisms. Thus, a cooperative structure that provides healthcare, involves the community in their projects, strengthens the manner by which social development programmes support gender empowerment and FS for rural Indigenous women.

Concerns regarding the perpetuation of dependency and vulnerabilities

Cooperatives exemplify a process for external actors to support rural Indigenous women against their plight of FI. However, one pertinent contention to a partnership with external actors is creating an environment where Indigenous women become dependent on

[193] Food and Agriculture Organization of the United Nations. Rep. *FAO and Traditional Knowledges: The Linkages with Sustainability, Food Security and Climate Change Impacts*. Rome, Italy: Food and Agriculture Organization of the United Nations, 2009, 6.
[194] Burke, Brian J. "Cooperatives for "Fair Globalization"? Indigenous People, Cooperatives, and Corporate Social Responsibility in the Brazilian Amazon," *supra note* 174, 35.
[195] Jose, Shibu. "Environmental Impacts and Benefits of Agroforestry." *Oxford Research Encyclopedia of Environmental Science*, 2019. 5-11.
[196] Bacon, Christopher M. "A Spot of Coffee in Crisis: Nicaraguan Smallholder Cooperatives, Fair Trade Networks, and Gendered Empowerment," *supra note* 176, 60
[197] Moran, Hugo. *Forest Business Incubation: Towards Sustainable Forest and Farm Producer Organisation (FFPO) Businesses That Ensure Climate Resilient Landscapes*, *supra note* 189, 100.
[198] Food and Agriculture Organization of the United Nations, and AgriCord. Rep. *Forest and Farm Producer Organizations – Operating Systems for the SDGs*, *supra note* 190, 11.

external support. One evaluation of cooperatives and Indigenous peoples concludes that "cooperative organizations do not guarantee social development...and may actually institutionalize inequalities and dependencies."[199] The integral consequence of this is worsening FI.

Understanding where previous partnerships with Indigenous peoples went awry details the lessons learned for future ones to flourish. However, it is important to note that "international partners played a major role in virtually every cooperative project,"[200] fostering an environment where independence is not emphasised. Furthermore, in the case of the AmazonCoop-Body Shop partnership, this dependency was perpetuated. The partnership required the provisions of Brasilian nuts without adequate contracts, making the local economy a cash economy revolving around the nuts. To continuously provide and sell the nuts, households sacrificed their subsistent agricultural production to allocate it towards nut extraction.[201] The conclusion from this case is that external actors must be entering the partnership with cooperatives with an equitable mindset, where Indigenous peoples are part of the decision-making process regarding all financial and development projects in the cooperative.

Comparatively, independence is fostered within the cooperative system as seen with the Fedecovera cooperative. This federation diversifies its commodities and financial activities that give "the organisation financial resilience" and independence, permitting them the power to "invest about half of its own resources on direct services to member cooperatives and ultimately to individual members."[202] Ultimately this supports collective commercialisation, with external actors providing financial and socio-economic support to the cooperative and the members it serves. External actors must understand the grassroots perspective and bottom-up approach to empower the population. Because external actors are removed from the experiences of rural Indigenous women, they are not in a position to be controlling their needs. Hence, reaffirming an equitable and culturally respected relationship is the pertinent takeaway for partnerships to function well and reach an ultimate goal of improving the livelihoods of the community, including with the reduction of FI amongst rural Indigenous women.

[199] Burke, Brian J. "Cooperatives for "Fair Globalization"? Indigenous People, Cooperatives, and Corporate Social Responsibility in the Brazilian Amazon," *supra note* 174, 48.
[200] Ibid., 37
[201] Ibid., 43.
[202] Food and Agriculture Organization of the United Nations, and AgriCord. Rep. *Forest and Farm Producer Organizations – Operating Systems for the SDGs*, *supra note* 190, 32.

Conclusion

FS around the world is facing its most difficult test with the Covid-19 pandemic ravaging and impacting every facet of everyday life. This paper calls attention to FI's repercussions in Latin America.

The analysis of the pillars of FS weaved a picture of why FI is soaring in the region. The availability pillar, becoming the predecessor link to access and utilisation, is suffering from productivity issues affecting the access pillar (being able to obtain the food) where food prices increase due to the dependency on trade and transportation to markets. Thus, a majority of people in Latin America are unable to afford a healthy diet, due to poverty and low education attainment, leading to utilisation concerns. Utilisation, determined by the physiological environment affecting food consumption, looks most prominently at the role of healthcare in the region, a service that many in rural regions do not have access to. Normalised coping mechanisms amongst Indigenous women compromises their health, as seen with stunting in the region. Hence, the instability of these pillars contributes to the overall threat to FS stability, inclusive of the effects that mar it: climate change, (droughts specifically), violence in the region and political and economic instability.

The contributing factors FI invoke migration as the most extreme coping mechanism to escape it. Concerningly, migrants have a high susceptibility to the consequences of FI. Meaning that mitigating the effects of FI is critical to reducing the effects that are felt by at-risk populations, including rural Indigenous women.

Gender inequalities, the impact of *machismo* and racial hierarchies ingrained into Latin American society contributes to FI amongst rural Indigenous women. Indigenous women are less supported by the government, are suffering from transportation constraints and are experiencing a loss of diversity in harvested food; augmenting their adoption of coping mechanisms, such as diverting food resources to the rest of the household. Consequently, the influence of external factors on the gender wage gap and thus the affordability of food, perpetuated an intergenerational transfer of FI in the household. These compounding and adverse effects on rural Indigenous women and their families' livelihoods illustrate the need for their empowerment through participation programmes, namely in cooperatives.

Examining cooperatives is one way to demonstrate the importance of empowerment programmes and communal economic organisations to build resilience to FI, especially with the grim reality of its future with Covid-19. Cooperatives in Latin America find their origin among the *CAC* movement, a widespread example of the beneficial impacts and ripple effects that comes from the unification of a community. As demonstrated in this analysis, cooperatives provide socio-economic benefits including healthcare coverage and access to global markets, education and a stable income. The overall underlying current of cooperatives is the diverse ways that they empower rural Indigenous women.

Nevertheless, to promote FS in the region, external actors have a role in contributing to the success of these cooperatives. Treading carefully to ensure dependency does not arise, external actors, (businesses, NGOs, etc.) including international ones, can diversify the access to global markets and support social development projects. A bottom-up approach to the partnership best ensures equity between the external actor and cooperative members. Cooperatives in Latin America promote unity, a needed theme during this global period of uncertainty.

The foregone conclusion throughout this research associates the importance of collective solidarity and global partnerships to combating FI around the world, and in Latin America. Breaking down the who and the why is integral to the understanding of the direness of the crisis. Rural Indigenous women are not the only vulnerable populations to this

phenomenon; smallholder farmers, women in general, children, Indigenous peoples, migrants and all those who are marginalised in society are at-risk to FI. Latin America is in a precarious position with external shocks surging FS. To prevent and mitigate this, external actors should focus on supporting grassroots organisations to ensure that the empowerment and FS objectives are realised in the region. Achieving Zero Hunger by 2030 is only possible with collective solidarity throughout all societal levels around the world.

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