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Farmers' Organizations and Development Actors in a Pandemic: Responses to Covid-19 and the Food-Energy-Water Nexus

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Farmers' Organizations and Development Actors in a Pandemic: Responses to Covid-19 and the Food-Energy-Water Nexus

by

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DEDICATION

To Aurelia. You are everything. I love you, googolplex plus infinity.

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ABSTRACT

The Covid-19 pandemic disrupted the lives of millions, if not billions, in some shape or form. This global multi-sited dissertation documents responses and changes in the agricultural development context within the AgriCord Alliance and network as they had appeared during the pandemic, with specific focus on co-production of resilience and the Food-Energy-Water Nexus. The research elucidates experiences representing the whole 'food chain' of a global agricultural development network. As the Covid-19 pandemic was a global event, it offered an opportunity for global disaster research. During the pandemic, the farmers' organizations and their members faced economic stress as marketplaces closed and other income sources were diminishing. Building on semi-structured online and offline interviews (n=42) and participant observation, this dissertation establishes that while there were myriad responses to the pandemic, the most impactful ways of addressing health, lockdown, and economic effects showed similarities even in distant locations. The study finds that development budget allocation became more flexible during the pandemic as organizations with the power to decide also felt the effects of the pandemic, possibly informing future development endeavors, and insinuating a paradigm shift. Furthermore, as lockdowns, social distancing, and remote working became the "norm," mental health issues emerged. On the other hand, global solidarity rose during this time as more online connections were installed and people in the network had more frequent interactions, increasing organizational social capital as well. This research shows how decisions in global development practice influenced agricultural FEWs dynamics, applying one of political ecology's key concepts of multi-scalar relationships.

CHAPTER ONE: INTRODUCTION

Background

In the early months of 2020, a novel coronavirus Covid-19 spread rapidly causing significant strain to people, communities, and governments (ILO 2020). We all felt it. We all lived it. We still live it, whether by way of acute risk, changed behaviors, changed routines, changed relationships, or understanding of normalcy, for example. My dissertation research was supposed to focus on riverine environments, communities, and banana farming in Belize. But here we are. It has been a game changer, a disjuncture (Bjursell 2020).

Yet the effects of the pandemic have been distributed unequally, negative effects concentrating on those with lower income levels before the virus as well as on other marginalized groups, with race/ethnicity and gender being important factors (Bottan, Vera-Cossio, and Hoffmann 2020; Oppel et al. 2020; Misuraca Ignaczak and Hobbes 2020; Hansen 2020; Mittal and Singh 2020; Ho and Maddrell 2020; Sims et al. 2022; Bogan et al. 2022). Additionally, the pandemic produced an acute global food insecurity crisis (Cardwell and Ghazalian 2020), and both commercial as well as smallholder agricultural value chains, or in other words, the set of actors participating in food production, processing, and marketing, are and have been negatively impacted (Morton 2020).

In this multi-sited online ethnographic study, my goal was to examine the responses and adaptation strategies of farmers' organizations as well as international development agencies and donors to the Covid-19 pandemic through the lens of the Food-Energy-Water Nexus

(FEWs) (Hoff 2011), an integrative framework to better understand interconnections between multiple sectors to foster sustainable livelihoods (Galaitsi, Veysey, and Huber-Lee 2018). By doing so, I sought to understand how development actors as well as farmers' organizations and communities may or may not co-produce resiliency and inform policy. Resilience here refers, in short, to the capability of communities and organizations to overcome disturbances (Manyena 2006). The farmers' organizations (FOs) I was interested in are groups of farmers working together, that are generally formed as associations, cooperatives, or cooperative unions or federations that represent their members interests, offer economic activities (mostly as a for-profit cooperatives), technical advice or training, and deliver public goods, such as natural resource management (AgriCord 2015a). Some key questions this dissertation addresses are: How has the pandemic affected the flow of capital, project funding, or resources with different development actors in different scales and locations, and who controls those flows? Are there vulnerabilities within the FEWs that have been exposed by the pandemic? Are there broader implications for 'development' in general, and the organizations specifically, that stretch beyond the pandemic?

Origin Story

"Sittin' on the porch at gram's house, watchin' parades roll by
whole time nobody knowin' in about a month, this whole way of life'll be over, time frozen
no more high fivin' your homies, with your palms open" - Curren$y

A worker at a Wuhan wet market who had been experiencing dizziness, chest tightness, cough, and pain for six days was admitted to the Central Hospital of Wuhan in Hubei, China on

26 December 2019 (F. Wu et al. 2020). The worker was not the first case of the WH-Human 1 coronavirus or 2019-nCoV, later known as Covid-19, but this patient provided researchers with data to pinpoint the origins of the virus and to underline the dangers of viral spill-over from animals to humans (F. Wu et al. 2020). Fast forward to February 15, 2020 and there were 66,580 confirmed cases and 1,524 casualties (Xu et al. 2020), and in early August, 2020 there were more than 20 million confirmed cases worldwide and more than 700,000 people had died (JHU 2020). In June 2021 after I had finished data collection for this dissertation, the pandemic death toll had reached over six million, globally. In the United States alone, more than one million people have perished due to Covid-19 (JHU 2022).

In medical anthropology, pandemics have been a recurring object of inquiry, particularly the cultural and social factors affecting so called risk behaviors during global health crises (Singer 2009; Atlani-Duault and Kendall 2009; Lynteris and Poleykett 2018; Hardy 2020; Higgins, Martin, and Vesperi 2020). On the other hand, in environmental anthropology pandemics have not been thoroughly studied, although the Covid-19 pandemic has spurred conversations on the environment. The overall effects of the pandemic are still unknown, but there was a momentary decrease in global greenhouse gas emissions and, contrastingly, an increase in hazardous disinfectants, and solid and plastic waste that may damage coastal environments, during the first year of the pandemic (Bashir, Ma, and Shahzad 2020; Patrício Silva et al. 2022). Additionally, remote working from home has increased the environmental footprint of Internet usage (D. Atoufi, Lampert, and Sillanpää 2021).

Due to the disease and subsequent lockdowns where people have been recommended or required to stay in their homes, when possible, the crisis has distressed global and local Food-Energy-Water systems. It has negatively impacted agricultural supply and value chains by

disrupting, for example, transportation, production due to lack workers or inputs, and demand both in local and global markets, causing increased prices and decreased production (Rondeau, Perry, and Grimard 2020; Morton 2020; Chari et al. 2022; Ogada et al. 2021), sparking conversation on and demand for food supply chain resilience (Kazancoglu et al. 2021). In some areas, agricultural extension (advisory) services have become unavailable because of travel restrictions and distancing procedures banning gatherings (Sulandjari et al. 2022; Prosper Bright, Terrence Kudzai, and Ngavaite 2021; Baffoe-Bonnie, Martin, and Mrema 2021). Food processing plants have been found to create environments beneficial for the virus to spread rapidly both in the United States and globally (Kendall 2020; Saih 2020). Additionally, according to the United Nations Food and Agricultural Organization there was risk of chronic hunger increase (FAO 2020).

A report by the International Energy Agency shows that Covid-19 crisis had major impacts on energy systems around the planet, including slowing down clean energy solutions (Turk and Kamiya 2020; Andrijevic et al. 2020). But on the other hand, energy use, especially oil, has also declined during the pandemic in certain contexts due to the limitations in travel because of lockdowns (Andreoni 2022; Lu, Ma, and Ma 2021). Economic conditions brought on by the health issues and lockdowns have affected energy access since utilities may disconnect people not being able to pay their energy bills and healthcare facilities in certain regions have been struggling with having reliable energy even before the crisis; the situation only to have been exacerbated by the virus (Puliti and Ogunbiyi 2020). Additionally, many governments have lowered energy subsidies and increased taxes on gasoline and diesel to tackle economic recessions (Clifford 2020; Lu, Ma, and Ma 2021).

As the pandemic caused a shift in where people worked and spent their time, water consumption patterns changed as well, more water being consumed in residential areas and less in industrial environments, leading to a decreased water pollutant discharge (Jia et al. 2021). Meanwhile, water insecurity increased, especially in countries with scarce water resources (Ibid.). Additionally, when the virus started spreading one of the first things health officials started recommending was to start diligently washing hands with soap for at least 20 seconds, increasing domestic water demand (CDC 2020; Cahill et al. 2022). Unfortunately, water access is a privilege not received by many, the pandemic only increasing pressure to the water sector, which reinforces the statement that the Covid-19 crisis intensifies existing inequalities (Boretti 2020; Mukhtarov, Papyrakis, and Rieger 2022). Therefore, the expansion of water access and tackling water insecurity, is a particularly important part of, not only dealing with pandemics, but the overall resiliency of communities and preparedness for disasters (Otto et al. 2020; Abu and Elliott 2022). Understanding the dynamics and shape of how such inequalities have intensified requires new research, as a pandemic of this scale is unprecedented. The concept and idea of the Food-Energy-Water Nexus (FEWs) is helpful in bridging the aforementioned sectors into a holistic whole, one that takes into consideration the interconnectedness of the sectors. In this dissertation I assert that ethnographic methods provide valuable insights to FEWs research. Furthermore, I claim that political ecology offers a critical theoretical lens through which FEWs can be explored. Political ecology offers a way in which to investigate local agri-environmental landscape effects and FEWs effects of the pandemic in a way that takes into consideration, for example, the power relations embedded in development, political economies, policies, and regulatory decisions.

Moreover, the pandemic may have indirectly intensified deforestation and land grabbing in, South America and Asia, and perhaps beyond (Wilson Center 2020; Chandran 2020). Concurrently with the world metaphorically and quite literally burning (Bradbury 2020; Cabanatuan 2020), majority of the 25 largest American corporations were expected to "earn" upwards of $85 billion more in 2020 than in 2019 (OXFAM 2020), revealing the hidden truth of the neoliberal economic policies where "…power profits from disaster" (Klein 2017). It appears the estimations for the wealth accumulation were accurate and by early 2022, billionaires had added $5 trillion to their wealth during the pandemic (Cooban 2022). Furthermore, it has been reported that during the pandemic, around 500 people have become billionaires, many from the healthcare industry (Peterson-Withorn 2022). Concurrently, economies across the planet suffered (Chowdhury, Khan, and Dhar 2022), and many industries such as tourism, important to several countries in the Global South, were devastated during the pandemic (Gössling, Scott, and Hall 2021). It has also disrupted the progress of Sustainable Development Goals on social, ecological, and economic fronts (Priyadarshini 2022), and prompted a decline in mental health in many places (Esposito et al. 2021).

Covid-19 is a disaster that has seemingly "natural" origins but is at the same time inherently 'unnatural' (if we accept or entertain the idea that human/natural dichotomy is real): it is a "product of connections." (Faas et al. 2020, 333) The unnatural nature of the crisis is revealed by the unequal consequences, the viral spill-over (transfer from animals to humans), and the disaster capitalist response to it (Mostafanezhad 2020; F. Wu et al. 2020; Klein 2007; Ieven and Overwijk 2020), which all confirms that "…there are no "natural" disasters anymore." (Masco 2017, S73)

In general, viral spillover of a disease from animal to human is not unprecedented in the age of the Anthropocene – the current geological epoch where human impacts on the planet outweigh natural processes (Crutzen 2006). Zoonotic diseases, such as Covid-19 may, however, be more prevalent in the future due to the unsustainable human-animal relations that our agri-food systems tend to exacerbate (Reisman and Fairbairn 2020; Lawler et al. 2021). The emergence of the corona virus and the subsequent pandemic "can be understood as one element in the wider transformation of the earth's biosphere…" (Duncan and Höglund 2021, 126), and it has ignited calls for global ecosystem management and safeguarding biodiversity to control or prevent any future outbreaks (Perera 2021; Lawler et al. 2021). Therein also lies hope; this disaster, as others, may be a context "…for creation of political solidarity, activism, new agendas, and developing new power relations." (Oliver-Smith 1996, 309)

Since the crisis is 'unnatural,' we might consider which factors allow such crises to appear and wreak havoc on global scale, especially increasing inequalities in general and in access to and control over resources such as food, energy, and water. We must, therefore, ask whether we should reconsider our current model of global development (Gotti 2020) and development cooperation as a continuation, and not focus only on issues such as wildlife trade regulation and conservation (although important) as a way to prevent viral spill-overs and pandemics and their unequal end results (Roe et al. 2020). Development cooperation is defined by the United Nations to be: "Activity that aims explicitly to support national or international development priorities, is not driven by profit, discriminates in favor of developing countries, and is based on cooperative relationships that seek to enhance developing country ownership." (Alonso and Glennie 2015, 4) The pandemic may have the potential to accelerate a shift in the global balance of power (Lyon 2020), and a move from an international perspective, where

inter-state issues, often in the Global South, are the focus, to a global one, where the Global North is considered as part of the problems (Oldekop et al. 2020). Could it also have the potential to change how we perceive development and networks of cooperation and flows of capital/resources? Brown (2021) explains that the way in which donors respond to the pandemic now and in the near future will influence the way development cooperation is practiced in the longer-term future. I argue in this dissertation that ethnographic research offers a way in which to understand transformations in global development practices and funding.

The development machine was predicted to run its course and fade away (Escobar 1995). It did not, but it is facing a new crisis – one that has potential of reversing trends and focuses of existing development trends (Brown 2021). For example, Kinsbergen et al. (2022) found that many private development initiatives moved towards emergency aid, for the first time, when the pandemic hit. According to a study by FINGO, a Finnish NGO platform on global development, the Covid-19 crisis has had a significant effect on the work of Finnish NGOs, and many have been forced to lay people off due to funding and travel restriction issues, indicating that the ’field’ in general may be experiencing a slump or downfall (Knuuti 2020). In Africa, according to one study, more than half of the development professionals have either lost their jobs due to the pandemic or know someone who has (E. Smith and Chadwick 2020). Canadian development aid sector has also been disrupted by the pandemic and the economic losses may threaten the future of the field (Paras et al. 2020). In this dissertation I elaborate on the possible futures of these linked crises on development organizations, farmers’ organizations and the communities which they serve.

Aim of Research

The overarching aim of this research was to elucidate responses to the Covid-19 crisis from various levels of development actors and the roles that the actors have played in co-producing resilient communities, especially as it relates to the Food-Energy-Water Nexus. The research questions guiding my work were as follows:

1. What were/are the perceived risks and subsequent responses of farmers' organizations (FOs) (and communities) and networked agricultural development agencies to the Covid-19 crisis in the study sites? How does this vary across study sites?
2. How might these responses inform global funding/capital flow resiliency with the development organizations?
3. How do these responses to Covid-19 inform community resiliency with the FOs and the communities they are in?
4. How might these responses inform policies around the Food-Energy-Water Nexus in the development context?

These questions guided my project and allowed for a critical engagement with development cooperation, the concept of resilience, the Food-Energy-Water Nexus, and disaster response and recovery. A nuanced understanding of the responses of global-scale agri-agencies and FOs, particularly with attention to variation across multiple sites, could provide insight into impacts of particular ways of responding to such unprecedented shifts in global development practice. I sought to have an applied impact on the operations of the agri-agencies and FOs in the development cooperation world as well as on co-producing resilient communities. In

principle this means recommendations on actions and policies that could increase readiness for rapidly changing conditions, environmental or otherwise.

Collaborators and Locations

This dissertation research would not have been possible without the input from multiple organizational actors in the field of agricultural development. In this section, I will introduce the organizations that were essential in this research on Covid-19 responses. I have separated the organizations here into four categories depending on their position within the researched network: the AgriCord Alliance, the donors, the agri-agencies, and the farmers' organizations.

AgriCord Alliance

In 1997 several agri-agencies that worked in the field of agriculture and forestry got together on multiple occasion and began sharing their experiences and eventually, in a meeting of the Development Co-Operation Committee (DCC) of the International Federation of Agricultural Producers at the OECD (Organisation for Economic Co-operation and Development) meeting in Paris in 2002, the agencies formally agreed to create the entity AgriCord. It was established with a particular interest in having "…a new and stronger position of developing country farmers in critical meetings of the WTO (World Trade Organization)."(AgriCord 2015a) Currently, AgriCord, a global alliance of 13 agri-agencies, supports over 200 farmers' organizations across the globe.

I conducted this dissertation research among the AgriCord Alliance, through a purposeful sample of its member agri-agencies, and farmers' organizations that are supported by AgriCord, which has been involved in implementing Farmers Fighting Poverty (FFP)

program supporting farmers' associations and cooperatives since 2007. The FFP program focused on three issues: sustainable economic growth; better distribution of income; and strengthening of democracy through strong farmers' organizations (AgriCord 2015d), implying that with stronger organizations, governance issues may be improved. The 13 agri-agencies under AgriCord Alliance have implemented the FFP program and work with local organizations (see Figure 1). The FFP and other programs contain several development projects. Each of the projects is a collaborative effort between AgriCord, the agri-agencies, and the farmers' organizations. Generally, within one project, there is one FO and one agri-agency which work together to achieve what the program and project goals are.

Previously, I was employed by one of the agri-agencies, the Finnish Agri-Agency for Food and Forest Development (FFD) and spent two years in Ethiopia in one of the Farmers Fighting Poverty projects working under the leadership of a local FO, Zenbaba, a cooperative union specialized in forestry, agroforestry, and apiculture. Additionally, I have collaborated with AgriCord on producing an environmental impact assessment tool to be used in project planning phases of their projects, as well as on a United Nations Food and Agriculture Organization (FAO) publication on building resilience of farmers' organizations (Simola and Vuori 2021). This background has given me insight as well as connections and access to the AgriCord Alliance, the agri-agencies, and farmers' organizations and communities. I continued this collaboration with FFD and AgriCord and established new connections to agri-agencies and FOs as community partners in order to produce research that is beneficial to AgriCord, the agri-agencies, the FOs and their members, the donors, as well as the researcher. In fact, whilst conducting this research, FFD offered me a job, which I accepted. So, in the process of doing interviews and collecting data, I was also employed by FFD for the purpose of assisting in

preparing development project proposals for the Ministry of Foreign Affairs Finland in relation to building organizations' resilience to climate change. Within the context of the job, I was in regular contact with FOs and agri-agencies operating in Uganda and Tanzania. The FOs I was in contact with during this time were not the same as the ones in my research, and the agri-agency representatives outside of FFD, were also not part of my research. Furthermore, the work started after I had conducted interviews with FFD staff. However, I recognize how my positionality may have shifted during this process of being employed by one of the organizations.

Figure 1. Map of Farmers Fighting Poverty -program (AgriCord 2015e).

An important locus of my study was AgriCord's head office is in Brussels, Belgium, close to the European Commission, one of the main funders of AgriCord. The EU funding for

AgriCord and subsequently the agri-agencies and FOs is funneled through IFAD, the International Fund for Agricultural Development. Furthermore, AgriCord and the agri-agencies within it receive financial and technical support from several national development aid organizations, including Ministry of Foreign Affairs Finland and Asian Development Bank. The farmers' organizations receive financial and technical support from the agri-agencies. Some of the agri-agencies operate in the country their headquarters are in and some work in areas thousands of miles away. For example, Association Sénégalaise pour la Promotion du Développement par la Base (ASPRODEB) is located and operates in Senegal, West-Africa. Whereas Forest and Food Development Finland (FFD) is in Finland but operates in Africa, Asia, and Latin America.

While the research location in the physical sense was mainly online, this dissertation research was global. The agri-agencies in the focus of the study are primarily located in major cities in Europe, while most of the FOs, the local/regional scale portion of the study, operate in rural and semi-rural areas of Africa, Asia, and Latin America. This variability allowed for systematic comparison of pandemic responses across scales within the AgriCord agricultural development network of actors.

Donors

The role of donors who are the source of funding for development actors in development cooperation cannot be overstated. They fund the ongoing development projects through various pathways, such as grants, loans, and others, that international and local partners then implement.

European Commission of the European Union

The European Commission acts as the executive of EU, with one commissioner from each member state. The Commission is responsible for managing EU policies and enforcing laws, for example. It is also responsible for development and international cooperation, offering grants for numerous organizations, budget support, and tenders (Commission 2021). The focus of the European Commission development instrument has shifted in recent years from strictly poverty reduction to economic growth more widely and job creation as well. All the EU funding for AgriCord goes through the International Fund for Agricultural Development (IFAD).

International Fund for Agricultural Development (IFAD)

IFAD, an agency of the United Nations, is a development fund, a financial institution attempting to eradicate poverty and food insecurity in rural areas of the Global South, focusing mainly on smallholder farmers. Established in 1977, IFAD has its origins in the 1974 World Food conference that was organized due to food crisis earlier in the decade in the Global South (IFAD 2021). The main pathway of IFAD towards alleviating rural smallholder food insecurity, is working with farmers' organizations. As mentioned above, EU funding for AgriCord is funneled through IFAD, but IFAD also works with several other organizations and FOs that share similar values and approaches. IFAD headquarters are in Rome, Italy.

Agri-Agencies

As mentioned above, there are 13 agri-agency members in the AgriCord Alliance operating around the globe. The participating agri-agencies all operate under the AgriCord Alliance, and yet, are not a homogenous group. The focus of organizational support of the agri-agencies varies from technical to economic support, and inclusivity to professionalism

(AgriCord 2015c). Additionally, how the agri-agencies were established and by whom vary across the board, as does their organizational structure as well as their sources of additional funding. Although there is diversity in agri-agencies regarding size, funding, in-country presence, and other aspects, there are a lot of commonalities as well; most importantly, the mandates are quite similar and focus on rural development and the improvement of farmers' livelihoods. Furthermore, what is common across the six agri-agencies, is that they all work with member-based organizations with a cooperative mindset (power in numbers), established by local farmers, for the improvement of agricultural practices, marketing, participation in value chains, capacity building on several areas, such as policy advocation and organizational strengthening. In this dissertation I conducted research with six of the agencies, which I will introduce below.

AsiaDHRRA

The Asian Partnership for the Development of Human Resources in Rural Asia (AsiaDHRRA) is regional network of 11 rural social development organizations in 11 Asian countries: Cambodia, Indonesia, Japan, Laos, Malaysia, Myanmar, Philippines, South Korea, Taiwan, Thailand, and Vietnam. AsiaDHRRA was established in 1974 in Thailand and currently their headquarters are in Quezon City, Philippines. As a regional agri-agency they engage with large food and agriculture bodies, such as the United Nations Food and Agriculture Organization (FAO) and the Association of Southeast Asian Nations (ASEAN). As members of AgriCord, AsiaDHRRA mostly operate in six of those 11 countries and the beneficiaries of the endeavors are farmers' organizations, fishers, rural communities, rural women, indigenous communities, and young farmers. The goal of AsiaDHRRA is to organize farmers into groups that work for the improvement of socioeconomic situations of the previously mentioned groups.

AsiaDHRRA has been implementing AgriCord's Farmers Fighting Poverty -program from 2016 and since 2021 they are working with 11 farmers' organizations with EU funding through AgriCord.

FERT

Fert is a French international agricultural development agency working in nine countries, mostly in Francophone Africa, but South America and Europe as well. Fert was established in 1981 and they have been members of AgriCord since 2003. Fert focuses on the enhancement of food security by way of enabling farmers to improve their working and living conditions through the establishment of farmers' organizations as enterprises and subsequent training of them.

Finnish Agri-Agency for Food and Forest Development

Finnish Agri-Agency for Food and Forest Development (FFD) is a Finnish agri-agency established in 2012 for the purpose of coordinating farmer-to-farmer development cooperation endeavors. In addition to the approaches all of the agri-agencies rely on, FFD uses an approach called twinning, wherein Finnish agricultural and forestry experts are partnered with farmers and forest producers in developing countries for knowledge- and experience-sharing. Lately, the focus of FFD has been on climate change, since farmers play an integral part in mitigation and adaptation but also as vulnerable groups with livelihoods dependent on environmental conditions. Currently, FFD is involved with improving climate resilience of smallholder farmers within the framework of climate-smart-agriculture and market-oriented solutions.

TRIAS

Trias is a large Belgian agri-agency operating in 14 countries across four continents, aiming at long-term structural change. Additionally, they have 9 regional offices in different countries of Africa, Asia, and Latin America. Trias is one of the largest agri agencies with more than 100 staff members, of which most are located in the regional offices. Trias was founded in 2002, by merging three (as the name implies) Belgian organizations involved with agricultural development. Starting from the 50s, these organizations have a long history of working in the Global South.

l'Union des producteurs agricoles Dévelopment International

l'Union des producteurs agricoles Dévelopment International (UPA-DI) is a Canadian agri-agency based in Quebec. It was established in 1993 by the Union of Agricultural Producers of Quebec and uses a similar farmer-to-farmer approach as FFD. UPA-DI operates mostly in West-Africa and Haiti, with also some activities in Latin America. Their focus is on sustainable agriculture that takes into consideration socio-economic, environmental, and cultural aspects as well.

WeEffect

WeEffect is a Swedish agri-agency, established already in 1958, operating in 20 countries across the globe. WeEffect is the largest agency within the AgriCord network (with more than 50% of the total budget) with five regional offices in Asia, Africa, Latin America, and Eastern Europe, supporting approximately 1100 agricultural cooperatives. At the core of their operations since 2017, in addition to rural development, has been gender equality, and lately food security.

Farmers' Organizations (FOs)

Demographically, the FOs represent a vast diversity of people in a variety of landscapes and geographies. All the members of the organizations are smallholder farmers or forest producers and according to the FFP program the organizations must incorporate aspects of inclusivity and representativeness, including gender, youth, and vulnerable groups into their operations (AgriCord 2015b). According to the Food and Agricultural Organization of the United Nations, FAO, a smallholder is considered to be a person, unit, family, or any other grouping who engage in agriculture, forestry, on fishing on rather small scale by using their own labor (FAO 2012).

There are over 200 FOs working with AgriCord to some degree. They are all unique due to the fact that they are member-based organizations, such as cooperatives, reflecting their members' desires, and they operate in vastly different environments with different mandates. Furthermore, the scale of operations varies to a great deal. Some of the FOs are local, possibly with less than 100 members from one locality, village, city, or area, whereas some are national apex level organizations with tens of thousands of members, some even millions. Within the confines of this research as well as part of the AgriCord Alliance's field of influence, all these organizations provide training for their members on a variety of topics, from agricultural practices to marketing, and from organizational strengthening to lobbying, each within their own areas and specific fields. I introduce all the 12 FOs that participated in the research in Table 1 on page 19.

Table 1. Participating member-based farmers' organizations.

Name	Agri-Agency	Country	Focus, field	Membership
Bicol Federation of Dairy Cooperatives (BFDC)	TRIAS	Philippines	Raw milk processing, market access, promotion of dairy products.	8 member cooperatives, 4,685 members
Camarines Norte Federation of Cooperatives (CANOFECO)	TRIAS	Philippines	Marketing, financing, training, and consultancy. Organizational strengthening of member cooperatives in different agricultural fields.	52 member cooperatives, 52,000 members
Farm Forestry Smallholder Producers Association of Kenya (FFSPAK)	WeEffect	Kenya	Smallholder forestry entrepreneur development.	16 member associations, 32,000 producers
Federation of Community Forestry Users Nepal (FECOFUN)	FFD	Nepal	Forest User Group network. Community forestry, advocating and lobbying, social movement.	~22,000 community forests, 8,5 million people
Hoima District Farmers Association (HODFA)	TRIAS	Uganda	Agricultural production, access to markets, farm entrepreneurship.	~10,000 members
Jenin Beekeepers Cooperative Association	WeEffect	Palestine	Apicultural production, access to markets.	~40 members
Labo Progressive Multipurpose Cooperative (LPMPC)	TRIAS	Philippines	Pineapple production, access to markets, lending, agribusiness products.	5 member branches, ~1 800 members
Masindi District Farmers Association (MADFA)	TRIAS	Uganda	Maize, rice, beans, soya bean, sunflower production, access to markets.	300 member groups, ~ 13,000 members
Njombe Agricultural Development Organization (NADO)	FFD	Tanzania	Potato production, agricultural practices, post-harvest practices, access to markets.	~ 7,500 members (under small farmer groups with 25-30 people each)
Tanzania Horticultural Association (TAHA)	FFD	Tanzania	Horticultural production (vegetables, fruit, flowers), access to markets, agribusiness.	17,588 members
Uganda National Farmers Federation (UNFFE)	TRIAS, WeEffect	Uganda	Agricultural production, capacity of organizations, lobby and advocate.	127 member organizations, ~ 3 million members
West Acholi Cooperative Union	WeEffect	Uganda	Cotton, soya bean, rice, maize, and sorghum production, processing, and marketing.	67 cooperative members, 10,876 members

Organization of Chapters

This dissertation focuses on the Covid-19 responses of development actors, donors, and farmers' organizations. In Chapter 1, I elaborated on the background and context of Covid-19 and its immediate effects on a larger scale. I briefly hinted at the necessity of the frameworks of Food-Energy-Water Nexus and resilience, and the theoretical foundations for this research, anthropology of development, disaster anthropology and political ecology. I then introduced the aim of this dissertation research and outlined the questions I set to answer. Furthermore, in Chapter 1, I introduced all the organizations that played a role in the research.

Chapter 2 introduces the conceptual and theoretical frameworks and perspectives that supported me in answering the outlined research questions. This chapter offers context for the activities of the actors involved and traces the histories of development to contextualize how the field has gone through changes in the past. I will summarize relevant literature in relation to the interdisciplinary framework of Food-Energy-Water and explain how I view resilience in this dissertation. Furthermore, in Chapter 2, I explain what theories in the research areas of disaster anthropology and political ecology offer in doing research about and during a global pandemic.

In Chapter 3, I explain the data collection and data analysis methods of this dissertation research. Due to the novelty of the project's online focus, I have dedicated quite a large section to exploring online methods. In this chapter, I further explain how I entered the field both online and offline, as well as the decision to use that terminology (versus "virtual"), and what limitations this research has encountered.

In Chapter 4 on results, I elaborate on the effects of the pandemic as a global disaster. I focus first on the fears and immediate effects, and then move on to the responses (health,

organizational) that the organizations had to tackle the pandemic. I further introduce how funding was affected during the pandemic and what opportunities there has been for future endeavors. I also explain the what the agricultural and FEWs effects of the pandemic have been.

In Chapter 5, this results chapter focuses on disaster preparedness and resilience. I introduce efforts that had been in place before the pandemic and how those have worked during the pandemic. I further explain how the participants see their resilience in relation to the crisis, how that could be improved, and what type of lessons have been learned. In Chapter 6, I consider the results of this study in light of current research, as well as the theoretical threads and additional frameworks that I have applied in this research. A part of the chapter is devoted to policy recommendations and anthropological contributions. The discussion is followed by a concise conclusion.

CHAPTER TWO: THEORETICAL THREADS AND ADDITIONAL FRAMEWORKS

Introduction

This dissertation research occurred during the Covid-19 pandemic, a crisis with a scope that has never been witnessed before, nor did anyone expect to experience. This has been a disaster in many aspects. The organizations that I carried out the research with are international development organizations and farmers' organizations (FO), operating in the field of agricultural development. FOs are often involved with producing food for local consumption or other markets and are thus dependent on environmental conditions for operations. Within this context I offer a theoretical framework to address the research questions provided in chapter 1, as I critically engage with scholarship in development anthropology, disaster anthropology, political ecology, resilience, and the Food-Energy-Water Nexus that guide this research. I have separated the chapter into two main sections, one focusing on the contexts of development, on how the histories of development are intertwined in present development work, and one on the agri-environmental and sociopolitical aspects as well as the FEWs Nexus, which are topics of inquiry in this dissertation. Before delving into a discussion of small-holder agriculture, funding, and farmers' organizations, I offer a historical backdrop to the field, as it relates to the formation of theories and practices. Similarly, in the section on environment, I elaborate on histories of the concept of the Food-Energy-Water Nexus and political ecology before introducing the research on disasters, which is necessary in studying the present pandemic. In

the end of this chapter, I bring these disparate theoretical threads together to build a conceptual framework that I argue is well-suited for answering the questions I have posed in the dissertation.

Anthropology of Development

Between the Wars, Historical Perspective

The history of development is intertwined with colonialism and postcolonialism and still "remains hierarchical and culturally inflected, operating on racialised, gendered and class lines..." (P. Hodge 2017, 321). Economic development was always a recurring theme in the imperial history of European nations, but the focus was generally on the mother countries. For example, the British mercantilists thought that the economic development of their colonies would only imply a more efficient use of natural resources of the colonies for the betterment of the metropolitan country (Wicker 1958). Colonial officials in Great Britain and France attempted (and failed) to change this dynamic by creating specific policies aiming at colonial development in the 1920s, after World War I (Abbott 1971). Unlike their humanitarian counterparts who suggested similar policies for the sake of actual colonial development, their attempt was not really about that. The idea was that the colonies need to be developed so that the metropolitan countries do not have to invest in their colonies; the colonies are supposed to fund the colonizers (Cooper 2010). Eventually, in the late 20s Britain enacted its first "coherent or consistent colonial policy" (Abbott 1971, 70) called the 1929 Colonial Development Act, which was set to provide £8.8 million as grants and loans from the British government to the colonies for economic development for 11 years. The funding amounts were quite small but the

shift in paradigm was evident as the act allowed for funds to be transferred to places that did not bring or had not brought in revenue that would act as a guarantee for the investment (Wicker 1958), or that had not been allocated to alleviate the impacts from natural disasters such as earthquakes or major crop failures (Abbott 1971).

Although the 1929 Colonial Development Act provided funds for the colonized countries, it seems that the funds were more geared towards nonlocal industries such as transport and communication instead of agricultural development or forestry that could have had a larger local impact. Hodge (2007) claims that transport and communications was key because of 'contact theory' which alleged that European ideals of civilization would only spread through contact, thereby leading to material and moral advancement of the 'savage'. Critics surmise that the act and colonial development was, at least partly, a means to reduce the level of unemployment in Britain and stimulate exports (Abbott 1971; Niculescu 1958; D. Meredith 1975; Decker and McMahon 2020). Furthermore, the funds that were approved by the British government for colonial development sharply decreased in the early 30s due to the Great Depression and fluctuated all throughout the history of the Act making long term planning challenging (Wicker 1958). In the late 1930s towards the end of the recession, due to the West Indian riots and increasing criticism of the Empire from especially Germany, Italy, and the United States (all having no colonies at this point), the British public became awakened to colonial problems and the lack of development in Britain's colonies (D. Meredith 1975; Cooper 2010). The public pressure and deteriorating conditions in the colonies eventually led to the passing of an updated Colonial Development and Welfare Act in 1940 increasing the amount of funds for up to £5 million a year for colonial development and £500,000 for research (Nature 1945; J.M. Hodge 2007). Additionally, the act stipulated that any recipient of colonial

Development and Welfare grants must pay standard wages and that no children under 14 should be employed with the grant funds (Wicker 1958). The 1940 act carried an agenda that attempted to mitigate the effects, such as environmental degradation, of private capitalist enterprises. Hodge (2007) has found "It was only after visions of impending ecological devastation and overpopulation instilled a new sense of urgency that imperial state interventions in the name of development were seriously contemplated and initiated with the aid of Treasury funds." (145) At this time roots for sustainability and ideas of sustainable agricultural communities entered the British colonial development agenda, not as direct concepts but as recognizing that some practices are more harmful in the long run than others.

Britain focused on and supported technocratic solutions and scientific research in their colonial development plans, whereas France had a more 'humanitarian' approach to colonial issues, which they called the 'civilizing mission.' After World War I France was concerned about human resources and wanted to improve health and education systems as well as living standards and farming methods in their colonies (J.M. Hodge 2007). Concurrently, the post war French colonies experienced a rise in nationalism and opposition to French rule. In order to limit the growing anticolonial sentiment, France implemented *mise en valeur*, or 'value creation,' which was very much intertwined with anti-communist economic modernization (Thomas 2005; Aldrich 2002). These strategies led to, for example, the forced resettlement of agriculturalists into concentrated communities focusing on cash-crop cultivation (van Beusekom 1997). The anti-communist rhetoric and actions allowed for a sustained governmental support, something that improvement of lives in colonies never did (Thomas 2005). During this time period France slowly shied away from the 'civilizing mission' and replaced it with ideas of development because development was something that could be

quantified, whereas 'civilizing' could not, causing another paradigm shift in the colonial development world (Cooper 2010). This shift paved way for a discourse change replacing the "dichotomy civilized/uncivilized to be replaced by the dualism developed/underdeveloped" (Ziai 2015, 30) later on.

World War II and the Cold War

After World War II Europe was in disarray and the United States had established itself as the dominant world power. Even before the war had ended, U.S. officials had been designing postwar economic rules. These plans materialized in 1944 as the multilateral[1] Bretton Woods agreements, wherein the International Monetary Fund and International Bank for Reconstruction and Development (later known as the World Bank) were established to monitor and sustain global economic conditions and to offer large loans (Kunz 1997; McMichael 2004). The Bretton Woods agreements (IMF and the World Bank in continuation) did not, however, envision development aid as a policy instrument in the postwar economic order (Ziai 2017). After the war ended the United States did not immediately realize the urgency of need in Europe but when in 1947 a devastating cold front swept through the continent revealing the conditions therein, the US, in 1948, developed the Marshall Plan (Kunz 1997).

The Marshall Plan focused on rebuilding Europe and Japan after the devastation of the war by providing more than $15 billion in aid funding through the IMF and World Bank (McMichael 2004). The plan was at least partly conceived and modelled after President Roosevelt's New Deal that had aided the United States to recover from the Great Depression. Economic redevelopment was not the only goal of the Marshall Plan though; the United States

[1] Multilateral aid involves multiple donors who act in combination, whereas bilateral aid involves aid from one government to another.

was also intending to stop the spread of communism in Europe, not unlike France in Africa after WW I (Kunz 1997). Development then became a strategy of Cold War, of the rivalry between the East and the West and legitimized the modernizing project (Escobar 1995).

On January 20, 1949, at his second inauguration, President Harry S. Truman held a speech wherein he announced a 'program of development' with the goal of developing 'underdeveloped regions' (Ziai 2015). Although Truman was not the first to use the term 'underdeveloped' (Cowen and Shenton 1996), his usage essentially made 2 billion people become 'underdeveloped' and "…from that time on, they ceased being what they were, in all their diversity, and were transmogrified into an inverted mirror of others' reality…" (Esteva 2010, 2). The metaphor of the mirror describes how the underdeveloped were in fact the creation of the developed through the processes of colonialization and capitalist exploitation. Truman was clear in how his program was going to work, he was relying on technocratic solutions and technological determinism, not unlike the British colonial development programs (Cherlet 2014). As Esteva (2010) puts it "Scientific laws took the place of God…defining the programme." (5) After the introduction of the Marshall Plan and in order to manifest President Truman's 'program of development,' the World Bank's focus started to shift towards the Global South (Ziai 2015), a moment considered as the starting point of the First Development Decade (McMichael 2004). Within a few years of Truman's speech and the idea of the American abundance to be spread across the planet was accepted by those with power and a new geographical terrain: the Third World, was invented (Escobar 1995). After the war, the European imperial powers were trying to grasp at last straws to prevent losing their colonies to anticolonial sentiments with gifts of development, ultimately failing to stop the process (Decker and McMahon 2020).

Postwar International Development

During the First Development Decade in the 1950s, the United Nations, Department of Social and Economic affairs released a report explaining the need of a complete "restructuring of the 'underdeveloped' societies" (Escobar 1995). Development became a hegemonic phrase encapsulating the desire for rapid economic progress and the adjustments required for that goal, as well as the reliance on experts and scientific solutions (J.M. Hodge 2007). The word also implied a change from tradition to ideals of modernity and the 'developed' nations then offered guidelines in how to enact that change (Frank 1966; Hoben 1982). The road to modernity includes an explicitly technocratic approach, one that Li (2007) calls "rendering technical," (7) including a multitude of practices that are seemingly nonpolitical. Ferguson (1994) refers to this dynamic as development being an "anti-politics machine" that reduces poverty to technical problems, thus depoliticizing poverty, which he claims was a "hegemonic problematic of development". (256) Furthermore, Leys (1996) explains how development studies at the time did not recognize the historical or current political contexts, and operated without acknowledging their own political commitments, as the work was based on science. This scientific, expert approach included the active dismissal of indigenous knowledge, and the "nature of the problem of underdevelopment and its solutions [were] defined by reference to this world-ordering knowledge" (Hobart 1993, 1). Mitchell (2002) explains how the promise of modernization goes beyond technological progress; it allows for the re-arrangement of socio-natural environments. An important notion here is that the essential belief of international development is that everyone can prosper under the modern capitalist system (Decker and McMahon 2020) but, and importantly, that the populations and societies to be developed were

led to believe that they lacked the capacity, in intellectual and material terms, to deal with their problems (Rahnema 1990).

These approaches were all part of development theory wherein modernization was essential, not only to homogenize the land, but people and cultures as well (Lummis 2010), "robbing peoples of different cultures of the opportunity to define the forms of their social life" (Esteva 2010, 5). Development was a project for economic and social change (Hobart 1993; McMichael 2004), and had a connotation of change from simple to complex, from inferior to superior (Esteva 2010), reverberating evolutionist socio-cultural theories of bygone anthropologists stating that cultures evolve from simple to complex. Hoben (1982) is adamant that development theory, which incorporates many theories, focusing on homogenization, is ethnocentric, especially regarding indigenous institutions and their supposed constricting role in slowing development, and therefore structural changes were necessary in the homogenization process.

Coming into the 1960s the contexts where development policy was made was changing due to anti-imperialism, anti-colonialism, and many colonial countries having won independence from colonial rule around the globe. The United Nations General Assembly launched the first UN Development Decade in 1961 calling all members to join in and support the development of the less developed countries, with the goal of having development achieved in the following ten years (Koehler 2015). Additionally, in 1961, The Organisation for Economic Co-operation and Development (OECD) was founded to accelerate world trade economic progress.

Development theory, and the process to homogenize economic systems, people, and land, was beginning to be questioned since it had not provided the growth and development it

had promised. It was criticized for being politically partisan and ahistorical, leading to struggles between the proponents and opponents of the theory (Edelman and Haugerud 2005). More specifically, in the United States, modernization theory that focused on education and technology transfer to elites in the periphery countries was found to be ineffective and preoccupied with anticommunism (Leys 1996; Gendzier 1985). There was a belief that this transfer to elites would cause trickle-down effects to the lower echelons of society (Decker and McMahon 2020), but the problem is that it rarely happens (Gardner and Lewis 2012).

Latin American scholars criticized the technical assistance and modernization approach recommended by the UN and implemented through World Bank loans and eventually established the Dependency School, focusing on the dependency theory which blames development aid as creating dependencies (Cherlet 2014). As with development theory in general, anthropologists (notably also sociologist Andre Gunder Frank (1966)) criticized modernization theory for being ethnocentric and simplistic and moved towards critical dependency theory (Lewis 2005; Gardner and Lewis 2012). Dependency theorists realized that so-called developed and underdeveloped nations were intertwined, that there were causal relations between the two, and that the capitalist world system was the backdrop for the creation of these dynamics (Ziai 2015; E.R. Wolf 1982). During this time, anthropology in general was becoming more politicized and the investigation of world systems was a part of this politization (Lewis 2005; E.R. Wolf 1982).

Regardless of the criticism of development, most African countries had experienced economic growth and life expectancy rates had increased in the 60s and early 70s, only to be halted by repeated oil crisis and a world-wide recession (Cooper 2010). From there development took a neoliberal turn, making it next to impossible for the decolonized countries

to escape the market based colonial exploitation (D. Harvey 2005). This turn included the OECD abandoning Keynesian economic policies, essentially meaning increasing deregulation, privatization, and higher interest rates for loans, and therefore ushered in structural adjustment policies by the International Monetary Fund and the World Bank that forced poor countries to sacrifice even the basic needs in order to fulfill loan requirements (Leys 1996). In a practical sense, this meant, for example, a liberalization of national economies by slashing government spending, including food subsidies, child- and healthcare, and privatization of state-owned industries (Gordon 1996; Rathgeber 1990). In expanding Ferguson's (1994) concept of the 'anti-politics machine,' Cooper and Packard (2005) specify that when the World Bank and other international multilateral agencies come to an agreement with the 'less developed' state, the development process, in addition to depoliticizing, disempowers local populations by neglecting their wishes and/or needs.

Post-Modernism and the Post-Development Era

> "The last forty years can be called the age of development. This epoch is coming to an end. The time is ripe to write its obituary." (Sachs 1992, XV)

The development era was said to end with the recessions and structural adjustment period in the late 70s causing negative political and economic results, eventually leading to what critics have called post-development era (Cooper 2010). Sachs (1992) places the origins of post-development theory to the change the world had seen from developed countries being 20 times richer than the developing countries in the 60s, to them being 40 times richer in the 80s. Additionally, the Cold War was coming to its end and the geopolitical interest of the West to develop the South had diminished. Development, as an enterprise, had indeed changed the world but not how it intended. Post-development was not aiming to improve development but

rejected the whole paradigm and looked for "alternatives *to* development" (Escobar 1992, 27, emphasis in original).

One key influence on scholarship in the era of post-development was postmodernism. In the 1980s postmodernist thought infiltrated the field of anthropology and the ideas of development became under postmodern scrutiny (Lewis 2005). In essence, postmodernism is a rejection of the concept or ideal of modernity, questioning objectivity of knowledge and science, and in international development the striving for modernity and all that it entails has been evident (Gardner and Lewis 1996; Ulin 1991). Lewis (2005) explains that applied anthropologists started working more and more in the field of development from the 70s onwards and have used anthropological theories in their applied work, and so the period of postmodernism in anthropology aided in refocusing attention to the "idea of development." It has become clear that, generally, people working in the industry had not been interested in postmodernism or questioning every aspects of the work, including discourses, because they do practical work (Cooper and Packard 2005), but simultaneously with the rise of postmodernist and post-development theories, development theory, modernization theory, and dependency theory had reached their end. This was at least partly due to postmodern ideas and critique; by the 90s their viability as explanatory paradigms had run their course (Gardner and Lewis 1996). According to Smith (1997) it was clear that "if modernization theory came in retrospect to seem like a cruel hoax, what has followed reveals something even crueler…the geographical euphemism *globalization."* (174, emphasis in original) Furthermore, coming into the 90s, environmental degradation was becoming apparent as deforestation, pollution, and other environmental issue were publicized, sustainability was becoming a hot topic in development

and a theme of anthropological inquiry as well, shifting the anthropological lens towards environmental futures (Persoon and Est 2000; Gardner and Lewis 2012).

Although Gardner and Lewis (1996) offered postmodern critique of development, they nevertheless remained optimistic and did not dismiss the idea of development as a whole, that development would be able to change from within. Venkatesan and Yarrow (2012) continue this path of criticism and optimism, claiming that the postmodern critique has reached its inevitable end mainly due to it being "an intellectual exercise." (25) As Cooper (2010) said: "However much validity there is in critiques of self-serving development institutions and ideologies, critiques do not bring piped water to people who lack it; they do not ease the burdens of women caught between rural patriarchies and urban exploitation; they do not distribute readily available antidotes to childhood diarrhea and malaria in areas of high infant mortality." (6)

The Rise of the NGO

The paradigm shift, from deterministic theories to a more reflexive development ideal, allowed focusing on grass-roots issues, specific groups such as women, and more of a participatory or community engaged approach, reinforcing the shift from economic growth to poverty and basic needs that had started in the late 60s, but still much depended on the development actor, since the IMF, the World Bank, and other multilateral agencies continued on their structural adjustment path, promoting free trade, whereas others, stressed participation, community engagement, empowerment, grassroots movements, women's issues, and sustainability (Gardner and Lewis 2012). In 1981 the World Bank established the NGO-World Bank committee that allowed for the increasing involvement of the Bank in poverty reduction programs and in the late 80s they started to expand that involvement because the trickle-down approach had not alleviated poverty (Paul 1991).

Regardless of the shift, anthropologists still questioned the relationships of power in development and not so much the ways in which development is done in practice (Mosse 2013). This is because the development discourse is essential in how we perceive the world and how power relations determine who is in control, which is why anthropology can continuously question "the processes, assumptions and agencies involved in development" (Gardner and Lewis 1996, 168). These ideas of power and questioning of assumptions of development and the subsequent lack of trust to top-down or centralized approaches in development work led to NGOs being embraced as partners by both the bilateral donors (generally government to government) and multilateral funding institutions, and by 1993 half of World Bank development funds in Africa were operationalized through NGOs (C. Miller and Razavi 1995), even if the visions of development with the World Bank (macroeconomic, top-to-bottom, governments) and NGOs (process-oriented, communities) were contrasting (Nelson 1995). According to Sollis (1992) there was a common understanding that the cooperation of NGOs and multilateral funding agencies was, in fact, working well. The paradigm shift and replacing (partly, at least) the top-to-bottom approaches to bottom-up approaches allowed for more participation in social activities and gave rise to income-generating activities (as a term and practice focused on poverty reduction) (Paul 1991), and the prevalence of grassroots organizations and national NGOs in the implementation of programs increased significantly (Sollis 1992). NGOs were seen as 'doing good' and allowing for community engagement, unlike governments and multilateral agencies (W.F. Fisher 1997). But of course, just as there is no singular 'development' there is no one 'NGO' but a myriad of different types of organizations varying in most all aspects of their existence.

Participatory development was introduced in the 1970s but started to slowly gain momentum in the 1980s, the process speeding up in the 90s partly due to postmodernist and postcolonial critique but also because of the promise that this kind of development would be "free from its colonial and techno-economistic shackles." (Rahnema 1990, 200). On the other hand, bottom-up approaches were still seen as not really changing power relations but more being structured by them (Mosse 2013), although some see NGOs as agents of transformation regarding these relationships of power (W.F. Fisher 1997). Later the word participatory has transformed into a myriad of different buzzwords, such as 'ownership,' 'partnership,' 'harmonization,' or 'community-based development' (Cornwall and Brock 2005). But, its end goal has always been about improving development practice (Gardner and Lewis 2012). One important field in which participatory development has played a key role in is agriculture (Chambers 1994). Participatory approaches bring development work closer to the communities they aim to help but the approach has also been criticized because genuine participation is limited due to the budgets, time constraints, and objectives being decided before the projects are implemented (Sollis 1992).

Gender Relations

The paradigm shift to bottom-up, participatory, and community-based approaches is very much intertwined with the rise of gender as a topic in development and the suitability to work with such issues with an NGO approach rather than with bilateral government to government programs. In an influential book "Woman's Role in Economic Development," Boserup (1970) criticized the literature of the field for lack of inclusion of women and emphasizes the need for education, birth control, and the creation of training opportunities outside of household duties. Importantly, Mohanty (1991) traces anthropology's origins as

being produced by colonialism, giving anthropologist power of naming the self and the other, thus labeling the Third World Woman as "native," essentially being in need of saving, an idea that Abu-Lughod (2002) has elaborated on extensively.

Furthermore, coming into the 1970s feminist movements in the United States were heavily critiqued of their middle-class whiteness and some Black feminist groups, having "emerged at the same time that white feminism did," had anti-imperialist visions, aligning their mission to include Third World Women (Roth 2003, 47). It started to become clear that women had been neglected in development projects and interventions, which lead to the creation of a new subfield of development, women in development (WID) (Escobar 1995). At the 1975 UN General Assembly, it was decided that the next decade will be a United Nations Decade for Women and should focus on issues and policies affecting women, including ideas of education, training, and family planning (UN 1975), as outlined by Boserup (1970) some years earlier. The assumption was that women's situations would immediately improve once they would be integrated into development agendas, therefore having no need to change other aspects of development work (Koczberski 1998).

Women in development, as a field, attempted to include women in the development discourse and subsequently, to interventions, but was also criticized for not actually focusing on the interests of Third World women, but the problem that women caused to development agencies and their functioning due to lack of integration (Rathgeber 1990). Additionally, it was criticized for concentrating solely on women and not paying attention to the patriarchal structures of mainstream Development (Chant and Gutmann 2002), and for being too nonconfrontational (Rathgeber 1990). Mueller (1991) encouraged WID feminists to work from inside the field to resist the explicit attempt to homogenize systems and 'save' women, and

focus more on development institutions. Abu-Lughod (2002) discusses similar dynamics questioning the feminists in the West trying to save Muslin women from the Taliban in Afghanistan, but do not focus on systems that create inequalities on a planetary scale. That being said, WID has also brought upon positive change and has changed the way in which Development approaches gender in the work (Escobar 1995).

The WID approach was intertwined with the modernization paradigm, essentially focusing on the fact that women will benefit with modernization, an idea that had been solicited before the turn towards the dependency theory. Mies (1998) explains how women were considered an underutilized or a nonutilized labor force within the WID approach, essentially hindering capital accumulation. With the inclusion of some neo-Marxist feminist ideas, an alternate approach, Women *and* Development (WAD) arose in the second half of the 70s (Rathgeber 1990). Although generally not considered separate from WID due to it being mostly an academically differentiated approach (Zwart 1992), WAD was influenced by the dependency theory and is focused on the fact that "women always have been part of development processes and that they did not suddenly appear in the early 1970s as the result of the insights and intervention strategies of a few scholars and agency personnel" (Rathgeber 1990, 492).

To recognize the social construction of differences between men and women and to focus on the socialist feminist ideas that those culturally shaped, constructed differences are cause for women's oppression, WID was replaced (or transformed) by the gender and development (GAD) paradigm in the 80s based on the work of postmodern and postcolonial feminists (Gordon 1996; Rathgeber 1990; Jaquette 2017). Part of the postcolonial criticism of WID was that it focused too much on Third World women as victims of patriarchy and that it concentrated too much on materiality (Mohanty 1991). How GAD differs from WID is in the

key aspect of not being "concerned with women *per se* but with the social construction of gender and the assignment of specific roles, responsibilities, and expectations to women and to men" (Rathgeber 1990, 494). With GAD, gender mainstreaming became an important aspect of interventions, it included aspects of participatory development, and changed how multi- and bilateral agencies restructured their programs, while at the same time, it has become evident that this approach has remained, at least partially, theoretical, due to the requirements for structural change that is harder to achieve (Jaquette 2017). Importantly, although funding for projects designed by local women's groups has increased over time, it has been found that the problems with both the WID and GAD paradigms has been the reliance on the notion of integration - of integrating or "mainstreaming" women into existing development structures (Koczberski 1998), or the assumption that with economic growth, gender equality will surely follow (Benería, Berik, and Floro 2016).

Concurrently with the previously mentioned economic recessions and the neoliberal turn in development in the 80s, the issue of gender became politicized because many states had privatized or reduced gendered social services, including child care and healthcare (Rathgeber 1990), which were/are seen as unproductive services (Sen 1998). Clearly, the structural adjustment policies had a differential impact on men and women, and during this time poverty became more and more feminized (Sadasivam 1997). After shying away from gender issues in the 70s and early 80s, the World Bank, in 1988, recognized that gender-neutral policies are ineffective in tackling women's issues, basing their arguments mostly on gendered economic activities (Collier 1988). Gordon (1996) elaborates on this by recognizing that "capitalist development can promote…gender equality if this is made a priority." (189) In intergovernmental meetings in the early 90s (1992 in Rio de Janeiro at the United Nations

conference on Environment and Development (UNCED), 1994 in Cairo at the UN International Conference on Population and Development, and 1995 Fourth World Conference on Women in Beijing) scholars and activists constructed “a common basic agenda on women’s rights in the broadest sense, and reproductive rights in particular” (Lewin and Silverstein 2016, 20).

GAD has been the main guiding paradigm regarding gender in development ever since and is used by scholars and development actors, including the World Bank and IMF to “discuss the relationship between development processes and women’s inequality” (Bhavnani et al. 2016, 26). There has been attempts to create and introduce new paradigms as well. Chua, Bhavnani, and Foran (2000) criticized WID and GAD for not including culture into the approaches and suggested a new paradigm titled: Women, Culture and Development (WCD), but for now they have not reached a wider audience.

Essentially, the problem of gender and patriarchy in development (especially in Africa) has followed similar dynamics as development and colonialism in general. Colonialism and development as continuation created inequalities and underdevelopment (Ziai 2015; Escobar 1992), therefore the need for development. Whereas colonialism, capitalism, and development introduced Western patriarchy with its gendered expectations of labor and monogamous nuclear families, thus allowing for a greater exploitation of women’s labor, and therefore the need for inclusion of gender in development interventions (Gordon 1996). Amartya Sen (1998) has recognized that these gendered expectations of labor and the so-called breadwinner ideology is a major cause for female poverty and limits their freedom.

Agricultural Activities

This dissertation focuses on agricultural development actors. Therefore, I have dedicated a section of the chapter on agricultural activities. The debates and criticism on modernization theory and practice and the subsequent rise of dependency theory prompted the new World Bank President in 1968 to shift focus from economic growth into the poverty alleviation and rural development, and also paved way to Green Revolution projects (Cherlet 2014), which paradoxically relies on modernization in its technocratic focus. With the Green Revolution, focusing on agricultural practices, inputs, and policies, several countries in Asia and Latin America witnessed a transformation of rural economies due to agricultural growth, but the same did not happen in the African context (Dawson, Martin, and Sikor 2016; McMichael 2004). In fact, it has been found that the Green Revolution technologies have had deleterious effects on people (Escobar 1991) and caused environmental degradation (Shiva 2010), agrochemical dependency (Dowdall and Klotz 2014), extinctions, and the loss of indigenous crops (Eliazer Nelson, Ravichandran, and Antony 2019). In a review paper, Chagnon et al (2022) situate agricultural development, both historical and contemporary, in an agro-extractivist context, where racialized imperial power has always played a role. Additionally, it has been demonstrated that the cash crop approaches had a variety of social consequences and were not able to diminish poverty (Gardner and Lewis 2012).

Postmodern critique of knowledge production was essential in starting to listen and incorporate indigenous knowledge in agricultural development programs. It was realized that Green Revolution technologies many times failed due to the assumptions that local knowledge was a hinderance and that scientific knowledge would lead to progress (Gardner and Lewis 2012). Although having its origins in the 70s, ‘Participatory Rural Appraisal,’ a label for a

"growing family of approaches and methods to enable local (rural or urban) people to express, enhance, share and analyze their knowledge of life and conditions, to plan and to act" (Chambers 1994, 1253), started to gain traction in the 90s. Similarly, in 1982 a new principle called 'farmer-back-to-farmer' was coined to include participation into the agricultural development (Rhoades and Booth 1982).

More recently, the Millennium Development Goals (MDG) as well as the subsequent Sustainable Development Goals (SDG) are intertwined with agriculture, and they also include climate change as an important topic. The MDGs were adopted at the 2000 UN General Assembly, and they were essentially used as development guidelines for the following 15 years that had "a moral imperative" (Cornwall and Brock 2005, 1049). Interestingly, the rise of environmentalism in the 90s, and discussions of sustainability are reminiscent of the 1940 colonial Development and Welfare Act that included an agenda on environmental degradation (J.M. Hodge 2007).

Many programs following the MDGs have focused on the environmental sustainability of agricultural development (not focusing on social aspects) and some have included the term sustainability, but continued without any changes towards that goal (A. Ferguson 2009). The MDGs were, however, formed in quite a top-to-bottom way with development ministers and heads of agencies, but did instill a goal to increase public support and therefore funding for development (Fukuda-Parr 2016). The SDGs were adopted as a continuance and transformation of the MDGs at the 2015 UN General Assembly to be more rights based than the MDGs (Koehler 2015), and they are seen as a global agenda for sustainable development including targets for not only the South (as the MDGs) but North as well (Fukuda-Parr 2016). The recognition of the interconnectedness of climate and agrifood systems and the links between

climate change and food security has allowed for the rise of the terms and practices of 'climate-smart agriculture' and 'payment for environmental services' or 'ecological accounting' to permeate the agricultural development world, thus creating another paradigm shift (Newell and Taylor 2018; Engel and Muller 2016; McMichael 2004). Additionally, what AgriCord and other development actors refer to as "value chain approaches," where agricultural producers and farmers' organizations are encouraged to embark on processing and marketing in addition to production, have been increasingly popular, but it has been found that there is a risk of further marginalizing women if appropriate engendering measures are not being followed (Rubin and Manfre 2014). Here engendering measures specifically refers to supporting women and women's groups to participate in value chains.

Development and Funding

Rossi (2004) states that "development interventions are maintained by (epistemic) networks of support" (557) which essentially means that there is some sort of a knowledge transfer to a 'target population.' Within development actor networks that support oftentimes refers to funding. Funding, coming from donors (bilateral, private foundations, development banks, etc.) maintains these knowledge transfers. Anthropological critique of development and the trajectories of development are interconnected as funding ebbs and flows with paradigm shifts, 'buzzwords,' and the degree of public support (Cornwall and Brock 2005). In this chapter I introduce how the previous may influence global development funding.

One well-known theoretical framework for understanding the globalizing world and the inherent disjunctures between politics, cultures, and economy, was proposed by Appadurai (1990), specifically the concept of '*scapes'* in referring to five elements of global cultural flows. The '*scapes'* (particularly *financescapes,* referring to movements of global capital and funding

for development; *ethnoscapes*, referring here to development actors and target populations; *technoscapes*, referring to a technocratic approach; *ideoscapes*, referring to flows of ideas and ideologies) and disjunctures offer a helpful backdrop in thinking about global flows of funding to development interventions and programs (296). Essentially, the relationships between all the mentioned scapes are constantly changing in development. These disjunctures have been evident, for example, in the case of gender in development where the donors and actors are pursuing something that may not reflect the social realities on the ground (Chaney 2017), showing a difference between policy and implementation (Rossi 2004).

As has become clear in this short history of development, there are a multitude of reasons for paradigm shifts within the field, which can then influence development funding. They may be economic recessions that trigger change or, for example, critique that triggers conversations eventually leading to change, and that change can refer to type of projects, funding mechanisms, policies, emphasis of importance or any other. Regardless of the reason for the shift, a disjuncture usually appears in the relationship between the scapes because there is a gap between "ideal worlds [in relation to development] and the social reality they have to relate to" (Lewis and Mosse 2006, 2; McDonald 1999).

To recap the main shifts discussed previously, in the 1929 Colonial Development Act, funding was for the first time directed to areas where returns were not directly expected, marking a shift towards 'aid' in development and could be considered as a starting point of bilateral aid. Public outcry of the conditions in the colonies then brought upon another shift in the form of the 1940 Colonial Development and Welfare Act, especially in the amount of funding, but also in what those funds should be used for (such as the agendas on environment and child labor). Bretton Woods and the post WWII gave rise to multilateral funding agencies

and focused on modernization of the Third World and the prevention of the spread of communism. During the neoliberal turn and the structural adjustment period the focus was on economic growth. Whereas the postmodernist, postcolonial period started to shift the focus from economic growth to more grass-roots activities, participation, gender, and poverty. This shift was essential in the rise of the NGO as well. Essentially, funding has always followed the criticism and paradigm shifts.

Donor countries have funded multilateral agencies, such as the IMF and World Bank, throughout the years without having much influence over what the funds are used for, although it is recognized that the US has heavily influenced the decisions of the World Bank in promoting free trade, for example (Gardner and Lewis 2012). From the 2000s this changed when 'earmarking' of donor funds became popular. Earmarking is a hybrid process combining elements from multi- and bilateral channels, where a donor stipulates where and what for the funds can be used, providing "donors with the opportunity to use the expertise and implementing capacity of multilateral agencies while keeping close control over the use of funds," but nevertheless, the vast majority of donor funds are still shared through bilateral means (Eichenauer and Reinsberg 2017, 172). Importantly, development projects or interventions "do not originate from design, but in the policy processes of donor agencies" (Mosse 2005, 23), the distinction being important since these policy processes of donors and subsequent funding are based in contemporary situations, such as elections and world events.

Buzzwords do guide funding, but they tend to also have an ideological grounding (Cornwall 2007). For example, France's dismissal of the civilizing mission and subsequent celebration of the development ideal due to being quantifiable, has had an echo in the so-called '*results-based management'* that is focused on finding evidence that development is working.

Whereas, '*good governance'* and the establishment of democratic institutions to pave way for free markets is reminiscent of the anticommunist agendas of decades ago (Cornwall 2007). These examples provide a helpful guide to thinking about the disjunctures in development, as the paradigms or buzzwords influence the actors to have a tendency to impose.

For example, some years ago, 'micro-financing' was seen as a panacea solution to poverty. In fact, Muhammad Yunus and Grameen Bank were awarded the Nobel Peace prize for their role in pioneering the concept of microcredit and microfinancing ("The Nobel Peace Prize" 2006). Micro-financing then gave way to 'impact investing' that expanded the concept and is seen as a part of "responsible investing and positive environmental, social and governance (ESG) considerations" (Hebb 2013, 73). As we can see the ideas of social change, free markets, democratic institutions, and environmental issues are embedded in these 'new' paradigms, such as circular economy.

Some buzzwords are critical though. Climate change, or climate crisis, is a part of the SDGs and plays an important role in contemporary development interventions thereby expanding the standard poverty reduction -model of development agencies into considering climate change adaptation and mitigation in their projects (Arndt and Tarp 2017), and as previously mentioned, funding for agricultural development projects is oftentimes reliant on this aspect. Often climate change adaption and mitigation is treated as a cross-cutting theme.

In this review, I have mainly focused on Western development actors, but in the last decade China has become a powerful force in the development field, especially in relation to infrastructure by establishing and operating the Asian Infrastructure Investment Bank and the New Development Bank. There has been a sort of reinvigoration of the Cold War development era where the antagonism between East and West was a guiding principle because "China's

geopolitical aims [have] raised doubt and opposition" (Kalathil 2018, 56). Furthermore, critics of the Chinese Development Banks say that they use 'debt traps,' lending money to developing countries which will then default and are forced to give up strategic assets or something else (Were 2018). Others claim that there is no such 'debt trap', but that a growing dependence is likely (Carmody 2020), or that the Chinese banks work just as other multilateral agencies such as the World Bank (Hameiri and Jones 2018). Furthermore, other rising economies in addition to China, such as Brazil, Korea, India, Kuwait, United Arab Emirates, and Saudi-Arabia have become donors, but have faced backlash from traditional donor countries development actors for fears of corruption and strengthening of rogue states, offering another glimpse into the financescapes surrounding development (Woods 2008).

Understanding Farmers' Organizations and Development

Farmers' organizations have been simultaneously considered as target populations and development actors by donors and agencies. This somewhat paradoxical existence can be helpful though. For ensuring participation, to have an organization consisted of the target population, which can also allow for combining local knowledge into the knowledge transfer, only seems rational (Jones, Glenna, and Weltzien 2014). Farmers' organizations (FOs), whether cooperatives, associations, or loosely based groups of people (Stockbridge et al. 2004), may be different to each other but have some general commonalities, such as the idea that collective action is a key principle in finding better access to markets or to add value (Hellin, Lundy, and Meijer 2009), and that the aim is to revitalize rural areas (Junpu 2018). An important distinguishing feature of these organizations is that they are member based (and have membership fees), and therefore they are not NGOs, although they may work with NGOs (Stockbridge et al. 2004).

In the last decade numerous donors and development actors have taken on interventions under the umbrella of 'farmer-to-farmer extension,' (F2FE) bearing a resemblance to the farmer-back-to-farmer approach from the 80s (Kiptot and Franzel 2019). Extension generally refers to agricultural advisory services that is now being offered by many farmers' organizations instead of governments, the decrease of government extension can at least partly be attributed to structural adjustment measures brought on since the 80s (Gubbels 1993). In analyzing F2FE in conservation agriculture (falling under the larger category of climate smart agriculture) Fisher et al. (2018) found that it can be effective in complementing other strategies and Kundhlande et al. (2015) stated that the F2FE approach "appears to be very effective." (40) Furthermore, Nakano et al. (2018) emphasize the temporal scale and how evaluation should only be conducted years after starting a F2FE program. Successful F2FE and other interventions regarding farmers' organizations require buy-in. In an intervention described by Li (2007), the project formed farmer groups and started handing out agricultural inputs without any knowledge as to whether those inputs could be used, really showing the need for community engagement and buy-in. Cleveland (1998) was adamant that anthropologists in the field of agriculture must participate "with farmers, formal agricultural scientists, and national and international policy makers in the search for sustainable agriculture for the twenty-first century." (337) Cleveland's advice is apt for researching farmers' organizations and development actors. And regardless of an anthropologist's work, I maintain that development actors should follow similar guidelines when working with farmers' organizations in general.

Farmers' organizations generally require more participation by their members than, for example, companies by their shareholders, and at the same time their decision making is political and social rather than technical (Gubbels 1993). Research that can elaborate on the

experiences of farmers' organizations has to consider this aspect at all times. Studying farmer cooperatives, Dowdall and Klotz (2014) are adamant that "Ethnographic research […] is central to assessing whether forms of risk management […] schemes are appropriate […] This research is crucial for choosing the proper tools to address the risks and uncertainties producers face in context as diverse as those we have explored." (123)

Anthropologically speaking, international development, "…may or may not be a distinctive apparatus that is separable from other historical relations between state, society, and culture, but it can be studied as the fraught institutional effort to make this so (or to resist it)—a scenario in which anthropologists are themselves implicated as policy makers, project workers, advocacy activists, or critics" (Mosse 2013, 240). Therefore, anthropology offers a way in which to study disjunctures in development, and farmers' organizations are important in this because they reflect socio-environmental landscapes and often donor policies in their being. Ethnographic research looking at the interactions of farmers' organizations and development actors is needed to understand the depth of their experience in how the decisions on certain level have effects on another. Although ethnographic studies of development have been conducted by applied anthropologists working in the development field or as outside researchers, research into farmers' organizations as relational actors in this system, particularly in relation to situations brought on by a pandemic, is novel. I purposefully use the term relational, because the farmers' organizations' existence, establishment, or functions may rely on donors and development agencies and that aspect is less commonly studied. More than half a century since the Bretton Woods agreements, the power still resides within the donors and development agencies. Studying the whole 'food chain' of donors, agencies, and farmers' organizations, or 'studying up' (Nader 1972), is pertinent in order to grasp the whole experience of farmers'

organizations. In the next section, I discuss the FEWs nexus and explain why this concept and framing of interdisciplinary research is relevant for the present study.

Agri-Environment

The Food-Energy-Water Nexus

The Food-Energy-Water Nexus (FEWs or the Nexus) emerged as a concept in 2008 out of discussions at the World Economic Forum on water scarcity, food insecurity, and the challenges of providing energy on a global scale (Waughray 2011). The concept was then launched to a wider audience in November 2011 at the "Bonn2011 Conference: The Water Energy and Food Security Nexus – Solutions for the Green Economy" in Bonne, Germany. The background paper for that conference has been seen as a founding document for the paradigm, highlighting the entanglements between the different sectors and the need for a holistic approach (Hoff 2011). The conference itself focused on pursuing three main objectives: to develop policy recommendations; to position the Nexus as an important concept for future conferences, such as the 2012 UN Conference on Sustainable Development in Rio de Janeiro, Brazil; and to launch concrete Nexus initiatives ("Bonn2011 Nexus Conference" 2011). The policy recommendations from the conference (2012) further elaborated on the inter-dependencies between food, energy, and water, but also with different actors, such as researchers, farming communities, civil society, and financing agencies. The document underlined food, energy, and water security as human rights, which ties the concept directly into the field of development.

According to the Food and Agriculture Organization of The United Nations (2014), the FEWs framework is important because population growth, migration patterns and further urbanization, increase in energy demand, shifting diets, and climate change, all exacerbate pressure to our food and energy production systems as well water resources. The Nexus rose from the proverbial ashes of Integrated Water Resources Management (IWRM) that was criticized for overlooking administrative boundaries, lack of specificity, providing a poor track record, and lack socio-cultural understanding, essentially for having too many limitations (Kurian 2017; Biswas 2004; Stein, Barron, and Moss 2014; Cai et al. 2018). IWRM was missing tangibility that the Nexus paradigm is trying to incorporate in it. In essence, the Nexus is about sustainability with a strong connection to the Sustainable Development Goals (SDGs) and environmental effects of the sectors (Yumkella and Yillia 2015; Stephan et al. 2018; Terrapon-Pfaff et al. 2018; Biggs et al. 2015). Since its inception, the Nexus has been used to frame research, policies as well as to design local production systems (Leung Pah Hang et al. 2016). It is becoming a buzzword that has power due to its equivocal meaning and managerialist technocratic approach (R. Cairns and Krzywoszynska 2016).

Even if a more technocentric and managerialist approach has become more ubiquitous, a clear consensus of a definition of the Nexus has never been reached (Endo et al. 2017; Galaitsi, Veysey, and Huber-Lee 2018; Wichelns 2017), although Simpson and Jewitt (2019) offer a seemingly comprehensive (albeit managerialist) one in saying that it is "the connections between these three resource sectors, together with the synergies, conflicts and trade-offs that arise from how they are managed." (2) Zhang et al (2018), have found that two types of definitions are the most prevalent. First is the interactions and interconnectedness of food, energy, and water, such as the need of water to grow food, and energy to harvest food, or to

transport it. Second, the Nexus is used as an analysis tool for quantifying links between food, energy, and water, generally from a natural science perspective. Smajgl et al (2016) further explain that in addition to the definition also research and applications tend to refer to inter-dependencies with the Nexus sectors, whereas Covid-19 al. (2014) have found an emphasis on security. Additionally, there have been suggestions to include other aspects directly into the Nexus framework. Melo et al. (2020) state that as forests are important aspects of both sustainable livelihoods and environmental management, 'forest security' should be included as an additional dimension to the Nexus. Although climate change and environmental security are seen as important parts of the Nexus thinking, they are also advocated to be included explicitly into the framework (Waughray 2011; Staupe-Delgado 2020; Q. Liu 2016).

One of the guiding principles of the Bonn2011 conference ("Bonn2011 Nexus Conference" 2011) was to include the social dimension into sustainable development through the Nexus paradigm. Wieglab and Burns (2018) elaborate on the social aspects by stating that the discourse around the Nexus issues relies mostly on economic, engineering, and natural science approaches, to be solved by technocratic solutions or the markets. It has become evident that there is disconnect with Nexus research and the original purpose. Technocratic approaches have been more prevalent, and the social dimension has been underrepresented. Although technology may offer temporal solutions to environmental problems, this technocratic approach often undermines the underlying causes of the environmental issues (Wiegleb and Bruns 2018). There has been a sense of positivist and apolitical view of the Nexus (van Gevelt 2020), due to which power imbalances causing disruptions within the Nexus are not sufficiently investigated and are often even reproduced (Urbinatti et al. 2020). In addition, most of the suggested instruments from Nexus research are focusing on free trade and other neoliberal agendas,

although through an environmental lens (Meisch and Leese 2015), whilst at the same time neglecting to include sustainable livelihoods approaches (Biggs et al. 2015). Embedded in these agendas mentioned above is the challenge that the Nexus may be recognized at a research level, but "not fully acknowledged on the ground" (Endo et al. 2018, 293), essentially meaning that they follow top-to-bottom tactics. Importantly, while the Nexus discourse revolves around overcoming siloed thinking, it may, paradoxically, reinforce "a rather narrow conceptualisation of sectors as categorical and clearly bound (analytical) units" (Stein, Pahl-Wostl, and Barron 2018, 181). On the one hand, in order to counteract and prevent Nexus of becoming merely a buzzword, Proctor et al. (2021) suggest standardizing Nexus research thus improving the ability of computer systems to use data from research more comprehensively. While on the other hand, Nexus knowledge cannot be expressed in simple recommendations (Urbinatti et al. 2020), or as a silver bullet solution for unsustainable practices (Williams, Bouzarovski, and Swyngedouw 2018).

The Nexus concept is considered an inter-disciplinary framework, yet social sciences have been mostly an add-on to research projects "conceived of by natural or physical scientists, or social scientists as facilitators of policies or programmes devised by others" (R. Cairns and Krzywoszynska 2016, 11). Hoolohan et al. (2018) underline that the transdisciplinary approach has the potential to improve any Nexus research, especially in understanding social and institutional dimensions as well as a variety of contexts, and Dallan Fontana and Boas (2019) add that a socio-political point of view is necessary. Stein, Pahl-Wostl, and Barron (2018) use *embeddedness* as a conceptual framework to describe how cooperation and coordination between Nexus actors depends on social relations; in how the actors are *embedded* within social structures. They found that we must critically engage with the social relationships in order to

make the Nexus more relevant to policy and practice. Covarrubias (2018) emphasize the need for a social flow analysis in addition to any material-based analysis in Nexus research because these aspects cannot, in reality, be separated. Furthermore, Mzimela and Ahmed (2018) highlight the need for an intersectional approach to FEWs research and applications due to the increasing vulnerabilities (especially in relation to climate change) on rural women. Mguni et al. (2020) used social practices approaches in looking at 'precarious consumption' to elaborate how vulnerabilities emerge in the Nexus context, and suggest that analyzing failures of "performance of a practice" (8) is revelatory of the functioning of the Nexus. I view these failures as disjunctures interrupting the system as experienced by the people. FEWs research seems generally to be more focused on the resource supply side of things and policies influencing that supply, only to be fixed by proper Nexus governance (Al-Saidi and Elagib 2017; Lele, Klousia-Marquis, and Goswami 2013). Urbinatti et al. (2020) elaborate on this and recognize the need for, not only inclusion, but rethinking of governance structures and "the cultural implications of transformation that are necessary and possible in 'Nexus' governance." (8) A theoretical framework known as political ecology may offer insight into these socio-cultural and power relations that are not typically found in the FEWs literature.

Political Ecology of Food, Energy, and Water

Frank Thone (1935) traced the causes of the Plains Wars into environmental and political origins, thereby coining the term 'political ecology.' His political ecology was something that combined political conditions and the environment, referring to how Indigenous American Indians were dependent on the grasslands that the settlers wanted to take for agriculture. In a special issue of the Anthropological Quarterly, Eric R. Wolf (1972) introduced political ecology in its neo-Marxist form and focused on connecting local ecosystems to a larger

context of political economy and power relations inherent in the capitalist system. Biersack (2006) adds that the political economy in political ecology grew more out of dependency theory and world systems theory rather than strictly Marxism.

Neumann (2014) explores the birth of contemporary political ecology to the rise of environmentalism in the 60s and 70s and concludes that political ecology, in one of its manifestations is a movement against industrialization and modernization. Whereas, Bridge, McCarthy, and Perreault (2015) find the roots of political ecology, at least in the Anglophone tradition, in the reaction against some of the reasoning and apolitical nature of the environmentalist movement. Peet and Watts (2004) emphasize the environmental movement in the origins of ecological anthropology but add that political ecology, as part of other works, was born out of critique of ecological anthropology.

To define political ecology, one is perplexed by the multitude of variations that have become included within the theory. Even so, the definitions do suggest that political ecology is an alternative to an apolitical ecology (Robbins 2012). Eventually, it seems, that the overarching guideline of political ecology tends to follow the definition that "Perhaps more than anything else, political ecology was (and is) an epistemological project, which set out to shatter comfortable and simplistic "truths" about the relationship between society and its natural environment" (Bridge, McCarthy, and Perreault 2015, 5).

Regardless of the lack of a clear definition, political ecology is useful in multiple disciplines, such as geography, sociology, anthropology, ecological economics, and sustainability studies, rejecting positivist or reductionist approaches to social relations and environmental science (Bridge, McCarthy, and Perreault 2015), and often include a commitment to activism (S. Batterbury 2018). But, because of this lack of precise focus,

Neumann asks “Would a political ecology of ‘Agave’ (an economically important plant) resemble in any way a political ecology of ‘the British Conservative Party’? In their use of the term, political ecology, can all of these authors possibly be referring to the same thing?” (Neumann 2014:3). These examples, purposefully, are extremes and most cases of political ecology share more similarities than them, even across disciplines.

At the heart of many political ecologies lies environmental degradation that has many forms, such as loss of biodiversity and productivity, among others (Robbins 2012). These can be seen as effects that human populations with all their socio-economic activities have on the environment. On the flip side, these effects then decrease the ‘usefulness’ of environments. As Robbins (2012) elaborates, “When a pasture cannot be used for its traditional purpose of grazing […] some kind of important change has occurred.” (110) This feedback loop, inherent in socio-environmental relations, illustrates the cyclical nature of environmental degradation, and at the same time of political ecology. As Harvey (2014) mentioned when talking about the relationship between capital and nature: “All ecological and environmental projects are socio-economic projects (and vice versa).” (249) In addition, when attempts are made to counter degradation by ameliorating negative effects, we must ask who is deciding how, why, and for whom?

All these dynamics tie political ecology into the production of risks, such as in the case of climate change (M.J. Watts 2015). The Food-Energy-Water Nexus is vulnerable to climate change in complex ways and incorporates an array of tangible contemporary and possible future risks (Howarth and Monasterolo 2017). Political ecology offers a way in which to investigate these, and other, risks and sectors separately and as relational components of the Nexus. Bringing these two frameworks together is one of the key contributions of this dissertation.

Food

The environmental impacts of food production have been extensively researched (Poore and Nemecek 2018); we essentially know what type of practices have larger environmental impacts. Furthermore, we know what type of consumption patterns have larger environmental footprints and we know how we could decrease emissions from food waste as well as human waste (Nemecek et al. 2016; Jewitt 2011).

Research that contributes to political ecologies of food are not necessarily inquiries into food or environmental effects of food in the biophysical sense, but rather power relations that shape food systems though socio-political-environmental webs of interaction. These include, for example, investigations into production, environmental impacts (Hoelle 2017; Gordillo 2017), food insecurities and resistance (Baro 2002), adaptation to climate change (Yeh et al. 2014), food waste (Gascón 2018), exports (Grossman 1998), power relations in agriculture (Giraldo 2019), local responses to global food crises (Zarger 2009), food justice (Agyeman and McEntee 2014), as well as the system as a whole (Galt 2013). The common thread among these differing approaches to political ecology of food is that they try to examine the dynamics of some aspect of food and socio-political-environmental relations.

The human population on the planet is growing and people need food to survive. At the same time, large scale food production may cause environmental destruction. This destruction is often framed as necessary because of the need to 'feed the world,' but it is also inherently unsustainable. This is, of course, paradoxical, since something that is unsustainable cannot continue on the same path, limits will appear, and the population will still be growing. Gordillo (2017) is adamant that this type of coupling of production and destruction is due to capitalist corporate models prioritizing profits over sustainability, both environmental and social. Hoelle

(2017) showed that while beef consumption in Brazil is linked to environmental destruction by way of production, it simultaneously latches on hierarchies of status and class, meaning that the explanation that economic reasons and development are all that is behind increased beef consumption, are not enough, and the "decision to eat meat is also related to cultural and social considerations." (758) This aspect poses a challenge to Nexus research because of the framework mostly relying on quantifiable data. In this dissertation, I endeavor to address this challenge by using qualitative data for FEWs research.

Food production can be destructive, but it can also fall victim to external conditions, especially in the case of smallholder farmers. Baro (2002) traced the diversification of rural Haitians' farming endeavors as a strategy to adapt to changing economic, ecological, and political circumstances, and therefore to avoid food insecurity. The farmers actively resist the changes affecting them. Similarly, Tibetan pastoralists are witnessing environmental changes in the form of increasing severe snowstorms due to climate change, making their way of life more difficult (Yeh et al. 2014). Past coping strategies, such as grazing on larger areas, have become increasingly impossible due to reduced mobility because of fencing that was based on assumptions about environmental degradation eventually having worse impacts than the assumed degradation. These examples show that economic and political decisions of the past (and present) cannot be ignored when looking for solutions to contemporary struggles in food production. During the pandemic, political decisions have had great impact on food production.

The political ecology of bananas has been revelatory of the local effects of global exports. Grossman (1998) has focused on three issues in his analysis of banana contract farming in the Eastern Caribbean for export purposes: labor, food, and the environment. The labor question relates to the control of local people by capital (and therefore global political

economies). Food, in Grossman's analysis, refers to declining local food production and need of food imports due to subsidized large scale US agribusiness selling low-cost food, trade liberalization, and structural adjustment policies, leading, for example, to increased export and food import dependency. The environment then refers to the environmental impacts of banana growing, focusing mostly on reliance on pesticide use and what Grossman refers to as 'deskilling' of labor, leading to pesticide misuse because of more diverse local agricultural systems were not as susceptible to pests than banana plantations are. When talking about agrochemical dependency and coffee exports in Guatemala, Dowdall and Klotz (2014) emphasize that the responsibility for the misuse of pesticides often lies on false advertisements and sellers promoting the 'more is better' approach, adding another layer of context. Agriculture, and agricultural development, is laden with power dynamics of which the agrochemical dependency and banana export system are examples of. Giraldo (2019) sees that to balance the power relations we need to look at agroecology as a social force that could inform agricultural development. To do that though, agroecology needs to include historical and political contexts into the resistance. Montenegro de Wit (2020) similarly suggests that agroecology should learn from abolition and the ways in which to dismantle exploitative systems.

Agyeman and McEntee (2014) explain how urban political ecology is helpful in framing food justice as a way to expose processes that cause injustices in the first place. As with agroecology in agricultural settings, urban political ecology of food justice offers a way in which to recognize "political, and economic processes responsible for the myriad food outcomes that FJ scholars are interested in understanding" (Agyeman and McEntee 2014, 217). Furthermore, with the rising prices and food shortages during the 'global food crisis' of 2008,

Q'eqchi' Maya communities in Belize, in order to cope, had to rely on numerous strategies they have formed over time (Zarger 2009). These strategies reflect agency, but global events, markets, and the push towards agricultural business (instead of subsistence) may decrease those options, reflecting the power differentials mentioned above.

At other end of the food system, food waste is not without power contexts either. Although the general assumption is that logistics and improper management are behind most of the food waste, a political ecology analysis shows that global agri-food systems and power imbalances are, in fact, the major causes and that the solution is political, not technological (Gascón 2018). It is safe to say that the whole food system therefore is an intriguing topic of inquiry for political ecologists. I started this food section by explaining how environmental effects of food production are largely known, in the biophysical sense. Galt (2013) outlines how we should study the food system in its entirety by increased interdisciplinary work and societal engagement by political ecologists.

Energy

As with food, the political ecologies of energy offer a wide array of topics under the general umbrella of energy. Nexus research often focuses on quantitative aspects of energy production and use, highlighting sustainability and policy aspects (Kaddoura and El Khatib 2017). Already in the early 80s, Nader (1981) emphasized the exclusion of power discussions from energy analyses, claiming such analyses focused too much on supply and demand. Anthropological and political ecologist interest in energy, therefore, lies with understanding of energy as a relational topic, laden with power dynamics, where concepts such as energy ethics, energy justice, and democratization of energy emerge (J. Smith and High 2017; Sovacool 2016; Lennon 2017; Ahlborg and Nightingale 2018; Remington and Tracey 2017).

Energy transitions are often based on techno-economic explanations of energy needs, which can sometimes lead to conflict. In underlining this aspect, Martínez and Castillo (2016) explain how hydropower has become a modernizing tool for governments, often neglecting socio-cultural sectors, and call for community engagement in socio-energy system planning to avoid possible conflicts. Similar dynamics are seen in energy politics in the Navajo nation where a planned construction of a coal-fired power plant was met with resistance by Diné women centering on exploitation, colonization, and human and environmental health with energy production (Powell 2017). Nader et al. (2010) refer to these dynamics when stating that while technological advancements have potential in bettering lives, all societal deceptions must be tackled before any energy transitions are set in motion. So, when planning for energy futures we cannot simply think about an energy source, its raw material acquisition or environmental effects, we must consider the power structures that are formed when new production facilities or ways of producing energy are created (R.N. Adams 1975). Therefore, any energy transition, as creating disjuncture, has then the potential to also "remake societies in fundamental ways" (Melosi 2006, 16).

Because of the embedded concept of power, political ecologies of energy tend to have an emancipatory aspect in them. For example, solar energy has been utilized in intersectional social and energy justice endeavors in order to decolonize energy (Lennon 2017). Urban political ecology has been applied with roof top solar and to challenge cost shift discourse of utility companies, who are saying that if people use solar there will be more costs to lower income customers (Remington and Tracey 2017). Buechler et al. (2020) found that solar energy projects can act as decentralizing agents and as a way into a more sustainable energy future that relies more on communities, especially on women, rather than corporations. Emphasizing

inequity and social hierarchies in renewable energy development therefore offers potential for economic, social, and environmental benefits (Krupa and Burch 2011).

Electricity use and infrastructure to make that possible is often taken for granted, but any disruptions to that are explanatory of societal power relations, the politics electricity networks, and vulnerabilities, through ways in which people cope with the disruptions as well as how and where they happen (Silver 2015). Electrification processes themself can, on the other hand, destabilize these power dynamics and social hierarchies by way of creating room for disadvantaged groups (Ahlborg and Nightingale 2018). In addition, even if a community, particularly in Global South, has electricity, cooking and heating is often achieved through the use of wood-based fuels (or coal) that are also a source of pollutants decreasing inside air quality (Shen et al. 2015). This suggests that forestry or the use of forest products should be looked at as an energy question in addition to a question of deforestation or other socio-ecological aspect. At a time when biomass, as an energy source, is suggested to be an alternative for fossil fuels, questions on actions of international forestry companies are being questioned by activists and NGOs because of the climate change effects as well as socio-ecological conflicts that have arisen (Alarcón 2019). Forestry, specifically tropical timber production and scientific forestry has been a colonial project, with histories of even outlawing subsistence use of forest products (Mukherji 2006; Bryant 1997). In the recent decades, however, non-timber forest use by forest dependent communities has been seen as a way to combat deforestation and to resist commercial timber production (Natcher, Hickey, and Davis 2004).

At a global scale, energy, of course, is also a question of global geopolitics, mixing corporate interests, modernization (and therefore integration), military interventions, and global

hegemony (Labban 2009; Michael J. Watts 2005). The incorporation of geopolitics and political ecology has become known as geopolitical ecology wherein local ecologies are affected by geopolitics, although not always in relation to energy (Bigger and Neimark 2017; Massé and Margulies 2020; S.P.J. Batterbury, Kowasch, and Bouard 2020). Foreign investments into energy sectors are at the heart of geopolitics. In the height of the biofuel craze, palm oil was seen as lucrative investment opportunity in African tropical forest zone, but because of the decline of oil prices in 2008, biofuel plans were quickly dropped when it was realized that the plant had more value as a food crop (Linder 2013).

Furthermore, Arriza-Montobbio et al. (2010) show how *Jatropha*, a biofuel plant, that was promised to alleviate poverty and increase energy security, ended up increasing existing socio-economic inequalities. The topic of biofuels is especially intriguing because of the direct connections with agriculture and food production, reinforcing the aspect of interconnectedness embedded in the Nexus. Although some plants, such as *Jatropha*, are said to grow well on marginal lands, growing of biofuels on agricultural lands is questionable, especially considering that their environmental effects may be higher than when using gasoline as an energy source (Magdoff 2008). Additionally, agricultural inputs, especially fertilizers but also the use of farm machinery among others, can be seen as forms of energy or using energy because the production requires vast amounts of fossil fuels (Ghisellini, Setti, and Ulgiati 2016; Pimentel 1980; Khan et al. 2009). There is a hidden industrial ecology in agricultural energy needs that only reveals itself with investigation to origins of the inputs, the industrial complexes that are not without their political contestations regarding the energy sources they use, such natural (also known as corporate) gas, and emissions of carbon dioxide (Huber 2017).

Water

Water is, of course, a key ingredient in food production, as any agricultural endeavor is dependent on it, but political ecologists have found that water in agriculture is not without its social, political, or corporate contexts (W. Adams, Watson, and Mutiso 1997; Barnes 2014). For example, irrigation water for agriculture from groundwater sources is often contested due to the possible environmental effects as well as power differentials in access to such water (Mukherji 2006). Furthermore, agricultural effluent has the potential to pollute fresh water sources which may lead to conflict (Rodríguez-Labajos and Martínez-Alier 2015).

Several energy sources are reliant on water either as a direct source of energy, such as in hydropower, or indirectly, as in certain forms of solar power and cooling for nuclear power and others. These interconnections show that the Nexus may provide a helpful framework in, not only theorizing about water, but to effect change as well. The demonstrations in 2016 against the planned Dakota Access pipeline that was to be built to transfer crude oil through Standing Rock in North Dakota are an effective example of this. The Standing Rock Sioux Tribe opposed the pipeline for fear of pollution to their water sources, as well as desecration of ancient burial sites, and used the slogan 'Water is Life' to underline the importance of these demonstrations (Cappelli 2018; Powell and Draper 2020). There is indeed a relationship between water and energy that intertwines corporate and governmental interests and that may lead to conflict. As mentioned above, some hydropower projects are also evidence of this sometimes unstable relationship (Martínez and Castillo 2016). It is now clear that many conflicts over "extractive activities, are indirectly conflicts over water" (Rodríguez-Labajos and Martínez-Alier 2015, 544). A common thread with these energy-water and food-water conflicts is that there is

potential in creating new social movements that can influence future water management (Rodríguez-Labajos and Martínez-Alier 2015).

In addition to the entangled existence, water, especially water scarcity, the perception of water scarcity and the failure to provide safe drinking water, has been a topic for political ecologists for some time now and has become a distinct subfield of political ecology (Loftus 2009). Water security (and scarcity) is a concept that is embedded in biophysical conditions and climate change, as well as socio-political relationships and is often more about social conditions than absolute scarcity (Johnston 2003). The Millennium Development Goals and the subsequent Sustainable Development Goals both include access to water as one of the goals and it is recognized that there is enough water on the planet to sustain us; the question is "How to choreograph the necessary politics to ensure this?" (Loftus 2009, 953). As with food or energy justice issues, political ecologists are proponents for water justice and recognize the need to restructure socio-political-environmental for that to occur. Buechler et al. (2015) emphasize the role of women and indigenous groups in this process of reorganization and possible resistance that "[…] help foster inclusivity in working toward more equitable, effective, and enduring policies." (239)

Global inequalities are evident with tourism, where questions of who travels and where are revelatory of those dynamics. Although tourism can have an emancipatory effect and challenge local existing inequalities (race and gender for example) (Johnson 2018), it can literally transform local water flows (as the water flows to the tourists for recreation and consumption), due competition over water resources and increased prices (Cole 2017; Mosedale 2015; Gössling et al. 2012). With changing weather patterns, such as decreased rain, brought on by climate change, deposits of groundwater can become strained. Tourism and the normative

expectations of tourists, particularly the amount of water tourists are accustomed to use, can add additional pressure to the depleting groundwater sources, which can lead to marginalization and eventually to conflict (LaVanchy 2017). Similarly, as with tourism, the process of development can introduce new water norms into local socio-ecological water systems, which can also influence power relations therein (Kovács et al. 2019).

Urban political ecologists use the concept of hydro-social cycle that describes an urban waterscape to be consisted of 'metabolic circulation,' "through which all manner of 'agents' are mobilized, attached, collectivized, and networked" (Swyngedouw 2006, 113). This waterscape, this assemblage of human and nonhuman entities is a system that has its historical contexts and power relations. Because of these connections, any decisions on water and the hydro-social cycle management can always be politically contested (Swyngedouw 2009). This is also true for discussions and decisions on corporate use of water, especially in water scarce regions, including aspects of globalization (Aiyer 2007). In Florida, USA, these types of contestations are a contemporary issue. In January 2021, Nestlé, the world's largest transnational food and beverage corporation, were given rights by the local government to extract water from Ginnie Springs, one of the springs that provides the Floridan Aquifer, sparking outrage and opposition (Saunders 2021).

The Political Ecology of the Nexus and Agricultural Agency Responses to Covid-19

As parts of the Nexus, food (or agriculture), energy (as fuel, electricity, etc.), and water are interconnected. When trying to look at the sectors through the political ecology lens, I realize that the separation of environmental projects from socio-economic ones in general, is impossible. For this reason, our inquiries should encompass the Nexus as this interrelated presence and political ecology offers a way in which to do that while maintaining a contextual

understanding. When considering the responses of agricultural agencies (here farmers' organizations and agri-agencies) to the global Covid-19 pandemic this kind of contextual understanding is important. It is essential since "Anthropologists recognize in these patterns [social entanglements of the pandemic] not only a rupture but also the familiar, as if what can be seen now is not new but has simply been made clearer" (V. Adams and Nading 2020, 1).

The contexts where the agencies operate are myriad, especially when considering that farmers' organizations are (in this case) in the Global South while the majority of agri-agencies are in the Global North. The dynamics and power differentials that appear because of this North-South, developed-developing, structure of development that remains racialized, investigated in the previous chapter, may have influenced local responses to the pandemic. Furthermore, local power differences exist as well, both in the Global North and South, all having their unique impacts on various levels of development actor responses. It is these 'power geometries' that shape the socio-natural environments the farmers' organizations and agri-agencies inhabit (Swyngedouw, KaÏKa, and Castro 2002).

Because agriculture is an important aspect in both the Nexus and the political ecology of all the sectors therein, agri-agency and farmers' organization responses to the COVID-19 pandemic are intertwined with them as well. The pandemic has interfered with the work of agricultural value chains and farmers, the whole agri-food system, due to disruptions to, for example, input distribution, transportation, ability to work, and access to markets (Rondeau, Perry, and Grimard 2020; Morton 2020; Apostolopoulos et al. 2021; de la Peña García, Zimmermann, and Eleuterio 2020). Apostolopoulos et al. (2021) underlined the need for further research on the topic of agri-food entrepreneurship and the pandemic, for example, in how the

crisis has been encountered in different areas and what measures have been taken, as well as whether and how the crisis has provided opportunities for possible positive change.

Grounded in the ethnographic fieldwork for this dissertation, I argue that political ecology approaches can be helpful in answering these questions, and furthermore, in relation to the Food-Energy-Water Nexus, it is important to include more political, ecological, and social context than would be possible by using Nexus approaches alone, given their greater reliance on quantifiable, macro-scale data. To date, some preliminary evidence suggests that aid initiatives and cooperation within agroecology movements and farmers' organizations may be important coping strategies during the pandemic or other crises (Tittonell et al. 2021; de la Peña García, Zimmermann, and Eleuterio 2020). Additionally, there are indications that the pandemic also acted as a catalyst for farmers' organizations in adopting more sustainable agricultural practices because of their desire to detach from using external outputs that have become more expensive or unavailable during the crisis (Martey et al. 2022). I return to this point later in the dissertation.

The FO responses are different from agri-agency responses simply due to the different mandates they have, how they operate, and what their positions are within overlapping fields of development actors. They are intertwined, as the responses of farmers' organizations are to some degree dependent on donor funding received from of agri-agencies. Generally speaking, most funds in development projects are earmarked for a specific purpose. They are also tightly linked because the global pandemic caused a situation that had not been encountered before on the scale that we witnessed it; throughout this project I investigated how those dynamics with funding and responses played out. For these reasons, political ecology and the Nexus were both helpful because the way the funding is used directly influences local responses; those responses

may then influence one or several aspects of food, energy, or water systems. For example, if the pandemic has had a negative effect on prices of fertilizer, would changing funding use restrictions have an effect on the food and energy aspects of an agricultural endeavor by a farmers' organization? What if funding from donors to agri-agencies changed due to the pandemic, how did that influence activities down the line? This type of analysis is suitable for a political ecology of the Nexus.

Epidemiological Context

In a political ecology of the HIV/AIDS epidemic in sub-Saharan Africa, King (2015) found that because of the actions of international funding agencies, NGOs, national governments, and others, access to drugs was increased. It is not within the mission of agricultural agencies to tackle public health crisis directly with funding drugs or vaccinations but responding to the pandemic can be because the effects of the pandemic are and were felt in the agricultural systems and the farmers' organizations that are supported by the agri-agencies. In this research, I explore whether possible actions during the pandemic will have or have had a similar positive effect as with increased treatment for HIV/AIDS.

Political ecology of disease suggests that there are socio-cultural-environmental-political reasons for how diseases spread (Mayer 1996), and Turshen (1984) exclaims that in the African context, spread of disease and medical services have been heavily influenced by colonial and post-colonial economic practices.

Furthermore, epidemiologists state that the spread of disease or virus vectors, such as mosquitoes, to new areas is often linked to changing environmental conditions caused by climate change, deforestation, or other (Andersen and Davis 2017; Bouzid et al. 2014; Olivero

et al. 2017). Covid-19 is not dependent on virus vectors for spread but environmental conditions were important in the mutation of the virus and the viral spill-over in the first place and the subsequent spread as well (T. Wu 2021). On the one hand, environmental changes may cause diseases to emerge and to spread, while on the other hand, the disease or pandemic in this case, may have environmental and agricultural landscape consequences as well.

Insight from Anthropology of Disasters

The agricultural agency responses to the Covid-19 pandemic, especially in how the responses of agri-agencies relate to farmers' organization responses, are essentially about vulnerability, and vulnerability has a lot to do with adaptation or mitigation to hazards, disasters, risk, and eventually, resilience (Wescoat 2015). While this pandemic is unlike the disasters that are generally described in literature, anthropology of socio-natural disasters can be helpful and provide insight into the agri-environmental and organizational consequences of this crisis.

To engage with anthropology of disasters and to apply it, one must define concepts such as hazards, disasters, crisis, risks, vulnerability, and resilience that are generally used to describe an event, situation, or people dealing with those events. A hazard can be seen as something that has the potential to disrupt, the potential to damage, it is an agent that may act as a 'fire starter' for a disaster but is not singularly responsible for a disaster (García-Acosta 2002; Hoffman and Oliver-Smith 2002). Disaster then refers to the unequal distribution of hazards and the impacts that have social, political, historical, and spatial determinants (Faas et al. 2020; Button and Schuller 2016). What is very relevant here is that disasters "display and articulate the linkages

between local community and larger structures," meaning that disaster anthropology may offer insight for research on farmers' organizations, agri-agencies, and the pandemic (Hoffman and Oliver-Smith 2002, 10). Crisis and disaster are often used as synonyms for catastrophic events but there is also tension between the concepts, where 'crisis' is used to mask how the effects of a catastrophe are socially constructed, whereas in the anthropological literature context for those effects are embedded in the use of 'disaster' (Barrios 2017). I am inclined to use 'disaster' as a framework for understanding responses to the Covid-19 pandemic and 'crisis' as an explanatory word, describing the acute seriousness of the global pandemic.

Risks and hazards are not the same. Experience of risk is subjective and depends on cultural settings and any assumptions on uncertainty (Boholm 2003; Alaszewski 2015). So, in the case of the Covid-19 pandemic, the virus itself is a hazard and the risks are dependent of the socio-political-cultural-economic situations people find themselves in. For example, in the United Stated, risk factors for contracting the virus include type of job and income level, which are highly racialized and gendered, meaning that if you are able to work from home, you experience less risk than someone who has to work with other people, connotating the concept of vulnerability (Faas et al. 2020). The pandemic is a disaster that also has compounding effects, exacerbating mental health, diet, domestic and gender-based violence, racism, and substance abuse issues, and importantly, from "hazard and vulnerability perspectives, the pandemic disaster was not natural, but was entirely socially caused" (Kelman 2020, 1).

For decades, anthropologists of disasters have focused on vulnerability as way to explore and explain risk distribution in societies. Lately though, there has been growing discomfort in the use of vulnerability and vulnerable as descriptors of people because "it can be insulting to individuals and communities with whom we work, and/or with whom we identify,"

but it is at the same time useful in showing inequities and how disasters are produced against a sociohistorical backdrop (Marino and Faas 2020, 33). Resilience, on the other hand, describes the ability of a community or system to maintain function during a disturbance or bounce back after it (Adger 2007; Holling 1973). In considering food system resilience, Béné et al. (2014) explain that resilience describes the system's capability to absorb a disturbance and then adapt for future disturbances. In agricultural systems, resilience is based on human-environment relations (Walker and Salt 2006), and if a system is vulnerable, its resiliency is lost, and "losing resilience implies loss of adaptability" (Folke 2006, 262).

In disaster anthropology, resilience does not generally refer to ecological systems but rather, more often, social ones. Disasters can be revelatory of lost resilience and inability to adapt but proper management practices and responses may aid in recovery (Colding, Elmqvist, and Olsson 2002). For agri-agencies and farmers' organizations, disasters pose a threat to the continuation of operations (Burnard and Bhamra 2011). The resilience of those organizations relies on the resources available and organizational processes that are focused on restoring operations as well as their social capital (Sutcliffe and Vogus 2003; Panday et al. 2021). After all, cooperation is a form of social capital, which in itself may be a form of power (Béné 2020; Bourdieu 1986). In other words, "…resilience is an emergent property that relates to the inherent and adaptive qualities that enable an organisation to take a proactive approach to threat and risk mitigation" (Burnard and Bhamra 2011, 5595).

But the concept of resilience is also problematic as it focuses on the responsibilities of affected communities, whilst diverting attention away from inequalities causing the need for resilience in the first place (MacKinnon and Derickson 2012; Kaika 2017). That being said, it is

still used and what anthropologists can do is to "focus on holding existing usages of resilience to careful scrutiny in light of existing ethnographic knowledge" (Barrios 2016).

The Covid-19 pandemic has been found to have environmental consequences ranging from positive effects, such as decrease of greenhouse gas emissions and water pollution (F. Liu et al. 2020; Muhammad, Long, and Salman 2020), to negative ones, such as halting recycling systems and increased amount of medical waste (Urban and Nakada 2021; Zambrano-Monserrate, Ruano, and Sanchez-Alcalde 2020). Arora et al. (2020) invoke the concept of resilience when claiming that the environment has 'bounced back' from a disturbance during the pandemic; the disturbance being human activity on a grand scale. The expectation, or fear, was that once the restrictions are lifted, the positive environmental effects dissipate as quickly as they appeared, further suggesting that we should study the pandemic effects to develop strategies for environmental sustainability (Rume and Islam 2020; Rupani et al. 2020).

Anthropology of disasters can be helpful in providing insight into these discussions because it recognizes that all the effects of disasters are formed within certain socio-economic-political confines. This also includes environmental effects since the disease itself is not causing any positive or negative environmental changes, although that point may be redundant since causality doesn't stop with theoretical borders. For example, the greenhouse gas emissions have decreased due to decrease of transportation, which decreased due to travel and other restrictions on movement to prevent the spread of disease, which then led to many people losing jobs and companies going bankrupt, which then increased people in need of aid. So, there is clearly a connection between political economy end the environment, between the "financial […] and political processes interacting with earth systems" (Masco 2017, 73). This also shows how and why political ecology has been interwoven into disaster anthropology as a guiding paradigm

(Barrios 2017; Faas et al. 2020). In addition to environmental effects, mental health effects of disasters are evident (North 2004; Henderson, Elsass, and Berliner 2016). As disasters bring about mental health challenges, disaster affected communities may require mental health services (Chase 2020). It is therefore possible for disasters to act as catalysts for increasing mental health governance (Seale-Feldman 2020).

Smallholder farmers have been found to be, at the same time, vulnerable and resilient to environmental change in agricultural landscapes (C.A. Harvey et al. 2014). They are vulnerable since they depend on environmental conditions for subsistence and/or livelihoods and resilient because they have been coping with environmental changes using a variety of risk coping strategies for as long as agriculture has been a source of food. As mentioned in the previous sections, agriculturalists have encountered disruptions in their activities during the pandemic due to several reasons, such as closure of markets and lack of transportation. In addition, the Covid-19 pandemic has been found to increase food insecurity and decrease income with smallholder households (Huss et al. 2021; Guido, Knudson, and Rhiney 2020; Middendorf et al. 2021). It seems though, that subsistence farmers are faring better when compared to commercial farms that are dependent on hired labor or farmers who depend on other work for additional income; these farms being more exposed to systemic shocks (Nchanji and Lutomia 2021; D. Gupta et al. 2021), again invoking resilience of the socio-economically vulnerable. Interestingly, some evidence also shows that farmers deprived of chemical fertilizers and pesticides due to the pandemic have been forced to use organic methods to replace the chemically derived compounds (D. Gupta et al. 2021). On the other hand, with the negative effect on livelihoods, the pandemic may have increased pressure on local natural resources such as forests (Khuc et al. 2018; Bista et al. 2022).

Furthermore, as the world economy struggles to get back to its pre-Covid days, some governments have decided to relax their environmental regulations on fossil fuel use and abandon pledges to renewable energy sources (Siddique et al. 2020), and some have had to cut funds allocated to environmental protection agencies (McNeely 2021). One of the largest effects of the Covid-19 pandemic globally is its distractive nature. For over two years, news stories revolved around the disease and pandemic, diminishing the focus on environmental challenges, especially climate change and biodiversity loss (McNeely 2021). How these dynamics will play out in the future can be guided by anthropology of disasters.

Application of Theories and Frameworks

In conclusion, this research builds upon this existing literature of development, disasters, political ecology, resilience, and the FEWs Nexus and contributes to the understanding of development actors' Covid-19 responses and their interconnectedness during a pandemic. This dissertation should not be considered as a critique to development as such, as "critique has run out of steam" (Bruno Latour 2004) , it is more an attempt to work within the framework of development to document and create change, borrowing ideas from post-critical pedagogy to acknowledge what has been useful in the time of crisis (Hodgson 2017). Many critiques of international development attempt to dismantle the field when anthropology could alter the nature of development projects (Venkatesan and Yarrow 2012), even if it has been hard for anthropologists (Hoben 1982). Political ecology has the potential to intertwine the anthropologies of development and of disaster into a coherent theoretical framework for my study, one that takes into account the previously mentioned dualist (developed/developing) aspects of development and any power relations therein. My understanding and use of political

ecology takes into consideration the Franz Fanonian[2] critique by Parker (2021), wherein she states that political ecology "remains committed to a distinction between the political and the ecological insofar as the polis is not questioned." (59) The critique is helpful for this dissertation research, since it recognizes the colonial histories of development, where the 'polis' refers to the imperialist mother countries.

In this chapter I have elaborated on what a productive intersection between political ecology of food, energy, and water could look like, scrutinizing each of these factors with their own power dynamics and interconnections. Nexus research often leaves out the social, political, and historical aspects, which were considered important when the concept was formed, but are handled at a macro-level scale at best. Furthermore, I explained the way agriculture and agricultural organizations are inherently intertwined with all the nexus areas. Additionally, as the agricultural organizations in this research are development actors with donor funding from the Global North, political ecology is useful in investigating the power dynamics that came to play during the pandemic, for example in relation to funding. Therefore, this dissertation research offers an ethnographic exploration of a political ecology of the FEWs Nexus in an agricultural development setting.

Disaster anthropology's concern with how disasters may provide a new way to see transformation in social and political relations leads to an important overarching question for the study: What were/are the perceived risks and subsequent responses of farmers' organizations (FOs) (and communities) and agri-agencies under the umbrella of AgriCord to the Covid-19 crisis*?* Similarly to disaster anthropologists, political ecologists have tried to "denaturalize so-called "natural" disasters by demonstrating their disproportionate

[2] In Wretched of the Earth (1961), Franz Fanon takes discusses the separation of human and earthly influences as they appear in colonial circumstances.

consequences…" (Mostafanezhad 2020, 640), and put those consequences in their historical and global contexts to explain and analyze phenomena (Schubert 2005).

Political ecology takes into account the power relations embedded in social-ecological systems (and possible change therein) and can help in exploring the resilience of communities deeper than the resilience framework in itself (Hoque, Quinn, and Sallu 2017; Quandt 2016). While taking into consideration the necessity of multi-directional learning (Oldekop et al. 2020), these dynamics are helpful in elucidating answers to my question: How might these responses inform community resiliency for possible different futures with the different actors?

Political ecology has strong connections to the anthropology of development and they are, at times, quite inseparable (Turner 2014). As political ecology addresses the political economies influencing local decisions and development anthropology offers context to development, they provide guidance into queries of global funding flows during the pandemic. Rocheleau (2008) elaborates this connectedness by showing how the historical contexts of development programs are political (and may have environmental consequences making ecology explicitly political as well). Furthermore, the Food-Energy-Water Nexus (FEWS) is currently being promoted as a novel framework for international development and it, by any definition, incorporates ecology, especially when advocated for in combination with the Sustainable Development Goals (SDGs). AgriCord works with farmers' organizations which are engaged in agricultural activities and the Farmers Fighting Poverty program focuses on the SDGs, therefore participating in the Nexus framework. This chapter has illustrated the many ways that international development is inherently political and linked to ecology. When considered through a political ecology theoretical lens it is obvious that the FEWS Nexus is also inherently political. Combining the two approaches will also be helpful to address the question:

How might these responses inform policies around the Food-Energy-Water Nexus in the development context? The following chapter presents the study methodology and research design.

CHAPTER THREE: RESEARCH METHODS

Ethnographic Approaches

Online Ethnography

To be online is to be connected to another computer or to a network and more recently, it specifically refers to be connected to the Internet. So, in order to do online ethnography, one must be connected. Questions of who are connected, why, and how, are integral in this process because the 'online' may restrict people without the possibility to connect (with differences in ethnicities and gender as well), while also may allow for greater access, such as with people with disabilities or vulnerable groups (Murthy 2008). Access to online research has also allowed for the "redefinition of the research field," (Sade-Beck 2004, 45), and even created a *need* to "reconceptualize what counts as a field site"(Hallett and Barber 2013, 308). These two ideas are similar but the former focuses on the opportunities, while the latter is more adamant that the inclusion of online environments cannot be overlooked in any ethnography. In addition to opportunities for new field sites, going online also presents methodological challenges, such as how to define boundaries in something that is temporally and spatially hazy (Tunçalp and Lê 2014), ethical challenges, especially regarding what is perceived as public as opposed to private (in social media in particular), questions about informed consent, and if generalizations from online to the offline world are applicable (Lester 2020; boyd 2008; Battles 2010; Golder and Macy 2014).

It is also important to separate being online from being in cyberspace or connected to a virtual world. This is so, because virtuality and cyberspace include an assumption that they are "opposed to and disembedded from the real" (D. Miller and Slater 2000, 4), but the Internet is not separated from reality per se; it is a continuation of social structures. Hallet and Barber (2013) refer to this as 'online' now being peoples' 'natural habitat' and therefore the separation of real and unreal in regard to online environments is futile, and Garcia et al. (2009) claim that the distinction between online and offline communication has become hazy and hard to distinguish.

Additionally, it is important to differentiate online ethnography from virtual or cyber ethnographies. Hine (2000), who coined the term virtual ethnography, said that it is "ethnography in, of and through, the virtual." (65) Virtual and cyber ethnographies have focused on places that are particularly seen as separated from the 'real' (Angelone 2019), such as the online virtual world 'Second Life' (Boellstorff 2008), online role-playing games (Simona 2007; Nardi 2010), online sex groups (Ashford 2009), and immigration from a closed online game to another platform (Pearce 2009). The mere existence of these online places is nonetheless evidence of the connection to the 'real' and they "are also cultures and sub-cultures in their own right" (Angelone 2019, 280), but these online spaces also create social change that becomes implanted in cultures (Hallett and Barber 2013). One important distinguishing feature is that the study of virtual spaces often, if not always, includes a virtual community that operates in a network mediated space and studies are designed to look at only those online lives (Ward 1999; Akturan 2009; Hallett and Barber 2013). Combining a location-based augmented reality world (Pokémon GO), social media sites, and visual online ethnography, Alavesa and Xu (2020) show how different realities can be blended and how the physical participation in an

augmented reality game outside of the confines of homes becomes a public activity. Furthermore, some use the term digital ethnography to describe online research that may or may not include other digital media in addition to purely online research (Murthy 2008).

When talking about online or Internet research and ethnography, we must recognize that the Internet is not a singular space, a monolithic, but a vast array of technologies in a vast array of geographic locations and people (D. Miller and Slater 2000). The important connection is just that: connection, or to be connected. Therefore, online anthropology is not about studying the Internet, but using the Internet as a locale for research, and not, in essence, that much different from research conducted in other settings (Bengtsson 2014). Expanding on this idea, Caliandro (2017) explains how the Internet is more of a source of new methods than any object of study. In addition, all the things found online, whether images, writing, or software, are cultural products and thus appropriate for anthropological research (Wilson and Peterson 2002). The methodologies for conducting online research and data collection are plentiful but often rely on the principles of traditional ethnography: interviews and participant observation, retaining the epistemological approach (Murthy 2008), while at the same time allowing for 'closeness' that would have previously required travel (Bengtsson 2014), which under pandemic conditions has not been possible. However, the way in which these methods are utilized vary greatly.

Some have focused on completely online research (albeit with real social contexts). For example, Bonilla and Rosa (2015) studied the hashtag #Ferguson on Twitter as a place, as a field site, where they could perform participant observation in relation to social justice movements. There the posts using the hashtag were analyzed not simply as comments but to indicate further meaning and in creating "a particular interpretive frame," much like codes in anthropological research (Bonilla and Rosa 2015, 5). Twitter, Instagram and other social media

sites, actually incorporate the tools that researchers can use for investigating social connections and interactions, such as the aforementioned hashtag, retweet or share functions, mentions, and so on (Hutchinson 2016).

Battles (2010) observed and participated in an online message board run by a nonprofit organization concentrated on youth perspectives on the HPV vaccine, mixing autoethnographical aspects into the study as an active user of the forum for some years before conducting research there. Schrooten (2012) investigated the online togetherness of Brazilian migrants on a popular Brazilian social networking site 'Orkut,' claiming that online activities highly reflect offline social life, and suggested that researchers should adapt locations and methods because of the interconnected lives people have through the Internet. Molz (2006) studied online travel sites that "allows for a sense of presence at-a-distance" (386), emphasizing the mobile social relations spanning multiple physical and online geographies. I will focus on the related aspect of multi-sited ethnographies in the following chapter.

Researchers have also carried out online research offline or combine both aspects of being. Livingstone (2008) researched youth use of social media sites by doing traditional interviews on the topic, focusing more on the experiences of the youth instead of observing how they were navigating the networks in an online environment. Whereas Nørskov and Rask (2011) suggest that combining online and offline observation may be a fruitful, since relying only on online observations may lead to misunderstandings that can create issues with data. Similarly, Sade-Beck (2004) used online and offline methods to study Israeli support communities online, explicitly to connect socio-cultural context, lived experiences, and emotion to the study. This perceived lack of emotion or misunderstandings has been a topic of discussion in regard to computer-mediated communication since the 80s, most commonly referred to as 'reduced-cues,'

as something that is lost when communicating electronically, especially the visual cues (Sproull and Kiesler 1986). Modern online devices are often capable of having video in addition to sound and text, possibly reducing the amount of reduced-cues, but ethnographers may still misinterpret messages because of the lack of full human expression (Howard 2002). And yet people may be so accustomed to online interactions and have developed ways in which to overcome reduced-cues (J. Meredith 2020). Either way, "your communications are going to be shaped by the medium you use." (Kozinets 2010, 46) And the fact is, advances in technology happen at accelerated speeds; the largest social media sites are just over a decade old, a few years ago phone calls with video were science fiction, and the spread of online connections or leapfrogging is occurring in many places. I found this to be the case in this research as well, the spread of online connections increased during the time of the pandemic in many places.

Beneito-Montagut (2011) also combined online and offline methods when studying online interpersonal communication. Here the ethnographer spent months doing online participant observation in different social networking sites and connected with people using real time video systems and email, for example, and eventually conducted face to face interviews offline, proposing an 'expanded ethnography' that approaches online research more holistically. Similarly, Chretien et al (2015) were looking at medical students' Twitter use for professional development by focusing on related hashtags and then subsequently interviewing key informants. This process is what Parker Webster and Marques da Silva (2013) refer to as following "the connections to another context." (124)

In the contemporary world, many meetings and conferences have transferred into online environments, a shift exacerbated by the Covid-19 pandemic, which has forced researchers to conduct online studies that could have been completed offline without the pandemic,

methodologically speaking. Mahoney et al. (2020) conducted online ethnographic research with refugees from the Congo wars in Tampa, Florida, focusing on Covid-19 and risks, using an approach relying mostly on interviews and participation observation conducted via phone and Zoom or other apps, although physically distanced participant observations were included. Here, of course, the research is about the pandemic, and could not have been conducted offline.

This type of research reflects traditional ethnographical research conducted through online means, rather than any virtual, cyber, or Internet research per se, and it reflects the necessity to change methodologies due to the pandemic. Góralska (2020) elaborates on this necessity claiming that traditional ways of doing ethnography have become impossible during the pandemic. It has affected the ways in which researchers are able to collect data, while also producing new opportunities for research (Venkatesh 2020). All this being said, much depends on the phenomena of interest, the research questions, and the boundaries that are set (Garcia et al. 2009). The questions asked guide the ethnography and the chosen methods (Kozinets 2010).

The situations and restrictions brought on by the pandemic underlined certain aspects that are inherent in online worlds and may provide helpful for research purposes. One such aspect is the permanence of data that is reflected in how recordings of webinars and other online events and communications are often recorded and published, they are archived for further use. This is especially important in organizational ethnography (that often encompasses multiple locations and many voices) where the recorded and stored information is available at all times, the drawback being that the "Ethnographer has no agency in the creation of participants digital records" (Akemu and Abdelnour 2018, 303). This becomes evident when webinars are recorded and published often the without the chat history present. This erasure of interaction takes away from what is observed, and a crucial aspect of ethnography is making field notes of encounters

and all observations (Bernard 2018). Frequently in online ethnographies, the field notes are collected from online observations that then influence the questions for interviews that are conducted either face to face or online (Beneito-Montagut 2011). There is not, in essence, too much difference when compared to traditional ways of doing field notes and how they are then used for further analysis, although, a certain lack of interactions is evident. What does make difference is that online research is convenient and accessible (Kozinets 2010). Researchers may fall victim to the ease of access or 'unobtrusiveness' and possibility of retrospective analysis, as well as lack of participation and interaction with participants (Tunçalp and Lê 2014). As mentioned, regarding social media hashtags and other tools; the data is readily available and can be coded. The described ease of data collections may also lead to the need of technical training and programming skills to be able to "collect, store, manipulate, analyze, and validate massive quantities of semistructured data." (Golder and Macy 2014, 144)

The question of sampling bias in online ethnography is indeed a challenging one, but it is at the same time a challenge for all qualitative methods (Howard 2002). The sampling method, of course, depends on which type of research is conducted online. If one looks at a hashtag qualitatively, there needs to be some sampling mechanisms, especially if there are vast amounts of posts, such as setting temporal or spatial ranges (Golder and Macy 2014). All online research faces the challenge of accessibility. The voices of the nonconnected will not be heard. It is pertinent to recognize that access to a connected device and therefore to being online, which I mentioned earlier, can be hindered by a multitude of issues. In an online ethnography that resembles more of the traditional variety instead of virtual or social media research, finding key informants and interviewees often relies on purposive sampling, snowball or chain-referral

method, and respondent-driven sampling, all having their inherent biases (Howard 2002; Bernard 2018; Chretien et al. 2015).

Multi-Sited Ethnography

"One needs sites (places) to generate an ethnographic project (spaces)." (Gustavson and Cytrynbaum 2003, 257)

If the 'field' needs to be reconfigured because of online connections permeating most aspects of our lives, there has also been a need to reconfigure the single site approach of anthropology. Influenced by postmodernist theory and the empirical need to understand the world that is in perpetual change (Marcus 1995), multi-sitedness has become a staple in anthropological research due to the effects of globalization and the connectedness that has only increased in the last decades. The formulation of research topics is no longer necessarily bound to a location, or even many locations, but to the relationships between them (Hannerz 2003), and the separation of issues from their larger contexts seems impossible. Although ethnography is seen to be based on the intimate experiences of a researcher in a community, where a single-site would make more sense exactly because of the potential for these intimate experiences for which the research is grounded upon (A. Gupta and Ferguson 1997), the multi-sited ethnography is not aimed at portraying the "world-system as a totality" but to understand how and why certain formations are part of the system, to map the terrain, as it were (Marcus 1995, 99). Inherent in this thought process is the deconstruction of a "place focused concept of culture" (Olwig and Hastrup 1997, 4), and implied is generally the decentralization of space (Eisenhart 2017). Additionally, it seems that multi-sited research is not about how many sites there actually are or how far they are from each other, but about "spatialized cultural

difference", because without difference there is no point in looking at multiple sites (Falzon 2009, 13).

What is important is that deconstruction and decentralization of 'place,' the aspect of collaboration or participation across sites is absolutely necessary (Eisenhart 2017), although collaboration (with connotations of means to an end) may replace rapport, which has been seen as key in anthropological fieldwork (Marcus 1997). Regardless of this changed dynamic, an anthropologist using the multi-sited approach still needs to find a 'way in', which is dependent on social and cultural capital that afford the ability to "activate connections" (Gilbert 2015, 56).

Globalization and capitalism necessitate a multi-sited approach because there are not many places left that are not affected by these forces (A. Gupta and Ferguson 1997). How can we understand what is 'local', without the context of 'global'? Cook, Laidlaw, and Mair (2012) explain that the origins of the multi-sited approach were saying that the single site approach is too limited to approach local phenomena because they are so intertwined with global systems. The single-site, a contained space, that could be studied without its connections becomes "artificial once we extend[…] our gaze to the global" (Burawoy 2000, xii). In fact, global essentially only describes the connections between multiple 'local' sites (Marcus 1995), and global only emerges in the local (Hine 2007).

Multi-sited ethnography has shown its usefulness in global commodity chain analyses. As Marcus (1995) succinctly puts it: "Follow the Thing." (106) Freidberg (2001) studied the journey of the green bean from different African locations to different European locations, capturing the production, export, and import aspects of the commodity chain, emphasizing that a single-site approach might not be enough in researching transnational trade relations. Along those lines, Tsing (2015) investigated the matsutake mushroom by doing research in multiple

sites, ranging from Finland to Japan, where she conducted multispecies ethnography, specifically looking at human and fungal relationships. Tsing's mushroom ethnography has been seen as one of the first full multi-sited ethnographies "*of* the world" in contrast to being an ethnography "*in* the world" (Gagnon 2017, 285), and it expands the notion of simply following a thing into an elaboration of assemblages, as "sites for watching how political economy works" (Tsing 2015, 23).

Another topic that has been widely studied using multi-sited ethnography is migration. Isaksen Leonard (2009) researched Hyberbadi migrants across continents for a time period of over ten years, finding that a multi-sited approach brought richness to comparison in the study, but also that, methodologically speaking, it is a process benefitting from longer times in the field and that "simultaneous research in the sites is not necessary." (175) On the other hand, Hage (2005) claims that multi-sitedness is less useful in studying migration than a single site, due to the toll it takes on the researcher to be immersed in a multitude of sites. Hage's critique seems to be a semantic one, since he proposes studying one site that is possibly global, instead of multi-sited research. Furthermore, Hage asserts that multi-sitedness became a buzzword and that early multi-site researchers approached the work mechanically without self-reflection. Falzon (2009) agrees with this lack of reflection but adds that since space is socially constructed "there is no reason why the space of ethnography should be exempt" (4), meaning that we need to follow these constructions to where they lead, which here means multiple sites. Along those lines, multi-sited research brought liberation to researchers as they were not so restricted to certain geographical places (Cook, Laidlaw, and Mair 2012), although Amit (2000) adds that field sites have always been constructs and recognized the arbitrary nature of bounded territories. Societies do not exist in voids but are part of a larger context. Movement or

displacement of people, ideas, things, and other, between those societies and larger wholes happens with relative ease (not to say that migration is ever easy), therefore making multi-sitedness appropriate for a holistic view (Falzon 2009), whilst at the same time holistic representation of the world is not really the goal (Kjeldgaard, Csaba, and Ger 2006).

In addition to Hage's (2005) critique of it being rather impossible due to the strenuous work that goes into an ethnography (especially with a family), multi-sited ethnography has been found to be increasing the carbon footprint of researchers as multiple visits in distant locations accumulate emissions (Falzon 2009). Freidberg (2001) explains how the logistics of being present in multiple locations may cause difficulties and requires funding, as transporting oneself across spaces can be expensive, that may not be readily available. They further find that multiple sites may also prove linguistically challenging, although that is very much dependent circumstances, and that the timeframe of multi-sited anthropological research does not fit into the model of extended timeframes that have been prevalent in ethnographical fieldwork in the past. Hannerz (2003) elaborates on this point by explaining how many researchers' obligations make it next to impossible to be in the field for long continuous stretches. One additional challenge that may arise with multiple sites, is the unforeseen connections that may lead to unexpected but necessary visits to different sites, meaning that the research design has to have some inbuilt flexibility in order to be able to expect the unexpected (Kjeldgaard, Csaba, and Ger 2006). Even with the lack of such a deep immersion due to the constraints, multi-sited ethnography has the potential to broaden the scope of traditional ethnography and therefore complement it (Eisenhart 2017).

Disasters are also ground for this type of broadening of scope in ethnographic methods. A pesticide plant in Bhopal, India, owned by Union Carbide India Limited, suffered a

catastrophic chain of events in 1984 and methyl isocyanate gas was released to the environment, killing thousands and injuring hundreds of thousands (Broughton 2005). The Bhopal disaster was (and is) spatially and temporally fluid, as the effects continue to this day, disregarding spatial boundaries, and an ethnography on it therefore required a multi-sited approach (Fortun 2009). Setting parameters for a global disaster, such as a pandemic, is challenging but as Fortun elaborates, with proper delineation, possible.

In a multi-sited ethnography, according to Marcus (1995), the ethnographer should establish a "literal, physical presence" with an "explicit, posited logic of association or connection among sites that in fact defines the argument of the ethnography." (105) Question is, does being online count as literal presence? Interestingly, previous notions of the field site as being a geographically bound location, a place, have had to change because of the forces described earlier, and, therefore, it is suggested that electronic communication may actually be the closest available way to conduct participant observation "joining together a number of dispersed associates" (Amit 2000, 14). Additionally, Gupta and Ferguson (1997) suggested that ethnography was (is) becoming "a flexible and opportunistic strategy…" (37) widening our understanding through attention to knowledge from several locations, insinuating a need for multi-sited approaches, and online environments could be included into that flexibility.

Multi-sited Online Ethnography

The ideas of multiple sites were originally introduced before the Internet became readily available and convenient as a space for multi-sited research. Marcus (1995) suggested that we have to follow participants throughout spaces; we can and should understand this that we have to follow the participants throughout online spaces as well (Caliandro 2017; Winter and Lavis 2019). This is partly because social relations do no longer need physical closeness as

technology and connections may uphold similar relationships mediated by devices (Molz 2006), but also because some activities have migrated completely to online environments. In fact, multi-sited ethnography is important in studying organizations that rely more and more on "digitally mediated encounters" that cannot be observed offline (Akemu and Abdelnour 2018).

Additionally, as our lives are generally not spatially bound due to all the physical movement and online connections (Hine 2007), it makes online multi-site research and 'following the thing' through multiple online spaces not only possible but "concretely viable" (Caliandro 2017, 553). According to Caliandro (2017), online ethnography seems to be an intuitive continuation of multi-sited ethnography, although traditional ethnographic methods and concepts do have to be adapted to some degree. What is important is what the researcher is trying to find out. The traditional ethnographical methods requiring immersion and extended time periods, which are "resource and time intensive" (Kozinets 2010, 55), may be more suited to answering questions on distinct cultural understandings, but not all questions require that type of understanding. And also, with that being said, in-depth online interviews can also allow for necessary deeper understanding, quite like offline interviews (Kozinets 2010).

Online participant observation of multiple sites does not require direct interaction with participants, thus differentiating it from traditional ethnography, but it does require other aspects that are "key and basic topics for ethnographic inquiries," such as "delving into social formations, systems of meaning, and strategies of self-presentation" (Caliandro 2017, 571). Furthermore, as entering the field, deciding what and where the field is, travel, making connections, all of it takes time in traditional ethnography, but in online ethnography those processes are expedited and require less resources (Kozinets 2010).

In offline environments, many events, such as conferences, festivals, and courses are temporally limited but important in anthropological ethnographies (Hannerz 2003), which begs the question of how are online events, such as webinars, online conferences, or social media interactions different from their offline counterparts? Online events and interactions are "ephemeral and dispersed" (Caliandro 2017, 577), and in that similar than offline events. The upside being that the online events and interactions are often recorded and are thus permanently available (Akemu and Abdelnour 2018).

Depending on the questions and purpose of research, organizations can be collaborators in multi-sited research, generally in pursuit of a common goal with the researcher. Organizational ethnographies often resemble multi-sited ethnographies in any case due to the fragmented nature of such entities, both offline and online or in any combination of the two. Similarly, Lewis and Schuller (2017) say that a study of NGOs in international development would require a multi-sited approach because of the large scale of perspectives and actors that are intertwined with the NGO form. Although the separation of online and offline environments is suggested to be futile (Hallett and Barber 2013), Akemu and Abdelnour (2018) argue that in organizational studies "informants' digital and physical interactions are not necessarily equivalent" (300) and propose a two-sided approach where the digital acts as an 'archive' as well as a 'process.' The archive refers to what was titled permanence in previous chapters, whereas the process refers to synchronous interactions with the digital that may be ephemeral but may also become part of the archives as well if recorded. Additionally, organizational multi-sited ethnography conducted online may provide an opportunity for multivocality and representation of marginalized voices, but connectivity issues may hinder this process (Ibid 2018).

The Pandemic Effect

The COVID-19 pandemic has forced researchers to rethink their strategies of data collection because of lockdowns, travel restrictions, and health risks. Access to informants in multiple countries has possibly increased during the pandemic due to the increase in online events. Online or digital ethnography has become temporarily the only way to conduct research, to reach participants due to the pandemic restrictions (Góralska 2020; Hinds et al. 2022), which is why assessments of technologies and methodologies used in online research are important.

Technology affords opportunities to engage in research from home for both researchers and participants, making geography more a matter of time zones rather than distance or physical accessibility. On the other hand, "The movement of life to online forums is a form of privilege, available largely to those whose work was computer-based before the pandemic" (Keleman Saxena and Johnson 2020, 2). In a review of video-conferencing interviews as a data collection method in qualitative research, Nehls, Smith, and Schneider (2015) found that online video conferencing allows for the simulation of a rich face-to-face atmosphere. Furthermore, their review shows that online interviews may, in some cases, actually provide more accurate than offline interviews data due to, for example, gendered effects, where women have been more comfortable in being critical in an online environment rather than in face-to-face interviews. And surroundings matter as well. People, both participants and researchers, may be more comfortable in the comfort of their homes or familiar offices "leading to an increased willingness to talk openly and honestly," as well as increase participation in general (Nehls, Smith, and Schneider 2015, 148). This may even be enhanced with the perceived sense of privacy, even if online interactions always carry an inherent risk of breach in that very aspect. Whatever the case or method may be, the ethnographer is there to listen.

webinars and online conferences often rely on the same technologies and platforms as video calls. In studying the use of an online video conferencing platform, WebEx, Akemu and Abdelnour (2018) claim that this platform and, due to the similarity with a multitude of other video conferencing apps, others as well, are places where power relations among participants can be observed as evidenced by the use of the mute button for instance. The conference or webinar hosts generally have the potential to mute everybody in any moment during a call and can also control the chat functions therein. Similarly, hosts and moderators can control participants' video. They can essentially make everyone a passive spectator with these controls, or they can allow for engagement. These are matters that a researcher cannot affect and that may offer challenges to online participant observation. In addition, many platforms offer a Q&A function, where participants can send questions to the hosts and presenters. These questions are sometimes visible to all participants, but sometimes only the people chosen by the host can see them. The questions are usually forwarded to the presenter by a moderator, and some questions may be left unasked. So, the audience who cannot see the questions have no way of knowing which questions were discarded by the moderator, which may leave out critical questions that could provide useful or helpful and speaks to the power dynamics mentioned above.

Ethical questions of consent and public/private divide is a question that always needs to be taken into account in multi-sited online research. Often data is publicly available to researchers and yet participants may feel that they should have privacy and that research attention may feel intrusive (Battles 2010). Regarding Institutional Review Boards (IRB) and online qualitative research, Angelone (2019) explains that while the IRB may allow accessing 'public' data from online sites, the researcher should have higher ethical standards and inform participants that they are being studied. Because of the hazy borders of public/private some

ethically questionable online participant observation has been conducted using deception and covert means without informed consent from participants (Brotsky and Giles 2007).

Online studies can count on ‘lurking’ as a way to conduct (non)participant observation first before participating themselves with the site in question (or to gain access or ‘membership’), but it should only be practiced if that is how people generally interact with the site (Garcia et al. 2009; Akturan 2009). This means that researchers should ‘play by the rules’ of any online environment they interact with, which is not that different from traditional ethnography. Ethnography and participant observation has a strong basis in ‘active listening,’ but in an online environment one needs to practice ‘adaptive listening’ to include all the various potential platforms and mean of communication, such as memes, emojis, video, chats, etc. expanding (Winter and Lavis 2019).

Eventually, it is not a question of which is better, online or offline ethnography, but if the question you are asking can be answered by the chosen methodology. Either way, “there is a real place for multi-sited ethnographies of the social and cultural lives of the policies and capital flows of economic aid in the time of COVID-19” (Faas et al. 2020, 338). The pandemic has redefined relationships between people and technology as people have adapted to the contemporary world, increasing the importance of online methods in the future (M.R. Cairns et al. 2020). Our online presence is more than communication, it is how many live their lives now, thus online ethnography should not be seen as a disruption to traditional methods but a continuation, an evolution that is necessary (Ghosh 2020).

Research Design

I utilized the AgriCord network in recruiting people from the agri-agencies and farmers' organizations to participate as informants as instructed by the Institutional Review Board at the University of South Florida. The criteria for inclusion for this research was individuals who were participating in the activities of the agri-agencies as employers or in the activities of the farmers' organizations as either members of the organizations or who are employed by them. Additionally, included personnel from AgriCord as the umbrella organization. I was interested in hearing the perspectives of the four levels or strata, farmers' organizations, agri-agencies, AgriCord, and funders, of this type of international development system.

As mentioned, the question of sampling bias in online ethnography is a challenging one. The sampling method, of course, depends on which type of research is conducted online. All online research faces the challenge of accessibility. The voices of the nonconnected will not be heard. It is pertinent to recognize that access to a connected device and therefore to being online, can be hindered by a multitude of issues. In an online ethnography that resembles more of the traditional variety instead of virtual or social media research, finding key informants and interviewees often relies on purposive sampling, snowball or chain-referral method, and respondent-driven sampling, all having their inherent biases (Howard 2002; Bernard 2018; Chretien et al. 2015).

Due to the study focusing on different levels (here level is not implying better or higher, but only difference in role) within international development hierarchies, I recruited participants focusing on each of the levels separately. From AgriCord I interviewed six people (n=6, 3F, 3M)), out of the seven who work for them directly. On the agri-agency side, I had the opportunity to interview people from six different agencies, varying from two to four people

from each. The total number of agri-agency staff I interviewed was 19 (n=19, 10F, 9M). From those FOs supported by the agri-agencies participating in the research, I was able to interview one or two people from 12 different FOs (n=14, 3F, 11M). The gender disparity within the farmers' organizations interviews reflects how the FOs are often, though not always, male dominated. Some of the FOs the agri-agencies work with are for women only. The FOs were ones that participate in agricultural or forestry activities and that offer a wide variety of geography and landscape. These factors provided a broad geographical and organizational scope and the possibility for comparison. Furthermore, from the donor side I interviewed two people from IFAD and one from the European Commission (n=3, 2F, 1M). Therefore, I successfully recruited and interviewed forty two participants in total (n=42), which was sufficient to reach data saturation, particularly given the relatively small number of individuals working within each organization (Baker and Edwards 2012). Because this study was mostly conducted in an online environment, sampling of participants had to fit that environment. I had to rely on the people working for the AgriCord and agri-agencies to refer FOs that they support. I would describe this type of sampling as convenience chain-referral sampling (Bernard 2018).

Entering the Field(s)

I embarked on this dissertation research journey after approximately two months into the pandemic. I had realized that it would not be over in a few months, that it would take time until travel was possible or traditional anthropological research was possible. Quickly thereafter I started formulating the research questions that guided the work. I contacted my previous employer in Finland to ask whether they would think this type of research would be helpful and if they would be willing to participate in the process somehow. They quickly showed interest

which gave me confidence to approach the research questions and start writing a proposal. In the middle of the process of proposal writing, the US government released a statement, essentially stating that all foreign students in the country with F-1 status should vacate and return to their home countries and only return after the pandemic would be over. I, as an international student with F-1 visa, and my family were in the group of would-be returnees. A couple of days after the statement was released, we drove to the nearest hardware store and bought several cardboard boxes in order to prepare ourselves for the unwanted journey back home. We packed most of our belongings to the boxes and were figuring out where we could store them and how to get rid of the rental apartment that we'd just signed a contract for another year. Suffice to say, this was a stressful time for our family. Luckily, several universities filed a lawsuit against the government and the mandate to remove international students was withdrawn. With a sigh of relief, we slowly unpacked the boxes. However, this ordeal left a lasting impression on us, and it influenced how I would approach the research. Fearing that at any given time we might be asked to leave the country, I designed the research so as to be able to conduct it from any physical location with stable online access.

Offline

As part of my ethnographic entry, I leveraged my former colleagues to introduce me to the staff of the main umbrella organization, AgriCord. We quickly agreed to meet and organized an online meeting to have introductions and for me to explain the purpose of the research and how it could be conducted. AgriCord was immediately interested and saw the potential this type of research could offer, especially during the pandemic. AgriCord agreed to be part of the dissertation study and subsequently invited me to Brussels, Belgium to their headquarters, where I could conduct participant observation and mentioned that I would have a desk waiting

once I should arrive. Some months later, when restrictions were lifted and travelling was allowed, I booked a ticket Brussels.

Finally, my journey to Belgium began in November 2021. The month is important as any who have been to Finland in November can attest that during that time the country is dark, wet, and cold. Even the name of the month in Finnish implies death. Belgium is south enough to have a different climate. As I landed and exited the terminal, I smiled, under my N-95 mask. This was because of the two things, the weather and that the pandemic measures had been lifted to the degree that I could do field work.

Travel would not have been possible without two doses of Covid-19 vaccinations and EU Covid-19 passport to prove that. Acquiring the EU Covid-19 passport was a more difficult task than I had thought. My first two vaccinations were administered in Tampa, Florida. The fact that this was the case, my vaccination status could not be added to the Finnish system because of a design flaw; they simply forgot that people could have received vaccinations abroad, outside of EU. Luckily there was a loophole. I went to the local temporary vaccination site in Helsinki, Finland, and asked for a third vaccination. This was at a time when the government had not yet recommended third vaccinations for my age group, so they could have rejected my request, but luckily did not. I got the shot, and then I proceed to tell the nurse that I already had two vaccinations before this one. I showed the US vaccination card, and they added the two prior shots to my record and in two minutes I had an EU Covid-19 passport and could travel again. So, the glitch in the system was that my file could not have been opened without administering the third vaccination, to add the previous two shots. This all goes to show how different the times and field work during the pandemic were, when comparing to times before.

After a short bus ride, I was in the EU-district of Brussels. This is *the* area with the headquarters of the European parliament, many development agencies, lobbyists, and such – the scenery very familiar from the news media in Europe. My apartment for the duration of my stay was close to the European parliament and subsequently a walking distance away from the AgriCord headquarters. I arrived during the weekend, so I had a day to adjust to the transition before going to the offices.

As I had been acquainted with some of the AgriCord staff and had met them in online surroundings, building rapport was not an issue in my research. I felt warmly welcome to their offices when I went there on the following Monday morning and was, indeed, given a table where I could set up my portable office and write down field notes, jot down points for my mind maps, and other tasks anthropologists engage in when in the field. During the first day at the offices, I was told one of the staff had tested positive but luckily, they had been working remotely prior to the diagnosis. If they had been at the office, they all would have had to isolate in their homes. This incident goes to show the precarity of field work during the pandemic. One positive test may end up disrupting the assignments of many.

At the office I was able to interact with the staff, both casually and formally in the interviews. There was the now so common awkward moment of, should we shake hands or wave, or what. We went to lunches together and talked about a variety of issues concerning the world of development, the pandemic, and of course trivial matters one talks about when making casual conversation. During my stay in Belgium, the restrictions had mostly been lifted, although mask requirements were still there, and vaccination passports were asked when entering any restaurant. Regardless of these dystopian requirements, which were already seen as the norm, people seemed only to be enthusiastic about being in offline social situations, and all

our gatherings, meetings, discussions, interviews, and others were very positive, even if the issues discussed were not always so. There was joy in meeting people after all the lockdowns and remote working mandates.

But the pandemic was not over. The headquarters of TRIAS, one of the participating agri-agencies, are in close proximity to the AgriCord offices in Brussels. We had agreed on a meeting with their staff along with several new TRIAS country and regional directors who had recently come to Belgium for a visit. A day or two before the meeting, two of the new directors tested positive for Covid-19 after contracting the virus, presumably in Belgium, and the whole team of visiting directors had to quarantine in their hotel rooms and the local staff in their homes. As their symptoms remained relatively mild, we still had the meeting, although online, as per usual now.

Online

During the pandemic most of the international development community was maintained through the internet, and I was able to observe their online interactions. Webinars had taken the place of meetings and offered a way in which to document this online community and gather data (Nørskov and Rask 2011), whilst at the same time act as an archive (Akemu and Abdelnour 2018). Most of the numerous webinars I attended can still be watched on a variety of webpages, including YouTube. This goes to show that the permanence, that I referred to earlier in relation to online data collection, played and plays a role in my research as well. The interactions stayed, so I could revisit them if needed. Technology affords opportunities to engage in research from home for both researchers and participants, making geography more a matter of time zones rather than distance or physical accessibility.

Due to the fact that the main donors and AgriCord have their headquarters in Europe, the time zone was convenient to attend webinars live and was therefore able to engage with panelists. Presenters, and other participants both in the chat as well as through camera and microphone. Not all the webinars were specifically about Covid-19 responses, but most were online as a Covid-19 response. The thematic areas of the webinars in addition to Covid-19 included climate change, rural finance, deforestation, sustainable food systems, food security, resilience, poverty, agricultural value chains, and changes in Development to name a few. Of course, during the pandemic, they all took into account and elaborated the current conditions, which had transformed due to the pandemic. The organizers of the webinars included many of the agri-agencies, AgriCord, IFAD, other development actors, such as the World Bank, IFPRI, and FAO.

In addition to the webinars and other online events, I was invited to several online meetings. These included planning meetings for future collaborations and events between AgriCord and agri-agencies, as well as larger meetings with other stakeholder groups. In many of these discussions, I was able to introduce my research topic, ask questions, and make connections. Being an active participant really gave insight as to how the AgriCord Alliance apparatus operates and what the organizational culture is like on a larger scale. In fact, after one of these meetings, I was asked if I would be interested in taking the responsibility of being a co-supervisor for a master's degree student who is writing her thesis on building resilience to climate change in collaboration with one of the agri-agencies.

Semi-Structured Interviews

Most of the data I collected came from semi-structured interviews conducted in online environments with software such as Teams and Zoom between October 2021 and April 2022. These software are ubiquitous and commonly used, especially during the pandemic, by AgriCord, the agri-agencies, and the farmers' organizations. Most, if not all the FOs also have been able to improve their online capabilities during the pandemic by way of investments in equipment and/or stable Internet connections.

The semi-structured interviews which I designed rely on an interview guide but allow for a free flow and expansion of questions and topics (Bernard 2018). Semi-structured interviews also work well when you are interviewing "high-level bureaucrats and elite members of a community" (Bernard 2018, 165), although I would shy away from using those terms, hierarchies are present. The interview guide in this research started with general non-leading questions on activities, missions, purpose, organizational structure, and funding (for example) from which I guided the discussion into issues concerning the pandemic. It is important to realize that using certain words may have different connotations in different languages, geographies, or for example, organizations. For example, risk, hazard, and resilience can have different meanings in different places. Therefore, it was important to ask questions in a way that does not assume that all of the interviewees have the same definition for the concepts. Most of the interviews took approximately an hour, give or take 15 minutes, and were recorded after informed verbal consent was received. The USF IRB exempted this dissertation research from written consent. In addition to the online interviews, I interviewed AgriCord personnel by traveling to their headquarters in Brussels, Belgium, and one agri-agency (FFD) personnel in Finland. Each participant I interviewed received $30 (U.S.) for their time, transferred to their

account. Some participants refused individual payments and instructed to donate the allocated payment to charity. The funds for this purpose came from the National Science Foundation – Doctoral Dissertation Research Improvement Grant (BCS 2116889) I received for the research.

Online interviews

As is clear, I was connected to the participants through online means in the online interviews. Generally, I was in our home office/bedroom (a common pandemic housing shift) in Helsinki, Finland, sitting in front of a laptop, an external monitor, an external webcam, an external microphone, and a ring light to make sure that there would be no problem with audio or video quality on my end. On a few occasions, I was at my office in downtown Helsinki and relied on a laptop for all of the previous. The connections were mostly stable, although there were three or four instances where we had to re-establish the connection a few times. Only one time did my computer do a restart in the middle of an interview, but since the participants have been relying on online mediated connections, it was not a problem as everyone simply waited out the connection issues. There was one interview that got cut off several times, as connection failed every time the interviewees phone rang. But again, waiting it out worked every time. Being compassionate to any types of interruptions is essential in online interviewing (Hinds et al. 2022).

I was quite literally across the planet from some of the participants during these interviews (See Figure 2 page 104), but I felt as though I was close. In addition to being in the offices and home offices of the interviewees, I virtually visited hot springs, hotel rooms, farmhouses, cars, restaurants, and bars in several different countries. I heard children playing, cicadas singing in the background, traffic, honking, roosters crowing, construction noises, even the flowing water from the hot springs. I strongly believe that because of the possibility of

conducting interviews in these different locations, interviewees may be more relaxed and feel less pressure than during in-person interviews. This may especially be the case considering gender, the dynamics of me, the interviewer, being a male from a US based university and White, as well as having been employed by one of the agri-agencies. As Żadkowska et al (2022), I did not see the lack of in-person presence as an obstacle in the online interviews.

Figure 2. Map of interviewee locations. Circle symbols with stars are locations where FO interviewees were during the interviews, whereas the purple placeholder symbols were agri-agency and donor interviewee locations. Note that some locations had more than one interviewee. (Map modified from Google Data, 2022)

Furthermore, I maintain that I have become a much better listener through the experience of conducting the online interviews. This is mostly due to the fact that in online interviews, the interviewer has to wait for the interviewee to stop or pause before asking further questions or interject in some way. The usual “yeah, right” or other confirming utterances that are generally used in discussions may interrupt the interviewee in a different way than in in-

person interviews. This strategy is also suggested by Saarijarvi and Bratt (2021), when talking about pandemic times data collection.

Limitations

I have explained the possible limitations of online ethnography in previous chapters. These have to do with being connected to online environments, and so those who were not reachable were not able to participate in the interview process or other online gatherings. Additionally, connections in some areas, especially rural, may experience slower connection speeds that can hinder the interview and other participation processes, but this was rarely the case with my interviews.

The specific limitations in this particular dissertation research were related to language, sampling, nature of the work, and the pandemic. In recruiting participants, I had to rely on AgriCord to share the recruitment flyer to all the agri-agencies, which then either showed interest or not. Similarly, in recruiting FOs, I had to rely on agri-agency support to introduce me and the study to the FOs. Luckily, I was able to recruit enough agri-agency and FO participants, as I had representatives from 12 FOs varying from small local ones to large national ones and half of the agri-agencies in the AgriCord Alliance.

Given that many of the FOs and agri-agencies do not use English language in their daily operations, they were therefore unable to participate due to lack of language skills on the part of the researcher, a challenge stated earlier when elaborating on multi-sited research. For example, I was not able to interview FOs from South America, Francophone Africa, or some parts of Asia because I was told there are no English speakers available to be interviewed and I had no means for translation services. Similarly, some agri-agency personnel were reluctant to participate in

English interviews as they felt that they could not provide enough detail in the interviews. Furthermore, as my interviewees come from a wide variety of language backgrounds and geographies, using their native language might have provided more detailed insight. On the other hand, the language of operations, especially in relation to any AgriCord programs, in these cases, is English, and therefore the interviewees are used to it, especially in the context of development work.

Farmers are busy. This is true all over the world. Many of the staff in FOs have their own farms and have to engage in farming activities in addition to their work at the FO. This dynamic makes it more difficult to find a convenient time for conducting interviews, especially considering time zones. Additionally, FO and agri-agency staff are often in the field, although much less during the pandemic than in previous times. In addition to having less frequent access to online connections, people are busy when in the field. In this context, being in the field essentially means meeting farmers, training on different topics, and conducting surveys and audits.

Lastly, this research was conducted during the Covid-19 pandemic, which brought on several challenges or hinderances during the research. These may not be limitations in the traditional sense, as they don't refer to research design or methods particularly. For example, I was not able to travel to Belgium when originally planned due to travel restrictions and partial lockdowns. This hindered the overall process, but due to most of the research focusing on online interactions, I was able to overcome most of the issues brought on by restrictions. Furthermore, I, as well as some participants, succumbed to the disease, which limited interactions at times. When I had Covid, I isolated myself from my family into an old barn, from where I waved good morning and good night to them. Of course, these types of situations

have been novel to most of us. “Social distancing” became the norm, which limited interactions in the field as well.

Data Analysis

As I interviewed participants, both in online and offline environments, I made extensive notes, focusing on the overall “temperature” of the interview, key issues, surroundings, as well as any other thought-provoking thing that came up. I quickly realized that in online environments note taking prevented me from interrupting the interviewees with common utterances that somehow supposedly affirm the interviewee that I, the interviewer, am paying attention. This was extremely helpful and made me a better interviewer. The notes from those interviews filled notebook after notebook. From these notes I first created mind maps using GitMind software (GitMind 2019). GitMind allows for the creation of detailed but colorful mind maps that help in grasping complex topics. After the final interview, I had two quite large mind maps, one covering the farmers’ organizations and the other agri-agencies, AgriCord, and donors (see Figure 2 for a simplified example of the mind maps). What happens during the process of creating mind maps based on interviews, instead of the more common use of mind maps as places where someone or a group tries to come up with ideas for some purpose, is that you start to see themes. When I had finished all interviews, I started seeing themes in the mind maps that I realized are essentially codes. This was the start of my process of inductive coding, reminiscent of open coding. I drew arrows to point interconnections and relationships to use the mind mapping software to its fullest potential, thereby also starting to analyze the data whilst only starting to develop the code book.

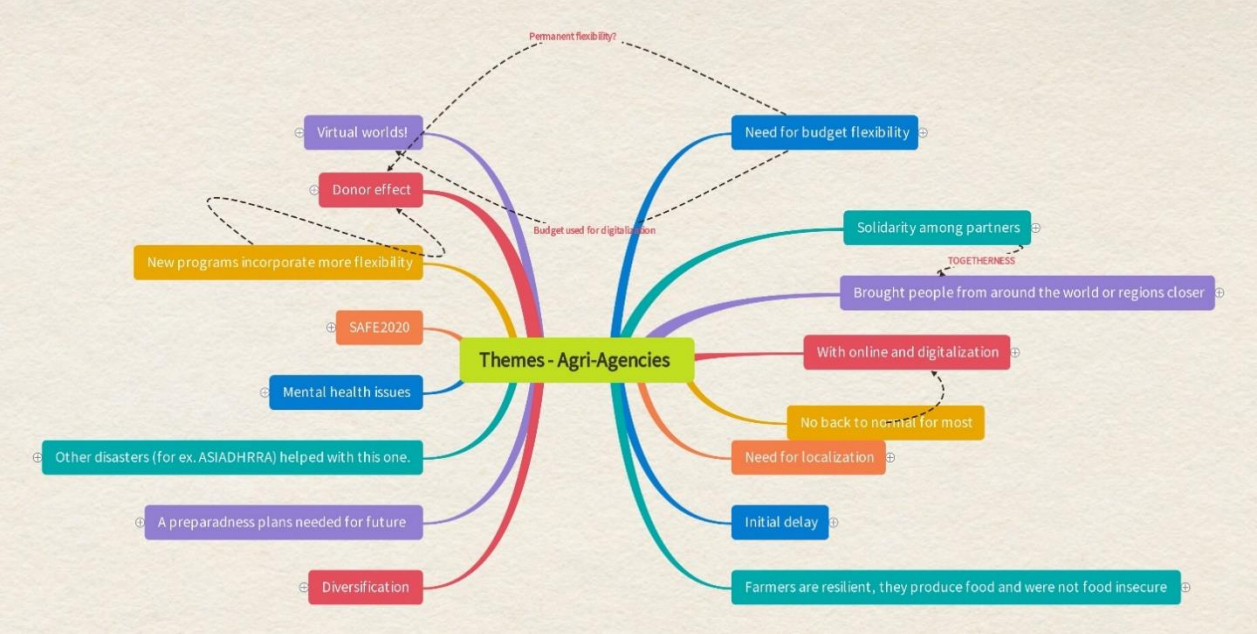

Figure 3. Mind map of themes from agri-agency interviews. Created with GitMind (GitMind 2019).

After mind mapping, I transcribed the interviews verbatim and read through them again, and again, realizing that the mind mapping exercise had been incredibly helpful for the creation of the codebook. It was not a finished product by any means, but a skeleton frame was there that was very helpful in the next phases. In order to further find and name the themes I used grounded theory and analytic induction (Bernard 2018). Analytic induction is a qualitative method that is helpful in showing causality and formulate rules about causes and effects of phenomena, which is suitable for this type of study that looks at responses. My process of mind mapping is one way of visualizing the data, which can be helpful depending on one's methods of learning. Eventually my codebook for this research included deductive and inductive codes. This is partly due to the topic of Covid-19 responses and frameworks used in this dissertation, such as the Food-Energy-Water Nexus. I coded the data manually from the interviews by using MAXQDA 2022 (VERBI Software 2019). The data from the interviews was compared across interviews and with data from online participant observations. Furthermore, many of the agri-

agencies and FOs involved in the research publish a yearly report, which contain further information from the pandemic timeframes. I was able to access several of these reports and use them as research material as well.

Ethical considerations

Although this dissertation research occurred mainly online, there were many ethical considerations. First and foremost, it was critical that there is no form of coercion in recruiting participants for this study. Consent was provided before any interviews or other forms of data collection. The anonymity of the participants is ensured, and the participants had the right to remove themselves from the study whenever they wanted to for any reason. The study was approved and exempted by the USF Institutional Review Board (Appendix I), and I adhered to all the guidelines they provided. Furthermore, since part of the research took place in the EU, the General Data Protection Regulation (GDPR) applied to this research.

Smallholder farmers are often considered vulnerable populations due to their precarious situations related to socioeconomics, environmental conditions and climate change, and others. Even so, this dissertation study can be considered very low risk, because of the themes of the topic and because the data has been de-identified.

CHAPTER FOUR: DISASTER EFFECTS

Introduction

> "Yeah, actually, personally, this is my worst experience in my life, having this pandemic. So, we are at the house during lockdowns, you weren't able to go outside. So, children never experienced like they need some, some, some lectures from my wife and from for me, just to educate them about what is going on. What is the effect of this pandemic. So, it's very it's very, how do I say that... actually since March 2020, so that was the height, that was the time that our government imposed lockdowns. So, we were we were not able to go outside, only one member of the family was permitted to go outside to buy your needs, your food. And then the children are most of the time inside the house. They were not able to play outside with the other children. It's more the effect of that on the psychological level as well as on the economic side. We were not able to have proper food that we need. So, then the worst that is that [name of organization] at the time wasn't able to provide salaries because of the lockdown." (Interview, FO participant, the Philippines)

I start this chapter with this quote because it demonstrates many of the aspects introduced and explained in this chapter. The quote is from an FO representative in the Philippines, who succinctly elaborated on the multitude of effects of the pandemic. What follows is a more detailed account to what the organizations and people endured and how they responded to the crisis.

Immediate Disaster Effect

"Well, at the beginning, for sure, it was very, like apocalyptic. We were thinking like we are in a movie or something like that." (Interview, agri-agency participant, France)

“I think was such a crazy thing that happened to the whole world that no one expected, and no one knew how long it would last or what to do.” (Interview, agri-agency participant, Sweden)

Before the pandemic hit, the existence of agri-agencies and especially farmers’ organizations, has been precarious. Funding is always challenging, and the climate disaster is exacting its toll on the agricultural environments, especially in the Global South where the FOs operate. Furthermore, land ownership is problematic in many areas, and there are conflicts on natural resource access between different stakeholders in some areas. These issues have not been resolved during the pandemic, but the focus has shifted as it has in the entire world.

The Covid-19 pandemic did not arrive simultaneously everywhere. Regardless of the timing, everyone knew something was happening, something serious. Before any governmental or local regulations, guidance, or lockdowns, any responses, the initial reactions to the pandemic were those of fear, of disbelief, panic, and perhaps determination. As on participant succinctly put it: “People this time, we were scared, we had never, no one had ever seen such a thing before ever…” For the agri-agencies, AgriCord, and donors, their thoughts were with their partners in the Global South and for the FOs, with their members, the sentiment shared in online gatherings and webinars. Due to the dynamics of development cooperation, this is not surprising, as aspects of help are intertwined within the system. How those dynamics play out in a disaster free world may be different, but during the times of the pandemic aspects of solidarity were strong. In this chapter, I describe how the pandemic situations evolved within the organizations in question. I elaborate on the effects the people in the organizations felt, the risks they encountered, both individual and organizational, and the subsequent responses that the organizations put in place to deal with the pandemic or that local governments put in place that

then effected how the organizations operated during those times. The pandemic can be seen as a disjuncture, a disaster that may potentially trigger a paradigm shift in development.

Fear

Since I, the author, and you, the reader, have most likely some sort of lived experience of watching or reading the news when Covid-19 was spreading and every other day a new country, city, or town declared that they have now witnessed their first case of somebody falling ill with the virus, we can possibly relate to feelings of anxiety and fear. Those feelings that we all felt, were felt by millions, if not billions. It is therefore not surprising that fear was a common theme to emerge within my research as well. One FO participant in Uganda described the initial reaction very well when I inquired about whether the pandemic had had an effect on their life:

> "Well, of course, at first, there was fear. There was general fear. You see, the world was, how the pandemic was publicized in the media, it was like the world was coming to an end tomorrow. And things were changing abruptly, all of a sudden, sudden changes were happening. Events were changing every morning and every evening."

All the organizations, the participants, had encountered fear, anxiety, or other psychological consequences, either early on when the pandemic arrived, or later after lockdowns. In the earlier phases, the fear was described as acute, as if there was something that could potentially endanger the health of loved ones or themselves. One FO interviewee from Uganda emphasized this when saying:

> "I was just affected psychologically because I was now even fearing at this age of mine, maybe I may be taken away by the pandemic, or my wife may be taken away by the pandemic, or my loved ones. So, I was just psychologically stressed out. How this pandemic is going to affect my, my social life with my family?"

For many, the effects really were drastic. There have been a number of deaths within the agricultural development network as a whole. One agri-agency participant mentioned how a member of their group had left the team and a month later passed away due to Covid. One FO interviewee mentioned, in grief: “It has affected my personal life because I've lost a number of people, in my, I can say my family members.” Whereas another FO participant said that: “I had Covid and I nearly I nearly died of Covid. Yeah, so I was hospitalized for about three months. Yeah. So that was early last year, it was so bad.”

Agri-agency participants were ready to recognize their privilege regarding health aspects. Generally, health systems are more accessible within the geographical locations where the agri-agencies are located, versus where the FOs are located. This dynamic, of course, has a historical back drop and does not exist out of chance. Regardless of the reasons for the divide, agri-agency and donor organization staff participants pointed out that they worried how the FO members and communities were doing health-wise. One donor participant from Belgium pointed that out by saying:

> “Let's say that first of all, at the beginning of the pandemic, so, March until July 2020, there was substantial worry about the impact of the pandemic on developing countries directly, so on the mortality rate of population in developing countries…”

As disasters are seen to exacerbate existing inequalities, although often on more local levels, the pandemic shows that this exacerbation may happen on a global scale, during a global disaster. In addition to fears of health, people felt unsure about work, both in agri-agencies and farmers’ organizations. Most FOs in the alliance are cooperatives or follow cooperative ideals of working closely with members of the organizations. This means that they often gather for different purposes with their member base. When the news of the pandemic spread, along with

the pandemic itself, the realization of not being able to provide for their members, was quite disorienting for many, to say the least. Furthermore, the FOs were worried about their funding – if they cannot use the funding they had been allocated, it could be that they then lose that money, and that could have possible future funding implications. Similarly, the agri-agencies worried that if activities are put on hold, it would affect their funding as well. One participant from AgriCord, described the situation a 'bit panicky' when referring to the money sitting on accounts without being used.

Economic fears were experienced in relation to the wider societies as well. There was discussion of recession in the media, and funding to development is often cut during those types of financially stricter days. One participant told me about their experiences. "I would say were that we were very worried initially, because I mean, like, you know, about the whole, everybody thought that we would go into this huge recession. Right, so we were kind of quite worried about funding." But, to emphasize, health fears were much more prominent than those of funding fears.

Initial Delays

"At first instance, the implementation, of course, slowed down and stopped even here in some cases." (Interview, AgriCord participant, Belgium)

As the world struggled to understand the pandemic, the participants had to make judgement calls based on health, economic, and other factors that were thought to influence any activities or work. Because of how travel and movement of people occur, many of the areas where the AgriCord alliance has ongoing projects, were affected later than those in the Global North. One participant elaborated on this. "And I guess that's also partly because the situation in

our partner countries hadn't really gotten that serious yet, by the time we went to sort of this full crisis mode. So, we were sort of reacting before, before the situation hit, hit them as much." Overall, this meant that the initial contact on pandemic issues, often came to the FOs from the agri-agencies or AgriCord. The agri-agencies contacted the FOs to find out if everything was OK, and if there is something that was needed. But during the early weeks, it was hard to say.

When it became clear that there will be travel restrictions and other measures affecting the work, some quick responses were necessary. For example, one agri-agency repatriated all their volunteers from across the world back to their home country. They did this swiftly in order to avoid travel restrictions that were anticipated. Furthermore, all agri-agencies thereafter interrupted any ongoing missions and returned home. They also cancelled all upcoming field visits and re-evaluated their situations. At this point in time, it was becoming clear that the pandemic would have major impact on the work that the Alliance does. There was, indeed, hesitancy, but also resolve, in the air. One participant mentioned how the initial situations went. "I think before the first months of the pandemic, I think maybe we had extreme measures which affected our delivery, because also at institutional level, I think we were quite extreme in terms of, of preventing cases within our team." And another explained the situation as facing the unknown. "But we didn't know very well, what were the risks of such a pandemic. So, we stopped all the activities of mission exchange and exchanges and so on." But this was not completely uniform, as some areas allowed for visitors throughout the pandemic, while others enforced strict border closures.

Due to the initial delays, further funding could not, in many cases, be disbursed either, because "there was no justification to send money." This is often the reality in development

work, funds are designed to be used for certain purposes, they are earmarked for certain activities. I will elaborate on this topic later, in the section on funding flows.

Lockdown Effect, the Real Disjuncture

Introduction

> "Farmers' organizations are built on membership and on bringing people together, which was the very first thing that they could not do any more. So, the way they function, the way they operate was completely affected from the onset of the pandemic, and it still is. So, initially, they were paralyzed, they were stopped, I think, in many areas, everyone stopped, the world stopped for a while, before they could pick up their activities in an alternative way." (Interview, IFAD participant, Italy)

After the initial delays, travel restrictions, and calling back personnel from overseas, the restrictions turned, in many places, into lockdowns. During the lockdown period I was in Tampa, Florida, where my partner and I and our then 4-year-old child (and a cat), isolated ourselves from the outside world, for some months. Our university was essentially shut down and our child's preschool was closed. I remember teaching lecture on Monday at the university and then the next lecture we were online. Once it happened, it happened quick. And so, for the following three and a half semesters, I taught classes online. The lockdown period turned into a game of who can work when, since one of the parents had to entertain the little one, whilst the other was working. It was the first time in my life, and many others' life, that I could not move freely. I recognize my privilege in that I have never had my movements questioned or restricted by the government or any other entity. Suffice to say, I could relate to the thinking shared by two participants. "I remember when I first when went for lockdown, right, that was in it was in March, April 2020. First time, you know, I have never experienced that. Now you are told to be

at home. No movement." "I mean, you go out in the street, and there's nobody. So, it's like, it's quite a shock on a personal level."

It was during this initial lockdown period, that the idea for this dissertation research emerged as well. I mention the situation because it relates to what many of the participants explained about the times of the lockdowns. They were times that none of us had experienced before. New terms arose or became the standard during this period. Terms such as remote working, social distancing, quarantining, and lockdowns themselves became the norm. In addition to terms, practices changed as well. Hand sanitizer became your best friend, hand washing became a much more important duty, and covering your face with, first, a piece of cloth, and later an N-95, or other mass-produced mask, was ubiquitous. All the major brands started selling masks a couple months into the pandemic - our child had Pokémon, My Little Pony and other colorful face masks, for example.

How these situations were handled or evolved, depends on contexts. Many jobs cannot be conducted online, many do not have access to online equipment, and many do not have water available for washing hands. Furthermore, some work is considered 'essential', meaning that the society cannot cope without someone doing that work. This can be healthcare workers, plumbers, food industry workers, emergency services workers, to name a few. But also, agricultural work is considered essential in many places. In my research, I found that in some areas, and depending on the size of the organization, the essential status could be given. One agri-agency participant shared their experience. "I mean, everyone knew we're under lockdown, things were not moving, but we got stickers for the cars because even when during the lockdown, there are those who still had permission to move around as long as you're considered essential, essential services." The same happened to some of the FOs, as explained here. "When

we went into lockdown, yes, the government authorized us to continue working and even traveling amidst the lockdown because of the role we play."

In the following sections, I will explain different consequences of the lockdowns and social distancing within the research setting.

Remote Working/Teleworking

"My dog is very happy. He is very happy because of the pandemic though, because I work from home." (Interview, agri-agency participant, Belgium)

Already before the strict lockdowns started taking place, some organizations were moving towards online environments to remain operational and to avoid any possible infections. Later, remote working became the norm in all of the agri-agencies and most FOs as well. Some of the FOs operate in more rural areas with less population intensity and subsequently had less Covid cases recorded and were able to still go their offices. In several FOs many of the personnel had to remain at home, but some could work from offices, it was more a question of how many could be on location safely at any given moment, and most felt it that 'rather safe than sorry' was the way to go forward. The experience of one of the larger agri-agencies shows the scale of this transition.

> "That was a huge undertaking, not least considering that we were in, we have 20 county offices, all of those county offices were closed, people needed to start to work from home, they needed different kinds of insurances. They didn't need that, you know, have a computer, internet connection, monitoring of all the partner projects needed to be done online and so forth. So, it was a huge shift in the whole organization. So, it has been a lot of work, right?"

Of course, remote working is dependent on the availability of equipment that allows work from home. This essentially means computers and online access, which not all of the

farmers' organizations can provide. Regardless, the vast majority of the organizations were able to start remote working. The problem is that FO work is very much dependent on meeting with farmers for different purposes, and often, farmers do not have access to online environments. Some of the work is not possible to be conducted online. These types of jobs were mostly delayed in the onset of the pandemic. One example from an FO underline this. "So, one of the things that we had to do quickly was to go for online meetings, especially with decision and policy makers. We also did the same with the farmers' organizations. But then the if you needed also to have voices of the farmers, you needed to speak to farmers, it was a little bit challenging in some cases, in terms of internet connectivity and other things."

As mentioned earlier, missions stopped, at least the physical ones. Some organizations started doing virtual missions as well. One participating agri-agency staff member elaborated on this. "The other point that is personal and professional is also the missions, we were used to traveling a lot, and meeting our partners in the projects. And this is something that we are not doing anymore. We have the so-called virtual missions. Of course, it's a completely different concept. But in any case, we needed to find some sort of compromise to keep the activities ongoing, but you know coping with the current situation and difficulties of traveling and you know, clearances authorizations, and so on and so forth." Furthermore, although at times there were more meetings than 'normal' times, some felt disconnected from their team members, they felt that office culture had potentially changed to some degree.

The move to online environments sparked a communication change that will seemingly continue indefinitely. Meetings between partner organizations have become more frequent and they require much less effort to organize than previously. Before, most of the communication

was through emails and then in person during field missions or other organized events. An agri-agency participant from Finland explains the benefits.

> "If you meet regularly, regularly, rather than once every six months, or once a year, it's very different if you actually talk rather than just send emails. So, I think that that's, that has changed, and it's a good change. So, these online meetings, and that, that also I think helps with activities, like running them, because you can talk to the partners, and then ask them, okay, what's the problem? And then come up with solutions together."

Additionally, agri-agencies have invested in Zoom subscriptions and others to host video chats and webinars where partners from different places can meet to discuss certain thematic issues, for example. There is a further benefit to these online meetings as well, simultaneous translations are available, making accessible to more people at once. I have been able to join several of these meetings and webinars, mostly on the topic of climate change. I believe in all of the meetings I attended; the pandemic was also discussed. So, in addition to changing communication means and ways, the pandemic has also changed what our small talk is like. Furthermore, many of the organizations have social media accounts that proved to be important venues for sharing information on events and other issues, to communicate with members and the wider public.

One thing to note is that remote working situations have fluctuated with the pandemic in most all of the areas of the world where the interviewees live. For example, some organizations returned to standard office work, only to be interrupted by the rise of a new variant, Delta, in summer 2021. I was one of the people who got Delta, but luckily my symptoms were rather mild, and I had a place to quarantine and isolate, and family who could keep me fed. Then later another variant, Omicron, surfaced in late 2021. Thereafter, remote working was again recommended and often required. I was visiting Belgium at the time when Omicron started

spreading. The day after I departed, new regulations were put in place, which would have made my research much more difficult had it happened during my stay.

During the pandemic, the research participants have been working more than before it, although this was more pronounced with agri-agencies rather than FOs. This is because of two reasons. First, due to remote working, the time spent actually working increased with the reduction of traveling and commuting. Secondly, due to the pandemic, there were a lot of situations that needed more attention than they would have previously. One agri-agency participant elaborated on this topic. “So, so, in that sense, I do think it has made us stronger, but of course, it has also taken a huge toll. I mean, we have been working like crazy, right? Yes, yes, to manage the during the pandemic. So, even in a way, the organization is also a bit tired in the sense that we have worked so much.”

Now, since remote work often meant working from home, there were some indications that work/life balance had suffered. Having offices in your living room or bedroom, if not separate office, have a tendency to remind us about work, even on our spare time. Furthermore, some of the people I interviewed, especially on the Global North side of actors, were hired during the pandemic and started working remotely right away. Building work community online has provided a challenge, that some were, and some were not able to overcome. Some also felt that there was a loss of community to a degree, when moving to online connections. One person underlining the importance of “chit chat over coffee.”

Social Distancing

"So, you have to keep the distance and I'm sure there'll be local police checking it out." (Interview, agri-agency participant, Belgium)

Although social distancing is not the same as a lockdown, it aims for the same purpose, to prevent the spread of the virus. When lockdowns lasted for weeks and months, social distancing stayed for a couple of years, in some cases. Many of us remember how hugging and shaking hands became a thing of the past and elbow bumps and shoes touching were the new craze. Meeting people is still a bit awkward when we don't know whether we can hug or shake hands; there usually is a question of how do we do this, before acting.

When strict lockdowns prevented any meetings and trainings, social distancing then generally placed a cap on how many people were allowed to meet, how many people were allowed to attend trainings. The rules and regulations for this purpose varied from country to country and from locality to another. One participant mentioned, in referring to trainings, that: "…the number of people to meet were minimized. And again, it was highly encouraged that we should meet outside and not indoors."

Farmers' organizations offer agricultural training and organizational capacity training to their members. It is at the heart of their operations, regardless of organization size. So, when social distancing rules made it impossible to have all the people come together, many of the organizations organized more trainings but for less people. This of course made it much more tedious for the trainers, since they were talking about the same things for many times, whether in the same location or travel to different places to host the training which also led to slowing

down of projects. One participant pointed this out and also contrasted the situations between FOs and agri-agencies:

> "But in short, there was also an increase in the fuel reallocation, because you could find that the training you have conducted in one day, in the event of collecting it in two days or three days, because they have to be less than, normally we are dealing with 40 people, 45 or 60. Now you have to deal with five, five people per hour. And then you have to conduct the four hours that is 20 a day, the next day also do four hours, really have to you have to ride to the same place twice or thrice. To do the same training. I say, of course, of course, African solutions to African problems would have to go on. Like if we were in Finland, or in the UK or in the USA, we would do trainings online. But here in Africa it's almost impossible. This is the availability of gadgets, the ICT gadgets. We are still communal."

This quote demonstrates the understanding of difference in operational capacity of organizations in different contexts and also how social distancing was considered more of a hindrance in the farmers' organizations rather than agri-agencies, AgriCord or the donors. This is not to say, however, that these organizations were not understanding of FO realities, they were, just that their realities differ. In addition to differences in online training opportunities, during my research it became obvious that not all training could be done online even if online equipment was available, or at least the usefulness would be lower. As one interviewee mentioned. "I always think that it is much easier to grow rice with PowerPoints than growing rice in the fields."

Mental Health

> "Because my personal opinion is that human beings are supposed to have and continuing to develop a relationship with others and with the Covid, the mandatory isolation really brought us several psychological problems and reflection to think how to go forwards." (Interview, agri-agency participant, Brazil)

In Finnish language we have a term for when one has been inside for too long, becoming jumpy, anxious, and possibly irritated, called being 'mökkihöperö', translating roughly into

being cabin silly, which in English is usually referred to as cabin fever. During the lockdowns, many of us felt this, and most likely, you, the reader, understand this feeling. The lockdowns created a global phenomenon of cabin fever. For some it was ephemeral and even enjoyable, but for some a struggle. In my research, mental health became an important topic that started with the initial fears for health and safety and turned into social issues, loss of community, missing of friends and family, and even depression due to isolation. For example, some participants lamented the fact that they had spent up to two years without seeing their families. Although many were connected, they felt disconnected. They were connected online but disconnected from their loved ones.

Mental health was a theme that arose from all the different actors' interviews in surprisingly similar ways. People recognized that families or people with children may have had additional challenges due to schools being closed and therefore children needed more support and looking after. One FO participant mentioned how the situation has developed during the pandemic. "And when it comes to children, I have children, children have been staying at home for a bit of time, now they're back to school. But when they stayed at home, I had to share my time supporting them to do their online classes, as well as for me working. And that was really, really hectic." Similar situations had been prevalent in the Global North as well:

> "And in fact, one of the things was that my personal life was much more mixed with my professional life. It was a continuous mix, it was really, really, really very hard. I'm a single mother of three children. They were all here with me in the house. And I had to work from home, and they really played mama hotel. I had to cook and clean and wash. And also having them you know, all the time around, you know, it made me nervous themselves. And one really was almost in a depression. Wanted to stop studying."

It is, however, the reality that in many communities where the FOs operate when the schools closed, the children were home and there was no online teaching available. In some

places, online education might have been available, but families may have lacked equipment to join the classes. Furthermore, on the FO side, school closures had additional impacts regarding economic situations, which I will explain further in the section on income effects below. On the other hand, family, and yes pets, were also something that brought comfort to many and was essential against feelings of loneliness and isolation that were seen as factors stemming from lockdowns, quarantines, isolation, and social distancing. My own experiences involved being in lockdown with my partner, child, and a cat. I mention this because in my interviews, we often talked about our situations and experiences with the lockdown. Many asked whether I had been in lockdown and if I had children at home during those times. As the answer to both was yes, we realized that our experiences have similarities, even though our geographical locations and life situations might have varied greatly. This was helpful in creating further rapport and possibly camaraderie during the interviews. The concept of resilience was evoked during these discussions on mental health, both in how mental health was addressed and what type of things made the situation easier (such as family and pets, potentially), but also directly in use of the term. One agri-agency participant mentioned specifically that mental resilience was needed because no one knew how long the pandemic and restrictions would last.

As I have mentioned, AgriCord, donors, and most of the agri-agencies are located in the Global North and most FOs in the Global South. One FO representative from Uganda juxtaposed the situations:

> "First of all, I found myself being locked up with my family and you know, we are in Africa. Here were so communal, our families are so heterogeneous. Yes, they are big families. We have extended the families, our neighborhoods, like for me, I stay in town, our neighborhood is so interactive. So, you could find it difficult today you have small kiddies, you have to stop them from visiting neighbors and sometimes even first to stop neighbors' children from visiting your house and the neighbors start seeing you as being uncooperative."

This comment reveals the expectation or assumption that European or North American people and cultures are more individualistic and nuclear family orientated. Due to this, if we follow the thought process above, they would be more equipped to being separated from extended families and community. Whether this is completely true, I cannot say, but it is true that online connections, and therefore possibilities to stay connected, are more readily available in the Global North and that families (kinship and fictive kinship) are considered to be smaller. Additionally, stressful economic situations were not distributed equally within my research populations. Farmers' organization representatives often have their own agriculture-related businesses, which can be farms or other types of ventures. As the pandemic brought upon a multitude of restrictions, many of these businesses were not providing enough income from the family and some even collapsed during the pandemic. In addition to fear for health and safety, they had to deal with the stress of losing income and businesses. One FO representative from Uganda mentioned:

> "Personally, I was doing businesses, my business collapsed. As a farmer, I was doing poultry. I couldn't access feed for my poultry. I couldn't access drugs, other services that need the market was a problem. So, it really affected me as a person, my business in farming collapse. We went through a financial difficulty as a family. And yes, and we lost relatives who were already having underlying issues, but it was difficult for them to access the medical care, hospitals all that because the restricted movement of the people."

The above comment demonstrates the accumulating challenges people felt during the pandemic and subsequent restrictions, especially on the FO side.

Market Closures and Income Effect

"The downside of Covid was the inability to access markets, because every small locality has a day in the in a week where they have an open market for to go and sell and go back. But during Covid, that was not possible." (Interview, agri-agency participant, Uganda)

In addition to businesses collapsing due to lockdowns and restrictions, the pandemic brought upon a multitude of other income effects. One of the most devastating financial impacts was felt due to the closure of markets, both local and export. All of the FOs in this research operate, to some degree, as businesses, with the aim of increasing farmer livelihoods. When the restrictions closed the markets, there was often no substitute venue for selling of products, leading to immediate economic distress on both the organizational and individual member level. One FO from Uganda, reported up to 40% decrease in sales. In many areas schools are one of the biggest customers of the FOs. So, naturally, when the schools closed, they were no longer purchasing any agricultural products from the FOs. This had a substantial effect on incomes of FOs in, for example, Brazil, Tanzania, Uganda, and the Philippines. Additionally, when people's movements were regulated, many informal jobs disappeared and people in urban households lost most if not all avenues for income. This then led to the fact that some FOs lost their customers, even if they could physically sell their products somewhere, as one FO participant stated.

> "Because pandemic effect economic situation of Palestinian people, Palestinian people don't buy honey and other bee products. There is another thing more important than honey. So, our members and farmers instead to produce one ton of honey they produce less because he can't sell this product."

Furthermore, because movements and transportation were restricted, whole food system value chains were disrupted. From the agricultural side, access to any inputs, such as seedlings, seeds, fertilizer, and pesticides, were limited, either because they were not imported or otherwise transported, or farmers lacked the financial means for procurement. Additionally, farm labor was often unavailable because travelling was not allowed. Therefore, for example timing of planting or harvesting was disrupted, yields were, in some cases, smaller, and other production difficulties arose. This of course, translates into less produce for sale and in the end,

less income for the farmer and the organization that often buys the members' produce and sells it on the markets. These dynamics had an effect on food prices as well, as stated by an FO representative from Kenya. "But then it also brought a lot of disruption because food became more expensive, especially in urban areas, it became more expensive because much less was being delivered. So, yeah, it's really affected people in that way." Due to lack of income, some cooperatives collapsed, and some FOs could not pay salaries for some time, leading to further hinderances of operations. Concurrently with the production difficulties, some FOs reported increase in overall production in the areas, because more people turned to agriculture, due to lack of income.

On the other hand, the FO farmers mostly engage in producing some type of edible products, whether that is vegetable or rice, or fruit, livestock, or any other product. So, when the markets closed, they and their families were able to consume the products they grew and thus were in that way resilient to the lack of market access. But, with no income, other products and services, such as hospital bills or medicine, can be unreachable. However, it is true that some FO members faced food insecurity during the pandemic as well.

One additional effect to incomes is the slowing down of fundraising efforts. As many donor countries were facing difficulties at home, willingness to donate may have been affected. Some organizations rely on, at least partly, attracting donations from people on the street, whether in cash or joining a monthly donating service. These practices were not allowed during the height of the pandemic, due to social distancing rules. Furthermore, as I was finishing up data collection for this dissertation research, Russia attacked Ukraine, displacing millions of people internally and internationally. Some FO members pointed out, that this will most likely create a situation where donor countries will have displaced people, or refugees, depending on

legal status, entering their countries and this requires their attention and financial means. How this situation will unfold, remains to be seen. In a webinar organized by The United Nations University World Institute for Development Economics Research (UNI WIDER), similarly, the pandemic was seen as something that would make it harder to justify international spending and end up decreasing solidarity. Although, there may be truth in the assumption, the next section will show a different outcome of the pandemic.

Emerging and Reinforcing Solidarity

"I can give several examples of some of the organizations which really went an extra mile, really, to show solidarity with the membership, even when you would be justified to just sit at home." (Interview, agri-agency participant, Uganda)

As I previously mentioned, the pandemic brought upon a disconnect with people. Concurrently though, and surprisingly perhaps, it gave way to solidarity within the AgriCord network and alliance, as well as on farmer level. It seems Oliver-Smith (1996) was right about disasters creating opportunities for solidarity and Mehta et al. (2022) about "new forms of social solidarity emerging during the pandemic..." (12)

On the agri-agency level, the feeling of togetherness rose as online meeting platforms were taken into use instead of emails and phone calls, and of course in person meetings. One would assume that lack of in person meetings would decrease the feeling of closeness but that has not been the case. Several agri-agency participants stated how these new ways of communicating allowed for more regular discussions. For example, one from Belgium stated:

> "On the other hand, I believe in a way it brought also some of the region's more together, because now all of a sudden, we were able to. [organizations name] immediately purchased the Zoom account, we were able to hold thematic

> meetings involving all people from all the different regions, speaking Spanish, French and English and Portuguese. Bringing in simultaneous translation to Zoom was also not a big problem. So, in fact, yeah, I also really had quite a few interesting thematic exchanges…Which I believe maybe would not have taken place if it would have just been for continuing the way of working as usual… It really, really generated a lot of enthusiasm among the different people because I felt like for the first time, they were really meeting and getting to know different people from different regions, meet their peers basically. Before that we also used to have regional workshops, but they are mostly one workshop for English speaking countries coming together, one workshop for French speaking countries together. And then another workshop for the Spanish Portuguese countries coming together. So, between the different languages, the activity has never ever any exchange or interaction or even people knowing one another. And I think that one has really changed. And that change has really also been appreciated."

This quote demonstrates the possibility that may come with technology in creating space for different voices. Of course, it has downsides as everything, but this type of global work may benefit from the use of online platforms. The several webinars I attended, had a similar feeling as the interviewee above. People were joyous of having the opportunity to meet peers from around the planet and were eager to share their own experiences, challenges, and opportunities in relation to Covid-19 as well as other issues, such as climate resilience. The pandemic has changed the dynamics of the organizations, as one participant pointed out. "So, the pandemic has really helped us to become a more global flat organization instead of center with peripherical regional offices."

Likewise, FOs have witnessed togetherness with other organizations as well as with the communities they are in, in the face of an unknown crisis. An FO representative from Nepal indicated that small acts of generosity were more common during the pandemic than before, knitting the FO closer to the community. And another from Uganda mentioned that farmers were trying to support each other in ways that they had never seen before. During the interview process as well as in online participant observations from webinars and meetings, it became clear to me that the reason for the newfound closeness was based on the global nature of the

pandemic. Everyone, from every organization, were somehow affected and could related to each other's struggle. It is not the same with other issues, such as poverty, climate change, or lack of access to any other number of things. Along those lines, both FO and agri-agency participants were open about the change in communication with donors as well. It was commonly mentioned that listening had improved and that different organizations were now more willing to discuss different matters more openly. Additionally, in a webinar, hosted by IFAD in February 2022, there was a question to the audience, consisting mostly of FO employees, on positive outcomes of the pandemic. The most common answers in the chat had something to do with some form of solidarity or working together.

However, simultaneously with the rise in solidarity, in organizational reports and surveys done during the pandemic, some organizations reported gendered differences in pandemic effects. There has been an increase in domestic violence or gender-based violence and increased burden of care for women (due to families being at home). In several webinars, such as the "Multidimensional Resilience - smallholder producers and farmers managing risks," hosted by AgriCord and FFD, the issue of the pandemic reinforcing gender disparities was also a topic of discussion. These reports also align with findings from research studies conducted during the pandemic (Mittal and Singh 2020).

Myriad Responses

Introduction

In the previous section, I explained the effects the pandemic had on the organizations and their members and elaborated on some aspects of how work and life changed. In this

section, I underline actions and activities the organizations enacted either to prevent, mediate or adapt to the new realities surfacing during the pandemic. Before I embarked on this dissertation research endeavor, I took part in a webinar hosted in June 2020 by AgriCord and FFD, aimed at disseminating questionnaire results focused on what type of risks smallholders face in relation to climate change and Covid-19. It was evident that both climate change and the pandemic produce risks to smallholders and the FOs they are a part of. The three greatest risks, rising food insecurity, income insecurity, and poverty, were the same for both crises. In the webinar, it also became clear that most of the FOs that had answered the survey, had had some type of responses to the pandemic, such as awareness raisin, change of marketing strategies, and participating in official emergency responses. It was clear to me, that ethnographic research was needed to find out in detail what those responses were and if they were helpful.

From Agriculture to Humanitarian and Health Aid

The mandates of the organizations in this dissertation research revolve around improving the livelihoods of the farmer members in a multitude of ways, but all somehow in relation to agriculture. Generally, this can be achieved by way of improving agricultural practices, access to markets or finance, entrepreneurship, and advocacy and lobbying. As you can tell, health or humanitarian aid is not usually in the organizations' purview. Well, it was not, but the pandemic changed that to some degree as captured in this quote below:

> "And also, of course, we also need to join in, you know, like, for example, we have come out of this pandemic, more or less, because it's been a really, really joint effort. You don't need to sit on the sidelines and wait for government to do everything, even if it's not within your mandate to do some of the relief work."

As the events were unfolding in early 2020 and the organizations had to go under lockdowns, governments started also recommending wearing masks and have hand sanitizer

available in, essentially, all indoor spaces. The FOs requested to be able to readjust their budgets, to essentially use funding that was deemed for a certain training or other purpose, to be used to procure personal protective equipment, such as masks, hand sanitizers, soaps, and sometimes hand washing facilities. As many events and trainings had been placed on hold due to restrictions, the funds were unspent. Therefore, donors and agri-agencies agreed that some of the budgets should be used for health aid in this case. AgriCord, additionally, started a separate program, titled Safe2020, that was designed to alleviate the pressures caused by the pandemic. Some of the FO recipients of Safe2020 funding used the money to purchase health materials as well. It was, however, not specifically a health program and the funds were also used to purchase fertilizers and other inputs or to reinforce online capabilities.

In addition to physical materials, many organizations started doing awareness raising campaigns by disseminating any available information on Covid-19. This included making videos on multiple languages (for larger effect), radio advertisements, and posters to inform, both members of the organizations as well as the wider public, on how to deal with the virus, how to possibly avoid catching the virus and how to prevent further spread, and later recommending getting vaccinated if possible. These informational campaigns were sometimes created by the agri-agencies and then sent to the FOs, or FOs created them independently by using funds from their ongoing projects. Some FOs even participated in health efforts by donating ventilators to hospitals and offering their then empty offices as places for quarantine. This type of humanitarian activity was completely new to most organizations, but some organizations, mostly in the Philippines and Nepal, had some previous experience due to the prevalence of typhoons and other events with the capability to disrupt health systems. As governments were struggling with the pandemic, in some areas they had asked the FOs to join

in on the health and safety campaigns in some shape or form, leading to what one donor participant mentioned getting more: “more credibility and a better working relationship with the governments and this is also something that will have a positive impact on who they are and what they can be for their membership within their respective countries.”

Another aspect of humanitarian interventions is food. As mentioned, food insecurity was rising during the pandemic in some areas, and FOs felt that it was their duty provide aid on that front. There were multiple ways in which this was organized. In Brazil, Nepal and Philippines, for example, direct food packages were delivered to people in need. In some other areas, inputs, such as seeds, were provided for home gardens in order for the families to grow their own food and meet their nutritional needs without need to travel (which was restricted). The food insecurity situation even prompted one of the agri-agencies to start a campaign to ending the hunger pandemic, essentially meaning fundraising for the cause and reminding people that Covid is not the only threat people have to endure.

As mentioned, mental health challenges were prevalent during the pandemic within the research organizations. Some organizations decided support was needed to tackle those challenges and offered counseling services to their staff and others as well. For example, one of the agri-agencies funded a youth summer camp in Nepal, implemented by the local FO, where a counselor offered guidance on how to cope with emotional and psychological struggles brought upon by the pandemic. Another agri-agency funded a Covid-care project, where they provided relief goods but also counseling services to those in need in the Philippines. It should be noted though, that most of the organizations did not have a mental health system readily available, although one could access such through regular health services. One agri-agency participant elaborated on this topic.

> "Such thing has been there in for those who are going to difficult personal circumstances, or even having difficulties at work. But I think it was really never, I'm not even sure if people knew about it. But it became much more a need during the pandemic. And I think also, during the pandemic, it was also really something that was actively overt."

This participant's reflection shows the realization and seriousness of the challenges during the pandemic. Mental health issues became a more discussed topic, they became more acceptable and possibly less stigmatized during this time.

Digitalization

How does one move to online working environments if the office infrastructure does not allow for that transition? Of course, one cannot, which is why several of the FOs requested and AgriCord and agri-agencies suggested, to shift budgets and allocate funds to purchase needed equipment, such as computers, projectors, and webcams, and install more stable online connections. Those materials were generally in project budgets to some degree, but the pandemic really made this issue a priority as it was the only way to keep in contact and to arrange meetings, trainings, and look for online marketing opportunities (explained further in the following section). One agri-agency participant explained this:

> "And what we have done with this that we have had in all regions, we have sort of adopted, shifted the budget. So now we support the partner organizations also with online connections. Earlier, they could have a really weak connection, or we could not sort of have good online meetings, but we are supporting them to invest in but the Wi Fi, better equipment, so they can be on board as well. And that was necessary due to the pandemic, both to have keep contact with the partner organizations to cooperatives but also to support them to get access to online markets."

The EU Commission has an arrangement with IFAD, which allows IFAD to have some control over the EU provided budgets, as long as they are used to the strengthening of the organizations' capacity. When the FOs, agri-agencies, and AgriCord realized the budgets

needed for digitalization, IFAD was able to accept budget reallocations quickly and flexibly. Furthermore, the AgriCord program Safe2020, also included digitalization aspects. As some organizations lacked online capabilities and were not in a position to use their budgets to install new equipment or connections, the Safe2020 program was useful for that purpose. Although, AgriCord operates on a global scale the Safe2020 was geared towards smaller FOs in Africa.

Because of the newfound online capabilities and the restrictions mandating social distancing, many agri-agencies and FOs started to develop e-learning modules, online extension services, and even virtual farmer visits broadcasted to agri-agencies in a different continent. Instead of the standard training procedures where farmers gather to a specific location for educational purposes, which were not possible during the pandemic or were conducted with limited capacity, FOs and agri-agencies thought of other ways of providing these services. The problem with online extension services and e-learning is that they are mostly accessible by the organizations, their staff, but so much by the farmer members, who are often smallholders with no access to online environments. For example, one larger FO in Uganda hosted a virtual television event, where they provided information to farmers on technologies, seeds, and other inputs. Some FOs relied on the Training of Trainers (TOTs) model. During the pandemic it often meant that the training sessions were created as modules that could be downloaded, so they were not synchronous sessions, allowing for the participants to watch the training sessions when suitable and then disseminate information further to farmers. The topics ranged from agronomic practices to agricultural investment strategies and policy engagement.

Alternative Markets

When marketplaces, schools, hotels, and other venues to sell agricultural products closed, many farmers and FOs lost their source of revenue. Additionally, as movements were

restricted, the transportation of goods in many places became either difficult or impossible as well, since not all the FOs are in a position where they have their own transportation means and rely on public transportation. After the initial shock, organizations started thinking about other possibilities, other ways to sell their products. The FOs came up with ideas that could alleviate the financial strain. As the FOs operate in a wide variety of geographies, environments, socio-economic surroundings, and levels of digitalization, there was no panacea for all the FOs to tackle the loss of markets.

The most prevalent solution to replacing conventional markets was to find online marketing opportunities. Online shops and marketing for agricultural produce was starting to gain traction before the pandemic, but for many FOs the pandemic was a catalyst to really invest in online marketing, boosted by the digitalization processes mentioned in the previous section. Therefore, in addition to maintaining and improving contact with other organizations and members, offering extension services and training, the digitalization allowed for marketing solutions to emerge. This also included SMS systems, where information on available products were shared by text messages, or even radio. For example, in Kenya, a platform called eGranary has been setup by the East African Farmers Federation, where farmers and FOs can access online markets but also information on inputs, financial services and extension services with their mobile phones (can be accessed without smart phones). The platform was initially set up in 2016, but the pandemic really showed the possibilities and opportunities there can be with such a system.

On the other hand, some FOs relied on already existing websites and social media sites for selling of products and were able to sell to a wider customer base than before. One FO participant explained this excitedly:

> "So, we work to an online, on Facebook, social media and Instagram and another website to sell our cooperative products and our members' product. In this pandemic we learn to solve many problems…We took advantage from pandemic to enlarge our work to sell more products, not only in Palestine area where our cooperative is but in all West Bank, in all Palestine, so this is make a benefit for our work."

The additional benefit of this type of online marketing is that it creates a direct link between the producer, or producer organization, and the customer. One FO participant from Nepal explained this further:

> "There was all this, the layers of the market, from the producer to consumers there. And from the online, all other layers totally cut down there. So that's the producer to consumer, that's a direct link build up there. So, the purchasers have increased their value...money in selling [online] rather than older techniques. So, they just are very happy to be using this platform."

Outside of online selling, direct links with customers were created by other ways as well. An FO in the Philippines established their own trading post, where their members could sell vegetables grown in their home gardens, while their general focus of operations is geared towards dairy production. This type of activity alludes to diversification that I will elaborate more on later.

There were some further issues as well. Even with online markets, one had to deliver the goods to the customers and with transportation not always available, it provided another challenge for products to reach customers. Some FOs were able to leverage the pandemic situation in order to reallocate funding to procure vehicles. For example, one FO in the Philippines used the budget to purchase three-wheeled motorcycles, trikes, in order to transport goods to customers. This case does not really represent what was done as a larger network but provides an example of a solution to problem in a local context. And more importantly, it emphasizes the need for flexibility during crises.

Some FOs in the network are involved in exporting goods to other countries or continents. For example, a horticultural FO from Tanzania export produce to European markets. When the pandemic was closing borders and passenger planes that regularly deliver cargo stopped services, some solutions were needed. The agri-agency supporting the FO, decided action was needed and requested to shift budgets so that they could hire a cargo plane to export a large amount of produce to Europe. Reportedly, this type of activity would not have been allowed, were it not for the pandemic, but now, it was. The cargo plane was eventually hired, and the produce made it to European markets, providing substantial income for the FO and farmers. This, of course, is an isolated case and does not represent the activities or actions of the network as a whole but it does provide the key insight that the actions were taken swiftly and if the wheels of bureaucracy had turned slower, the case would have ended in rotten produce and no income for the FO and farmers.

Localization

Although the world, in the research context, was more connected through online means than ever, localization became an important part of any response to the pandemic. Localization here refers to different kinds of solutions that surfaced throughout the network during the pandemic. Furthermore, as discussed previously, finding local markets is a localization aspect that I already explained. As I have mentioned earlier, listening became a practice that was more emphasized than before. The agri-agencies, AgriCord, and the donors were more open to suggestions from the FOs as to how to deal with the situations arising in each context. The local regulations varied from country to country and even within countries, so ground-level information and recommendations were needed to respond to crisis.

The ways in which localization can be seen in the responses are, essentially, as many as the organizations within the research, and most likely the same is true for the organizations within the network that were not participating in the research. Some examples of different local solutions illustrate their diversity, with the underlining understanding that local problems require local solutions. For example, in Madagascar, when the roads and markets closed, the FOs were left with inability to reach their farmers. The local solution was to use project funding and purchase 100 bicycles for certain farmer members who were trained by extension workers, in order to be able to travel within the communities and share information. This way the FO was able to go around the transport challenges and were able to reach their farmers. Whereas in Mozambique, one FO suggested to the supporting agri-agency that they would want their storage facility roof repaired in order to be able to store food that they'd produced and that was not sold, due to market failure, and for future harvests as well. The agri-agency agreed, and the roof was fixed, using budgets assigned for training. There was another additional bonus with the new roof; the FO was able to rent out a part of the space, thereby making some additional income for the organization. Similarly, a new warehouse was built for an FO in the Philippines with funds reallocated from training budgets. Also Huss et al. (2021) have suggested that increasing access to storage facilities decreases vulnerability to supply shocks during the pandemic. Additionally, one FO in Kenya even started producing masks themselves because they were not available otherwise.

Another example of localization comes from an agri-agency that had in-country presence in many areas before the pandemic. When the pandemic hit, they expatriated their people and were left wondering how to continue their work. The solution was, to hire local people to replace the expats in order for the activities to continue. Although this seems like a

simple solution, we should bear in mind the histories of development and how these dynamics have evolved over time. The agri-agency participant explained this thoroughly:

> "I think it shows us or it shows our donors that relying more on partners or the localization, the activities, really helped us during the pandemic, because we're able to maintain, not all of our activity, but a big chunk of our activities. And it was because we didn't have expat on the field [because they] were repatriated during Covid. And I think this approach really, help us during the pandemic. And I think for the future, it will be maybe a little bit easier to make this approach accepted by the donors who were a little bit more cold or reticent about this approach before the pandemic. And also, because there's another preoccupation that was brought during the Covid and it's not because Covid in itself, but it's all the preoccupation about decolonization of aid. So, I think the, our structure of intervention with the responsibility and co-conception and co-realization of the project goes directly in this direction. So, this notion of decolonization of aid goes in the direction that we were going already before the Covid, and I hope it will help us to increase our activities in the future."

This interviewee shared an understanding of the critique of development from the actors themselves. This was not the only time decolonization of aid came up during the interviews, without any questions on it on my part. The discussion on paradigm shifts may therefore be relevant in relation to overall pandemic effects. All this said, by far the most common localization aspect in the responses was related to agriculture and agroecology in continuation. I will explain and elaborate on those responses and effects later in the section on agri-environmental experiences and the Food-Energy-Water Nexus.

Funding Flows

Donor Effect, Budget Reallocation

"So, we have been listening a lot in these two years. And actually, this has given results in terms of actions, in terms of also in the perspective of the program itself, because actually listening to

them, helps you to be in the position to provide mindful support." (Interview, IFAD participant, Italy)

One of the major themes coming up in this research, and one that I have alluded to already, was how during the pandemic, the donors were listening and were more flexible than in the times before. The most common way this was shown, was in budget reallocations. There was not one project within my research that had not somehow shifted budget lines in order to tackle the pandemic challenges. These reallocations were mostly used for health and safety (masks, sanitizer, etc.), digitalization and subsequent operations in online environments, but all also for many other matters, as detailed before. Many mentioned, both FOs and agri-agencies, how the donors were quick to give the go-ahead for changes and listened more closely to the local solutions than in other times. One FO participant from Uganda reflected on those times:

> "Yeah, it was easier to change the budget with the pandemic because all along if you see, budget was a little bit of very rigid, very strict. Once you have already budgeted the money for a specific activity, they have to be channeled directly to achieve the objective of that activity. But when Covid came, we learned that yes, at least it is a matter of death and life, so if we do not change the budget, then we shall not rescue the situation. So, it was actually very easy to change the budget line to implement activities in response to the pandemic."

During my data collection, the interviews and participant observations, both online and offline, this topic was discussed nearly every occasion. After some time and after all these encounters had provided information on this newfound flexibility, I started asking people why they think flexibility and understanding had become so ubiquitous. The answer is essentially twofold. Firstly, with the pandemic restrictions many activities could not be implemented, meaning that budgets could not be used. This is problematic for the programs, since the donor money needs to be spent during the project time, or there may be some hinderances to the overall program which can then influence other funding in the future. So, in a sense the donors

were eager to have the money spent on something that can be done during the crisis something that still is justified within the overall purpose of the program, the strengthening of farmers' organizations. A donor organization representative explained this process:

> "In the past to change an activity, the organization had to write to us a formal email explaining why, providing explanation, clarifications, justification and so on. And then we had to approve one by one, the changes, the adjustments and the proposals. Now, we have simply agreed on a repurposing process, meaning that in the course of the year, they had the possibility to revise the annual work plan and simply to resubmit it again, being in line with the objectives and the priorities that, of course, were originally planned and are of course, you know, the guiding lines of the program itself."

Secondly, the nature of the crisis was that everyone felt it. Similarly, as with rising solidarity, flexibility on budget use, seemingly originates from this clear understanding that this is a serious event that people are facing. Three was no hesitation in calling the pandemic a global emergency with serious effects. The EU Commission also realized this and made an effort to front load all available budget funds to the programs they supported in order to make sure that there was no lack of funds to face the crisis.

Additional Funding

In addition to budget reallocation, further funding was sometimes available for necessary activities. European Commission representative mentioned how in addition to the front-loading process they were trying to mobilize extra funds for mitigation measures. The process to get these funds to the FOs was slower though, taking anywhere from six months to a year and a half, which, on the other hand, is still faster than in 'normal' times. He explained:

> "Yes, we had, let's say, quicker procedure. But we still have to go through the formal process of review and approbation and approval of the funding. The usual mechanism from the European Commission to have financial decision adopted by the College of Commissioner with the old prescreening process by Member States

> and other [donor groups]. So, all this was one as the usual as per the book. But we had, let's say fast line procedure, to go through the same process, but quicker."

The quote demonstrates how the system generally works, how the bureaucracy is strong and does not make swift movements in relation to funding. However, the pandemic changed that, at least to a degree and for a while. A donor representative also mentioned how the pandemic lightened the bureaucracy for a time. "You cannot be lost in bureaucratic procedures and still we have large procedures and bureaucracy and rules and everything. So, we have just tried to make them a little bit lighter, much more can be done." The question then remains, whether that 'lightness' will remain.

As I have mentioned, AgriCord launched the Safe2020 program to tackle issues brought upon by the pandemic with funding from IFAD. These extra funds were targeted at African FOs and were used for a wide variety of purposes. The funding amounts from the Safe2020 program were not large in the grand scheme of things, but still important for coping with different aspects of the pandemic. Additionally, the EU Commission managed to mobilize 10 million Euro on top a larger 14 million Euro program. The important thing to note is that it was there and will be somehow used for making FOs stronger, as told by the EU Commission participant. "The way we bring fresh money, is that the fresh money we'll bring in, is towards resilience."

Furthermore, the agri-agencies were in a bind due to projects not being able to spend the money that allocated according to the predetermined schedules. Some governments recognized this and offered to decrease or cut the agencies' self-finance (or co-finance). Generally, the agencies have to bring in their own money to every grant they receive from their governments. For example, if a project is going to be 100,000 Euro, the agency may receive 90,000 Euro,

depending on the percentage, and the rest they have to find on their own, usually by way of fundraising. One agri-agency participant explained this:

> "So, in the first year of the Covid, they told us that if needed, you can just forget about your co-financing. So, we could get rid of the 15% because they acknowledged that also fundraising for example, which is the main source of the own financing, so it's not easy to conduct it in the pandemic conditions."

This experience shows how the fundraising issue, I have mentioned before, ties into the availability of funding. Furthermore, some governments offered direct subsidies to the agri-agencies. For example, wage subsidies that became available in some areas for a larger part of the society, were also offered to the agri-agencies. In addition to these, some agri-agencies were able to form new partnerships with other institutions, such as the FAO, and write new grant applications to either counter the pandemic effects or for other future endeavors. As one agri-agency participant explained:

> "But yeah, I think I think I would say it has attracted new funding. So that has improved. Because we, because of the pandemic, we got into an engagement to the United Nations Development Program, which is looking to work with the young people doing in the in the green economy space. So that that that provided more funding for us. And I would say that that is something that is welcomed."

The FOs themselves were there for their members financially as well. One activity that several FOs, conduct, depending on their core business, is lending money with low interest rates to their members. FOs realized that since the pandemic disrupted sales, the farmer members did not have income to pay back their loans according to the pre-agreed schedule. The FOs installed moratoriums and extensions, so that the members could focus on tackling the pandemic challenge before burdening them with paying back loans. Some were also able to release dividends early to members, to offset the losses incurred by the pandemic.

Agri-Environmental Experiences and the Food-Energy-Water Nexus

Introduction

This dissertation research focuses on agricultural development actors. In previous chapters and sections, I have explained what type of effects the pandemic has had on many aspects of the organizations' operations and livelihoods of farmers, among other matters. It is, however, crucial that I also investigate the effects of the pandemic to those agricultural activities on farm level and through food pathways with the FOs, as well as subsequent actions to counter those effects. Furthermore, in this section, I introduce the Food-Energy-Water Nexus effects as well. As explained in chapter 2, agriculture and therefore farmers' organizations are at the heart of the inter-dependence thinking of FEWs.

Smallholder farms generally operate on family labor. When farm size increases, the need for external labor increases. During the pandemic that labor was difficult, or in some cases, impossible to find, leading to problems, such as rotten produce, overgrown weeds taking over fields, and things of that nature. Additionally, sometimes the farms are not next to the farmers homes and travel is required to reach them. As mentioned, transportation had become limited, meaning that some farmers could not attend their farms during the restrictions. This led to a situation where fields were neglected, farmers couldn't sell their products, or get the food for themselves. For example, one FO representative from Kenya explained how some of the FO staff have farms further away from Nairobi, and during the lockdowns they could not tend their farms back in their home villages. It should be noted though, that most often this was not the case as smallholders usually live close to their farms.

When the markets and transportation closed, other necessary things for agricultural purposes became limited as well, leading production difficulties, as one agri-agency participant mentioned. “We had problems to get the inputs, to get some seeds and fertilizer and to get some, even some gasoline sometime for the motorbikes.” Supply of many inputs decreased and subsequently prices increased, whilst incomes had diminished, leading to an unsustainable situation with food security risks, requiring immediate attention and solutions. All the actors recognized this risk, and some agri-agencies changed strategies to focus more on food security in future endeavors.

Farmers in my research were at the same time vulnerable to the situations created by the pandemic, and well-positioned due to their main activity in food production. As income sources diminished during the pandemic, food was still mostly available from their farms, although sometimes to a lesser degree, as mentioned above. Because they could manage with the food they produced, another benefit was that they could keep a distance to others and avoid contagion. Sometimes, though, what they grew was not sufficient to provide a nutritious diet for the smallholder family. This is especially true in monoculture-like farming systems.

Home Gardens and Agroecology

To encounter the market failure, restrictions, and lack of transportation, many FOs realized that lessons from the past could be helpful in countering those challenges. Many FOs started recommending their farmer members to engage in home gardening, sometimes also referred to as kitchen gardens. This way the smallholders could grow nutritious food for their families and for sale on local markets, if markets were available. The FOs provided seed inputs for this purpose and guidance as how to establish the gardens, often organic. One FO participant from Kenya explained this:

> "So, we had to shift some of the, for example, we shifted into food security, as part of the interventions that we were doing. So, we would help especially vulnerable households to set up what we call kitchen gardens, which is a small garden, chicken, plants, some vegetables and stuff like that, so that they can be able to meet the needs of their families."

Some of the FOs targeted youth and women with similar type of interventions to tackle food security issues. The type of crops one should grow was also re-evaluated in some areas. For example, in Uganda, one FO started providing quick maturing seeds for the farmers, since it was not known how long the pandemic would last. This way the farmers could rather quickly grow the crops and be of assistance to the local community. The pandemic also brought along health consciousness that had some effect on diets. For example, in Nepal one FO reported increase in demand of asparagus, as it was seen to be very nutritious and might help dealing with the virus. This evidently led to an increase in price and subsequently and increased interest in growing the crop in small gardens around the house. Randin and Turagabeleti (2021) have reported that home gardening may have had a positive impact on socio-economic situations in Fiji, suggesting that these strategies may be helpful in a wide variety of environments. In another example, one FO in the Philippines that was taking part in fish farming, decided to shift away from more expensive varieties that tourists were regularly consuming, into local varieties for the local communities, due to tourism industry coming to a complete halt in 2020.

The concept and practices of agroecology have been on the agenda of some of the agri-agencies and AgriCord for some time. So, in a sense it is not novel for them. What is novel though, is the rapid increase in interest in agroecology during the pandemic. Once FOs reported the lack of fertilizers and other inputs, agri-agencies with suggestions from FOs started thinking about agroecology more as a solution for the effects of the pandemic. It became a push for that direction. Sustainable agriculture, climate smart agriculture, and organic farming all have

similarities, but essentially all of them rely on aspects of agroecology. These mentioned practices have become even paradigms for agricultural development actors.

Of course, agroecology is not a silver bullet solution suitable for all FOs and farmers, but it does offer some benefits that could be explored. For example, if your farming system relies on chemical fertilizer inputs that are bought from the markets, what do you do when markets fail. One solution is to offer locally produced inputs based on organic compounds, such as manure, compost, and other sources. Similar dynamics apply to pesticides as well. Biological control methods are a part of agroecology but require a lot of work and planning. One participant explained how a circular system that is less reliant on external inputs, is potentially more resilient to disasters, such as the one we have been facing, and includes aspects of self-sufficiency. Similarly, and mentioned by several participants, this type of farming system could be more resilient to climate change issues as well. One FO participant from the Philippines, mentioned that they have been recommending farmers to grow root crops and certain other crops, such as pineapple, on their farms to be more resilient to typhoons. In addition to growing safely underground, root crops and pineapple are nutritious, and, as mentioned, the pandemic has made such foods more in demand.

AgriCord, IFAD, and the EU Commission have also interest in agroecology that has been there before the pandemic, but as with agri-agencies and FOs the interest has grown due to the pandemic. The interest ties into the overall resilience of the food systems, as one participant mentioned. The EU is bringing in €10 million for the promotion of agroecology, for the purpose of enabling farmers to create more resilient and sustainable farming systems, largely due to the pandemic effects, since, as one donor participant mentioned, “agroecology was not very popular as part of a thematic to be funded.” Furthermore, there seems to be more interest in agricultural

research as part development efforts than before, but it is unclear whether that is due to the pandemic or other issues, such as the Green Deal and other climate change issues.

Other Agricultural Matters

One major part of agroecological practices is the non-reliance on monocropping. This is due to the systemic thinking that focuses on long term sustainability, wellbeing (of soil, landscapes, communities, the environment, etc.), self-reliance, and circularity, already mentioned above. Reliance on single crops is also risky, from the income point of view. If you rely on a single crop for income and that crop or markets for that crop fail, you can leave producers with no income. The pandemic has demonstrated this blatantly, as explained in previous sections. Therefore, diversification of farming activities as well as FO operations has been on the agenda of the FOs and agri-agencies, as well as AgriCord and donors, during the pandemic. It should be noted, though, that diversification is not a novel idea in the network, and many, if not most, have been proponents for the practice for quite some time now. Diversification applies not only to strictly agricultural practices, but to other aspects of organizational and farmer level decisions. One of this type of activities is participation in the value chain in different ways in addition to producing agricultural products. This could mean, simply put, processing the agricultural products in some way and selling them on the markets, for example. Furthermore, the previously mentioned home gardens and different input sources can be seen as part of diversification actions.

As many people, especially in urban areas, became unemployed during the pandemic, they were left with no income for them, or their families, and food insecurity was on the rise. One solution that many found was to transition to more rural areas and start working the land. This was not a solution or response by the actors in this research per se, but the topic was

discussed in several interviews as a coping strategy that had environmental landscape effects. I introduce this topic specifically because it may inform community resilience or preparedness plans. One FO participant from Uganda elaborated on this topic.

> "Because most of the businesses that closed most of the offices, most of the offices were closed. So, people went into farming. And then we saw an increase in food production than before because most people in offices again, had gone back to farming. teachers, schools are closed and we're going into farming."

The Food-Energy-Water Nexus

As I have stated, FEWs is intertwined with agriculture, agricultural organizations, and the field of agricultural development for several reasons. I have underlined the importance of FEWs thinking in relation to climate disaster issues that have direct impact on all of the sectors: food, energy, and water. Extreme weather events are increasing, causing droughts, floods, temperature changes, and others, all having a major impact on food production. Furthermore, access to energy can become precarious, both directly as having fuel to power machinery or transportation, or indirectly with chemical inputs for farms. Similar dynamics can appear with other disasters and crises as well. I have explained in detail how different aspects of farming activities of FO members have been affected during the pandemic. In this section, I will elaborate further as to how the FEWs interdependencies have been evident throughout the crisis. However, I will not dedicate space for increased energy use from increased remote working and internet usage, decrease from decreased transportation or increased water use at homes, as all are widely reported.

The vast majority of the members of the FOs in this research are farmers who grow food, and there is great variety in what type of food is produced. The list is long, but suffice to say it includes different cereal crops, vegetables, fruits, fish, dairy, chicken and other animals,

for example. Most local FOs collect their members products and sell them as whole sellers, this is the basis for cooperative action. Additionally, many FOs engage in value chain activities, where they provide added value to the products, meaning altering the raw material in some way to create a new product and sell it on the market (also export). Some examples from the FOs in this research include making juice from fresh fruits, processing and bottling milk, and processing rice, soybean, and maize. Whereas some have taken up processing due to the pandemic for various reasons. One agri-agency participant from the Philippines said this:

> "Also, they started to venture in food processing. So, in that way, they avoided food wastage. So, because their harvest like shellfish harvest is there, and but without the market what to do. And so, they also embarked on food processing. And so, it not only supplemented their incomes, but also allowed provided for a variety of food available for the community. And what is interesting here is that the women members of the farmers' federation became even more engaged and active. Because of, you know, the food processing, it's much more dominated by women in terms of the different steps more than men. So that allowed, that gave venue for women to be more involved in their organization."

This quote demonstrates how the pandemic had effects and responses that were not anticipated, ones that tie together gendered engagement, community support, diversification, and yes, innovation. It shows that the FO made a conscious effort to combat the market failure and subsequent overstock of products. On the other hand, complete reliance on processing can be a vulnerability as well. For example, shelf life of raw milk is rather low, and it needs cooling. When transportation to processing facilities was halted by the pandemic restrictions, a lot of milk had to be discarded by farmers since they do not have cooling systems on their farms, as explained by an agri-agency representative from Sweden. Furthermore, an FO participant from Uganda described this type of dynamic:

> "And then in terms of food, our processing plants, we were unable to access raw material for processing, because we do process rice, we process maize, but by that time transport was affected. So, sourcing the raw material for our processing plant

> was a problem. And the people or the household or the clients we used to supply them with food, rice and then push the ball to, we were unable to meet that demand. Because of that, that distortion."

This quote underlines the far-reaching consequences of system disruptions, in relation to FEWs. What is important to note, is that essentially all processing also requires energy, and often water. During the pandemic there were instances where energy (fuel, diesel, electricity) became either more expensive or less available, even scarce. This means that processing, and transport (if available), of products becomes more expensive. So, in addition to having less products available due to restrictions, operations may become less profitable. On the other hand, fuel became cheaper in some areas during the pandemic, but then at the time of interviewing some FO representatives explained how now the price had surpassed what it had been before the pandemic. Some interviewees also mentioned the negative impact of Russia's attack on Ukraine on energy prices towards the end my data collection.

As the organizations in this research focus on agriculture and food production, energy and water are not directly in their purview. By this I mean that most do not support development projects that include building dams for power or irrigation, or other energy investments, or water, sanitation, and hygiene (WaSH) projects, for example. However, this does not mean that these factors or sectors are not indirectly within the scope of their actions, as the example above on energy indicates. Most farmer members of the FOs in this research rely on rains for crop irrigation. Therefore, that aspect of the FEWs was not directly affected by the pandemic. But, as many were quick to point out, climate change does have a very significant impact on their activities already, whether by way of drought, floods or irregularity of seasons.

Where water really became an issue that most organizations dealt with somehow was with washing hands. One agri-agency participant from the Philippines elaborated on this:

> "Because, you know, you talk about pandemic, you talk about having access to water. Tell them to wash your hands between and if their access to water is, remains to be an issue. So, we realign, it's not a small budget, but the I think we had to realign about $10,000 for one village to respond to well, both training and installation of portable of water pumps."

This quote demonstrates how hand washing was seen as an important part of tackling the spread of the virus. There were multiple other examples of providing portable water canisters to FOs, especially when organizing trainings, so that members could wash their hands before entering training facilities. Furthermore, some organizations procured water containers to give to FO members, so that they could wash their hands when needed at home, provided there was an accessible water source around. I explained in the literature review, how water, and especially water for energy, is politicized. An agri-agency participant in Guatemala confirmed, without prompt, how those issues with hydropower are rather common, but quickly added that the pandemic did not, to his knowledge, change those dynamics.

What is energy, is a question I had to ponder whilst doing data collection and interviewing for this dissertation. The obvious answers are electricity and fuel, but in the context of agriculture, is insufficient. Yes, farm machinery, such as water pumps and others, and processing equipment use electricity and fuel (diesel, gasoline, petrol, and others) but the produced food is also an energy source to humans, and if recycled as compost, an energy source for growing crops. Additionally, the 'original' energy for the crops comes from somewhere, most commonly from agrochemical inputs, fertilizers (and the sun, of course). The main three ingredients in chemical fertilizers are nitrogen (N), phosphorus (P), and potassium (K). The ratios of N, P, and K are usually around 3-1-2, meaning that there is three times as much nitrogen as there is phosphorus. The used ratios depend on soil and other conditions, as well as the crop that is grown. Without going into detail, nitrogen is produced from air (which contains

78% nitrogen) with natural gas (methane). The gas is used as raw material as well as to power the production, releasing carbon dioxide into the atmosphere. On the other hand, phosphorous and potassium are both mined from the earth's crust. All these practices have negative environmental effect, nitrogen production by way of greenhouse gas emissions and the others through mining activity and processing, with deleterious effects on local waterways, for example. All this is to say that fertilizer is and should be considered as energy when thinking about FEWs. The cumulative environmental effects should be taken into consideration when evaluating agriculture from an environmental standpoint.

As I have mentioned on multiple occasions, FO and FO member access to fertilizers decreased dramatically during the pandemic. The two main reasons for this were related to supply chain bottlenecks, the lack of products available and price increase. Without access to chemical fertilizers, production in a system that is dependent on them decreases vastly since the crops are not getting the needed materials (NPK) to grow. This is often the case in monocrop systems that do not apply any crop rotation or other soil and nutrient maintaining and retaining practices. Some FOs reported that farmers have requested subsidies for fertilizers from the FOs and from local governments to cope with the increasing prices. It is therefore clear that the lack of fertilizer had food production effects.

Fertilizers are a sensitive economic and political topic. Often, in rural areas, information on how to use fertilizers are provided by traders who sell those products. Similar dynamics have been prevalent in the case of seeds as well. One agri-agency participant mentioned how governments may propose to establish a training center run by a fertilizer company as a solution to production issues and asked:

> "Well, will they give you good advice or with the try to sell their product? The second of course, the second of course, they need new customers. [company name] approached us, for example, and wanted to sort of train our farmers. No, thank you, we don't want your support, go away."

Conclusion

This chapter has focused on the multitude of direct and indirect issues brought upon by the pandemic. I have centered the chapter on the disaster effects as well as the responses within organizational, individual, as well as the landscape level. With ethnographic interviews and online participant observation, I was able to surmise what the AgriCord network has gone through during pandemic times. It is clear that individuals, families, communities, organizations and agricultural landscapes have all undergone stressful situations, but have also found strength and solidarity.

In the interview process I wanted to ask what the participants themselves thought of their responses. I simply asked, "Do you think the responses of your organization were helpful or good responses?" This is a very tough question to answer as there were many responses in each organization. Even so, overwhelming majority thought that the restrictive responses, such as remote working, social isolation, using masks, and improved sanitary practices, were seen as successful, since not many had succumbed to the virus. As one FO participant from Uganda stated:

> "Yes, it yeah, it works. We believe it you are because...you know, one, one thing that I want to like to report to you, for us to continue working as a staff. We were lucky, we didn't, none of us had cases of the Covid-19. So, I don't know whether these were because of were following the strict operating procedures, standards. So at least up to now, none of us had cases of Covid in our organization that we're working in. So, I believe it worked really for us."

At the same time the luck, demonstrated in the quote above, was not always present. Some of the people had to spend time in hospitals, some in the network passed away, and some had to take sick leave due to the virus. However tragic that is, it could have been worse.

CHAPTER FIVE: RESILIENCE AND PREPAREDNESS

Introduction

> "This experience is one of the best preparations. We have this pandemic, and we experience it, and we learn a lot. We learn a lot. Now, what we are doing, as I said, what we are doing, should prepare us towards the future pandemic and disaster. I think if we are successful in many of these things that we are doing with our farmers, then we will be able to be more prepared and more resilient." (Interview, agri-agency participant, the Philippines)

Preparedness and resilience contain similarities within their definitions, regardless of how detailed the definitions are. They both have something to do with enduring disturbances, or in this case a disaster, a crisis. In a sense preparedness is something that is actively done, whereas resilience describes our being - what we are. Preparedness is therefore a component of resilience. Being prepared helps in being resilient.

The first thing to acknowledge is that no one was prepared for a pandemic such as this, of this magnitude. Not the network, not one organization, not one community, nobody. This does not, however, mean that the organizations or farmer members were not resilient or prepared for some other type of disturbances. In fact, the pandemic can be seen as an indicator for preparedness and resilience. This chapter addresses how the studied agricultural development organizations have experienced the crisis in relation to their preparedness level as well as their resilience to the events brought on by the pandemic. To end this chapter, I will introduce some future effects and positive outcomes of the pandemic, which are often intertwined with preparedness and resilience, as outlined by the participants of the research.

Preparedness

> "I think one of the one of the ways to prepare for future or some of these uncertainties is to learn to document the learnings that we have learned now, and also uphold some of the practices that we have come up with as a result of this pandemic, so that we are better prepared if something happens." (Interview, agri-agency participant, Uganda)

As I mentioned, the organizations, the staff nor the members were prepared for a pandemic. Regardless of this, aspects of pandemic preparedness were in place in several organizations in different areas, although many times unknowingly. There have always been contingency plans in place within the operations of the network, since not everything always goes as intended originally when designing projects or support structures. The contingency plans have, however, been more geared toward small hiccups, permission issues, delays due to bureaucracy, and things of that nature. There has been a certain amount of the budget, albeit small, assigned to the creation of risk assessments and/or contingency plans.

Geographical, environmental, and organizational differences have led to situations that have required different approaches for organizational operations, especially during disturbances or crisis. One essential factor in being prepared for the transition to online communications, especially in the case of FOs, has been the size of the organizations. Some of the FOs are rather small and local, with less than 100 members, where online communications have not been necessary at all with members of the FO. Connections have, however, generally been available between agri-agencies and the smaller FO leadership. Due to the lack of experience or availability of online connections, transition to online environments has been challenging. Some FOs, on the other hand, are national apex level organizations, which have had experience in and access to online communication and had an easier adjustment period in comparison, both due to

experience and having had access to funds to procure online equipment before the pandemic. The national level organizations' members are often smaller local organizations, cooperatives usually, that then also have had some online access, but not always stable and sometimes only able to be used for emails, not video calls. As most agri-agencies have experience working with larger, national organizations as well as small local ones, they were able to use the online working experiences to be able to support smaller organizations to transition to a more online focused working modality.

In addition to size of organization, the size of country has played a role as well. For example, the sheer size of Brazil has made frequent visits to smaller organizations or farms quite impossible. Therefore, online connections have had to have been established to keep in contact and allow for knowledge sharing. These connections had been used for some e-learning before the pandemic, but they really proved useful during the lockdowns and restrictions. They were key preparedness aspects, as they also provided necessary information on how to set up such systems in other areas.

Some geographical areas are more prone to experiencing environmental hazards. In the Philippines such are for example typhoons. Due to the frequency of the storm winds capable of devastating large areas of land, some organizations have had to have been prepared in case of emergency. Some of the ways to prepare are more related to reactionary aspects but some are longer term operational or agricultural changes. The reactionary aspects do not need to be ad hoc, however. For example, some FOs had drafted business continuity plans that take disasters into consideration and act as a fail-safe if something goes wrong. The plans could describe, for example, what is to be done when a storm breaks processing facilities or storage rooms. These plans were based on 'natural calamities' and as one FO participant describe, not always taken

seriously before the pandemic. Now they are, and they provide a basis for further planning. I explained in the previous chapter, how diversifying and moving to more storm-resistant crops has also been promoted within the FOs in the Philippines. The practices are an example of longer-term preparedness as opposed to reactionary. This type of diversification and agroecological practices, as mentioned, are promoted more and more by the whole network, for the purpose of being more prepared for the climate disaster and subsequent disturbances, market failures, and other instabilities. Another lesson learned from the typhoon inflicted areas is to set up an emergency fund. One agri-agency participant from the Philippines explained this in more detail:

> "You know, this is from where the strong typhoon devastated the region. And the cooperative from that experience decided to set aside funds for disasters so that they can quickly respond to both the relief and emergency needs of members, but also looking at the possibility of recapitalizing businesses."

As this quote elaborates how the emergency funds can be used for several different purposes. For example, often FO members have taken loans from the cooperative that they cannot pay back during disasters. These disaster funds, instead of the repaid loans, can then be used for the operational and other costs of the organization.

Several, if not all, development donors require a risk assessment to be conducted when applying for funding. These assessments have usually focused on local conditions, political, social, and environmental, as well as on organizational capacities. The risk categories are often described and given a likelihood evaluation, followed by any plans to mitigate effects if the described risk materializes. During the pandemic, I participated in a training webinar, organized by FINGO, Finnish NGO platform on global development, on a new risk assessment matrix, which is going to be used for any civil society organizations looking for development funding

from the Ministry of Foreign Affairs Finland. The webinar emphasized the need to take risk assessments more seriously and having concrete contingency plans ready, including designated people responsible for any responses. I mention this because one of the agri-agencies participating in this research started using this matrix for risk assessment after this webinar. Often these risk assessments are conducted at the beginning phases of project planning. The issue that arises from this practice is that sometimes the projects or programs go on for years and we do not always know what the future holds. This was the case with the pandemic, of course. Risk assessments are part of preparedness planning, since in order to plan, one must ponder what to be prepared for. In the case of typhoons, for example, the hazard is strong winds causing damage, and the risks could be loss of life, loss of profit, and loss of crops. The risk assessment can describe these situations, assign roles to who takes the responsibility for which action, and so on. One agri-agency participant from Sweden explained the end result of this risk assessment and preparedness process. “So, to make sure that they have strategies in place on how to mitigate the risks that they are facing in their geographical areas of work. And I think this is something that we need to invest more in…” Whereas another from Canada, emphasized the need of organizational restructuring. “I think it's more in the way we are structuring our organization than to try to plan in advance some activities or responses, because every crisis will be different. I think it's more in terms of responsibility and who does what.” This quote resembles the ideas of the risk assessment matrix, insofar as having a clear idea of responsibilities.

In the end, the most common reply in my research to the question of how to be better prepared for future disasters, was learning from this one. The pandemic raised the disaster awareness level of each organization and each participant. It was agreed that going through this

global pandemic has left all the organizations better prepared for any future crisis. As told by an FO participant from Uganda:

> "And, you know, the pandemic has taught people lessons. And we have learned that, yes, in a time, it might be another instance come. So, you should always be prepared. Just the way farmers prepare themselves... when farmers realize there is climate change, weather pattern is unpredictable, they prepare their land very highly, and then also do their planting highly. But this pandemic has also made us learn that economy can be disrupted anytime. So, you should live while planning for tomorrow. So that if emergency come it does not get you by surprise, you're able to at least absorb and then you continue with livelihood."

Resilience

> "I think resilience is basically what describes our organization on an individual and on a more collective sense largely out of necessity. Like I said, we are an alliance that works many with many different partners of various cultural, various, all sorts of socio-economic backgrounds. So, you know, if anything, we have to be resilient. If we're not resilient, this isn't even about the pandemic, we have to act resiliently, or we just don't function at all, both on a more individual and a more collective level." (Interview, AgriCord, Belgium)

To explain what constitutes resilience is a tortuous task. The vagueness of the concept allows for a wide variety of explanations and inclusions. In this chapter I understand resilience as something that is within organizations and communities, in their being, something that makes them endure. In the previous chapter, I elaborated on multiple effects of and responses to the pandemic that can be seen through the lens of resilience. I will try to avoid repetition and only briefly mention any responses that have already been explained as examples of resilience. One thing to note is that the experience of resilience is dependent on experience of risk. As I explained in chapter 2, the experience of risk is subjective and depends on feelings of uncertainty among others. Therefore, the evaluation of resilience should take into consideration the subjectivity as well as positionality of the people in question. What is implied is that some

of the organizations are located in the Global North and some in the Global North, some are focused on office work and some on the ground level. It is clear that risks are different in these different contexts, varying from inconvenience to loss of income, for example. In the data collection process, it became clear that many agri-agencies, AgriCord, and donor participants recognized this contextual difference and how it also relates to resilience.

Organizational resilience is based partly on the people within the organization (Bourdieu (1986) suggested that social capital is an individual property). I say partly, because several other issues are at play when thinking about how the organizations manage during crises. In my research, it became quite clear that organizational resilience is relational; it is founded on the connections and relationships the people have, the connections the organizations have with other organizations, and the connections that the organizations have with their members and communities they operate in. The idea of 'power in numbers' is ingrained in cooperative thinking, and I found that in a global scale the same thinking applies to organizational resilience. This dynamic does not only involve funds flowing from donors via AgriCord and agri-agencies to the FOs, but also comradeship and knowledge flow from farmers to farmers, from peers to peers, from region to region, and continent to continent. And as I elaborated, solidarity rose during the pandemic within the network between local actors as well as global. These connections that were strengthened or even created, were essential in bolstering resilience during the pandemic. There was somebody to ask from, to engage with, and to share with. This dynamic speaks to the co-production aspect of resilience (Boillat and Bottazzi 2020). A regional agri-agency participant from the Philippines talked about these relationships and their impact on resilience:

> "The way we are structured as a regional organization, we have very strong, and I think a deep relationship that is very important in these Covid times. You can do much more if your relationship with organizations and with people are good. So, and that we were able to do and, and we always say resiliency has to do with also with your reason for being and I think is what we are doing."

Furthermore, social safety nets, as sort of community resilience catalysts, were in demand during the pandemic. They were helpful in alleviating mental stress, food insecurity, and health concerns, to name a few. In several webinars organized by, for example, the World Bank, IFAD, and AgriCord and FFD, the topic was explained thoroughly. It was underlined how these social safety nets were crucial especially for the more vulnerable groups within the communities. Some of the FOs in my research took on a role of a social safety net, by providing for the community. The communities were therefore more resilient due to the actions by the FOs, supported by the alliance. Here, the flexibility and opportunity for budget reallocation were essential. An agri-agency participant from the Philippines elaborated on this:

> "And they provide a very basic like relief goods, but not only providing basic relief goods, but also social psycho emotional counseling services. They also had this, they ran like a family center, like someone in need can phone and could get response either counseling or going to their place so that they can be if they are hungry, then Covid care can mobilize and deliver whatever basic needs that could be provided."

What is also interesting that some of the FOs were specifically asked by local governments to reach rural populations and provide them with information and distribute inputs, for example. One donor representative described this situation in a way that explains how new relationships with different actors that came about during the pandemic, can be helpful in the process of becoming a more resilient organization:

> "Another thing, as I said, they [FOs] were solicited by their governments to do certain things, but at the same time, by doing certain things, they got more credibility and a better working relationship with the governments and this is also

> something that will have a positive impact on who they are and what they can be for, for their membership within their respective countries."

Additionally, some FOs and agri-agencies described how their operations are dependent on funding from donor organizations and without it they could not carry on with their activities for much longer. An AgriCord participant explained how their secretariat is also dependent on the partnerships with the agri-agencies and is "only as resilient as the agri agencies are willing to continue that partnership." Whereas one FO participant from Kenya explained this funding characteristic of precarity:

> "I'm looking at the organization as it is, I wouldn't say that it is very resilient, because at the moment, we are still dependent a lot on outside support. And if anything, a disruption comes and that that support is disrupted, then the organization might not be able to, you know, really bounce back or survive."

On the other hand, several organizations started expanding on their organizational partnerships during the pandemic. They looked for new partners, either for funding purposes or knowledge sharing. This was also a topic in some of the webinars I attended. For example, in one organized by FFD and AgriCord, one of the main findings was that increasing partnerships was a benefit from the pandemic, and it was seen to increase resilience of those organizations that had embarked on such endeavors.

The FOs and their member farmers, as agriculturalists, have shown during the pandemic that they are able to cope, innovate, and develop mechanisms in order to keep moving ahead. I have described in detail how the FOs came up with local solutions to find markets, grow food, and remain operational in situations were essentially everything was restricted and there was a lack of inputs and access to markets was diminished. I found that the higher the dependency of FOs and their members are on external inputs in their agricultural production, the less resilient they were to the pandemic. But the transition to other ways of producing food, such as the

examples provided in the previous chapter on home gardens and agroecological approaches, show the adaptation capabilities of the farmers and the FOs, thereby insinuating that they are resilient. If we understand resilience as simply bouncing back to a prior state without adaptation, they were not resilient, but if we understand that adaptation is a foundation for resilience, they were. In the end, many agreed that the pandemic has been an educational crisis. Participant from AgriCord explained this succinctly. “I think we have learned a lot. We are now more resilient than we were when the pandemic broke out, we’re a lot more resilient.” Yet, even after this, it is hard to describe a resilient organizations. It is not necessarily the size of the organization or FO that makes them resilient, or the amount of funding, or the partners they have. One key aspect in my mind is the ability to maneuver in case something happens. How those maneuvers are instigated or enacted depend on the context and the people within the organizations.

Positive Outcomes and Future Effects

“…I don't know if there will be a such thing as normalcy from here on. And therefore, while there is this building back better, but building back better towards a different kind of future will be the key.” (Interview, agri-agency participant, Finland)

The pandemic has been a journey for all, and it will have long lasting consequences for many aspects of organizational being. As mentioned, the experience has required learning, listening, and understanding with all the organizations in the research. What was nailed down during my research process was that the organizations felt empowered in that they are relevant and needed. One agri-agency participant from Canada mentioned that “suddenly people are

paying attention." An AgriCord participant reflected on the same topic. "I had the impression that maybe this pandemic made everybody to think more about agriculture, it has been sort of sinking a bit in the priority areas when it comes to donor financing and so on. So that it might this might bring it back."

Ways of communication have changed, and they will not return to any 'normalcy' if that refers to times before the pandemic. Most organizations are now more capable of and willing to communicate through online means. Some agri-agencies reported a decrease in hierarchy, due to 'closeness' that arose from online communications. One agri-agency participant from Sweden explained this.

> "People feel much more involved than before. We have been we've done some written questionnaires on this and that is what the feedback people give that the organization has shrunk. We have more people employed, but we are much more closer to each other. And that is due to the pandemic and the start of using all of meeting online meeting tools."

Furthermore, online extension services have been essential in FO work during the pandemic. Some FOs reported that they will keep conducting online trainings and offer extension services cue to the reach and ease of use. There will be hybrid models where some trainings are in-person and some online. For example, an FO participant from Tanzania elaborated how even once the pandemic is done, they will keep offering online extension services because they can reach more people in different locations. An additional benefit that FOs think about is that doing online trainings is much more cost effective than inviting everyone to a certain location, offer food, and transportation, etc., making it possible to perhaps design future interventions or projects differently than before.

Missions and field visits will have their place, especially in onboarding new partners, but they will remain a more of an infrequent practice. Flying across the planet is now more

under scrutiny that it was before the pandemic, although several agri-agency participants underlined that travel has been more questionable in the recent years because of the carbon footprint caused by frequent flying. The pandemic offered an opportunity or push towards decreasing emissions by flying less.

Additionally, as many FOs embarked on online marketing, they are not going back to 100 per cent offline environments. Future will show how large the online market share will be, but as the systems are in place, they will be used at least to some degree. It very much depends on local conditions. In some places, such as Kenya, mobile devices have been used in ingenious ways for years now to conduct business. Whereas, in some other areas this has not been the case and the transition to online markets is slower.

Similarly, the pandemic offered a push towards more localized, diverse food systems. All the different levels of organizations had already been thinking, to some degree, about agroecology and more local, close-knit food systems, whether due to climate change issues or dependence on imports. The input scarcity really showed the interconnectedness of local food systems to the global market system, offering insight as to what could and possibly should be done in order to avoid vulnerability to market failures. These practices will most likely continue to be a part of the AgriCord network for the coming years.

Flexibility in budget reallocation has been one of the most helpful and lauded changes that has happened during the pandemic. Most organizations wish for the practice to continue, but some also reported that bureaucracy is slowly coming back and that the period of flexibility is coming to an end. Flexibility outside of budgets and funding was also introduced as an important future characteristic of the organizations and their activities. This relates to

organizational agility that is often easier for smaller organizations. One FO participant from Tanzania reflected on this.

> "Another thing that we should we think we should keep is the flexibility. Because I still remember how flexible we were during the pandemic to make sure that things are moving. If this is not working, can we do this? Okay, can we? Okay, at this time, okay, let us shut the office. Okay, let's work online. Yeah, we need the flexibility, especially when you want things to happen positively."

In relation to funding, FOs reported a decrease in outside sources of income during the pandemic. This and the inability to conduct daily operations provided a forced opportunity to innovate and plan, to re-evaluate how to conduct business in the future. Unfortunately, this dynamic insinuates that vulnerability and experience of risk breeds resilience. I say unfortunately as the critique to the concept of resilience is often, and rightfully, targeted at how some groups are in some shape or form discriminated (locally or globally) and then have to be resilient, but then are lauded for that resilience. As if they are better suited for situations that require resilience. Either way, this was a time to re-evaluate, re-compose, and to be better prepared for the future.

Conclusion

In this chapter I explained how the participants of this dissertation research perceived their respective organizations' preparedness levels, lesson learned, and resilience. I then outlined some future effects and positive outcomes of the pandemic. What is important to note, is that all of the mentioned are deeply interconnected. How resilient an organization will be in the future is constituted by what type of lessons are learned from the past and what type of preparations are made for the future.

CHAPTER SIX: DISCUSSION, RECOMMENDATIONS, AND CONCLUSION

Discussion

Introduction

The focus of this dissertation was to better understand how global and local agricultural development donors, farmers' organizations, agri-agencies and the AgriCord alliance have experienced the Covid-19 pandemic. In elucidating responses to the Covid-19 crisis from various levels of agricultural development actors, also 'studying up' as suggested by Nader (1972), and the roles the actors have played in co-producing resilience, this dissertation study sought to reveal how multifaceted the responses have been and what can be learned from them. Additionally, one key focus of this research was to investigate the funding flows of these development actors during the pandemic, possibly informing future development endeavors. Furthermore, this study aimed to provide an ethnographical account of the FEWs Nexus effects of the pandemic in an agricultural development context.

The theoretical threads I used in this dissertation were anthropology of development, political ecology, and anthropology of disasters. The additional frameworks employed were the Food-Energy-Water Nexus and the concept of resilience. Anthropology of development is useful since the focus of my study is on agricultural development organizations. Political ecology, on the other hand helps in looking at the power relations within the development actors, as well as allows for the inclusion of agricultural landscapes into the critical study of the FEWs Nexus. Anthropology of disasters is essential in this dissertation study due to its concern

with transformation in social and political relations during and after disasters. The concept of resilience offers a backdrop (although often criticized) for understanding and explaining the organizational operations during and after the pandemic. The Food-Energy-Water Nexus allows for the inclusion of the interconnected environmental aspects of agricultural development and the operations of farmers' organizations as well as their members into the analysis. Furthermore, as mentioned, political ecology offers a lens, through which the environmental aspects of the FEWs are critically evaluated.

Additionally, I have purposefully chosen to use the term *disjuncture* to describe the overwhelming effect of the pandemic on a global scale. Appadurai (1990), proposed the term to understand the globalizing world, especially in relation to politics, cultures, and economy. In my view, the pandemic has caused disjunctures in all the previous. Although the virus and health concerns are the culprit for any of the incidents and actions that followed the spread of the virus, I maintain that the main disjuncture has been the lockdowns and restrictions, and the responses to the pandemic, which, of course, were caused by the virus. This, by no means, is to promulgate the idea that the lockdowns and precaution were unnecessary or that the pandemic shouldn't have been taken so seriously, only that many of the effects were felt due to the lockdowns. Furthermore, the responses to the pandemic have been numerous and varied, but there are similarities that can be drawn together. For this purpose, I have applied Appadurai's *scapes*, as a way to perceive global flows of ideas (ideascapes), technology (technoscapes), and funding (financescapes) throughout the actors (ethnoscapes) involved.

In this section I will first summarize the key findings of this study, in relation to the four research questions I have outlined in Chapter 1, then follow by interpreting the results in relation to the theoretical threads and frameworks.

Key Findings

All of the development organizations within this research have experienced the pandemic in some shape or form. The risks that the pandemic brought about have not been equally shared or experienced due to several reasons, such as geography and environment, access to funding or having online access. Even so, the effects of the pandemic have followed similar pathways across the studied organizations. There was an initial shock that triggered fear reactions and caused delays in the operations of the organizations. Thereafter, the lockdowns were mandated in almost all the studied organizations by their local or national governments. The lockdowns and other restrictions on movement are mostly what caused a lot of distress within the organizations, especially economic stress within the farmers' organizations. The data indicates that mental health was negatively affected in most organizations. Remote working and not seeing colleagues, family, or friends offline, really had a negative impact on the people participating in this research. Regardless of the negative impacts of lockdowns and remote working, the data shows that the initial fears and delays were displaced by the responses that the organizations put in place.

Clearly the most common response to the pandemic was moving to online working environments, which was done in all of the studied organizations. Although there were some exceptions, remote working was seen as a key response to the pandemic, and it was felt necessary to avoid contagion. Furthermore, several FOs received support to update their online capabilities, so as to be able to stay in communication with other organizations and also within their own organization, and to allow for more opportunities for remote working. Additionally,

as online communications became more common, many felt newfound closeness and solidarity with their fellow organizations.

The health responses, which are not generally in the mandates of any of the organizations, were experienced as necessary ways to support the communities, especially where the FOs are concerned. All the organizations (FOs, agri-agencies, donors, AgriCord) included PPE (masks, sanitizer, etc.) in their budgets to some degree as to avoid contracting or spreading the virus in their offices or training situations.

As the restrictions were in effect, marketplaces had to close, and many FOs and their members lost their income sources. This was clearly the most critical effect of the pandemic on the FOs and their members. Although people feared contamination and dealt with other issues, the economic struggle was seen as the greatest threat for the wellbeing of smallholder farmers. In order to counteract this loss of income, quest for alternative markets was necessary. Many FOs either started selling products online or expanded on this aspect of their business. The online expansion support was helpful for this purpose as well.

Funding flows were altered during the pandemic. The initial delays of operations slowed the initial flow of funding. After some time, budget reallocation became common as donors, agri-agencies, and AgriCord realized that something needed to be done and the rigidness was not helping during the pandemic. Some new funding opportunities also arose during the pandemic, most to tackle pandemic effects, such as lack on inputs, and to allow access to online equipment.

Agricultural value chains suffered from the lockdowns and restrictions. Most importantly, markets closed, and many things became scarce. Farmers had difficulty selling

their products and people had difficulty buying food in some areas. Lack of inputs, such as fertilizer (energy) and seeds, had a negative effect on food production. Processing facilities had to shut down for some time in some locations, and some could not receive needed raw materials due to lack of transportation. The FEWs effects of the pandemic were, therefore, many. Firstly, food was less available through markets, and some FOs reported rising food insecurity within their membership or communities. Energy, mostly as agrochemical inputs, was less available during the pandemic, either because the prices had increased or that they were simply not available due to transportation issues or border closures. Water was more in demand as hand washing was suggested as the best way to avoid contamination, to which the FOs had to have local solutions, installing hand washing facilities, especially in regard to trainings, whereas other actors (agri-agencies, AgriCord, donors) had facilities in place. All of the FEWs issues were tackled in some way, either by direct support from the organizations or by localization efforts. These localization efforts also included transition or push towards agroecological approaches and home gardens, which use nutrients from compost and manure, for example, to grow food. Furthermore, the agencies showed resilience during the pandemic and were mostly able to continue their work after the initial shocks and lockdowns, which hindered processes. It became clear that preparedness was pronounced in areas with histories of crisis or, for example, online capabilities. In the following sections, I will interpret the results through the theoretical threads and additional frameworks.

Disjuncture

I have demonstrated how the organizations within the scope of this study have experienced and responded to the pandemic. Although the organizations are separate entities, they are tied together and interconnected in the development sphere. Therefore, their responses

their experiences and responses have been, at the same time, local and individual, as well as collective. In engaging with disaster anthropology, this study demonstrates and confirms many of the assumptions that are embedded in the theory. The virus, and the subsequent pandemic, is the hazard that is threatening people and communities. It, indeed, has had the potential to disrupt or damage (García-Acosta 2002; Hoffman and Oliver-Smith 2002), but it was not simply the existence of the virus that caused these disruptions. Whilst the hazard was the same, the risks that research participants and the organizations faced were, indeed, not equally shared. The disaster and this study have shown and reconfirmed, on global scale, that disaster impacts have determinants that are founded in sociopolitical, historical, spatial, and economic matters (Faas et al. 2020; Button and Schuller 2016). For example, the access to online environments were shown to be unequal, and therefore for some, the transition to remote working was simpler. Yet, this disaster has proved to be a context for rising 'solidarity' and 'new agendas' as suggested by Oliver-Smith (1996). Additionally, Mehta et al. (2022) has found that during the pandemic solidarity has risen due to 'compounding uncertainties', a finding my research concurs with. What this dissertation study adds, specifically, is that as with more localized events, the pandemic shows these dynamics to be at play on a global scale as well. As I have previously explained, many of the participants proclaimed that they felt closeness with others, even if they were struggling with isolation and not being able to meet friends or family. These matters may possibly have a causal relationship, although that cannot be proven here. Maybe solidarity rose and people felt closer because they were in vulnerable situations and felt the urge to socialize more during the isolation period. It could, however, be that due to the newfound online capabilities and frequent access to Teams and Zoom, there simply were more opportunities to gather and talk about important things. As we have seen in meetings and

webinars, people now have a common experience that everyone can relate to in some shape or form. Béné (2020) points out that cooperation is a form of social capital, and in this dissertation research this is evident. The fact that the FOs participate and act as members of the network gives them social capital, as forms of connections and support. I argue that increasing solidarity, and thereby cooperation, increases social capital.

As part of Appadurai's scapes, *technoscapes* are of importance here. Rather than focusing on modernizing aspects or technocratic aspects of agricultural development, the emphasis is here on digital means. As the pandemic spread, online capabilities in the AgriCord alliance spread and were reinforced as well. These online equipment and software can be seen as technoscapes, as ways in which global cultural flows are spread in the globalized world. What is unclear, however, is that do the equipment mediate cultural flows or are they such themselves. My interpretation is that the answer is both, and that they cannot be separated. In relation to this, finding alternative online markets or creating them, can be seen as a part of technoscapes as well. The push for online marketing was intensified by the FOs during the pandemic, but already promoted before as a diversification activity. Are online markets feasible, viable, or wanted in all contexts may be a different story, but nonetheless in several locations they have provided meaningful livelihood opportunities. The fact remains however, that as with online research, access to online markets depends on the capability to log on, for both the seller and buyer.

When information is spread through online means, as it was during the pandemic, there are ideas that are shared. This can be seen as an example of *ideoscapes*. Unlike with technoscapes, the flows within the realm of ideoscapes went both ways (bottom-up, top-down) and horizontally as well. As I have mentioned, when the pandemic hit, the AgriCord alliance

and agri-agencies therein asked the FOs what was needed to tackle the situation. This practice is what is often titled as bottom-up approach, which allows for more participation from the 'targets' or beneficiaries of the development endeavors. AgriCord projects in general rely on discussion with local FOs when creating any projects, a practice more common in the NGO world in general, but during this time the dynamic was expanded. As there was rising solidarity, horizontal discussions increased, and FOs and agri-agencies were more in touch with each other as well. The flow of ideas then followed this pathway and suggestions, and strategies were shared. Especially in relation to health responses the agri-agencies provided ideas to the FOs. In some instances, these were videos or other instructional materials in order to raise awareness on pandemic issues. In these situations, the top-down approach was more common. This may be due the inherent inequality in our systems as explained by some of the research participants – healthcare systems are not equally distributed within the areas that the alliance operates in.

Furthermore, in a political ecology of disease, King (2015) claimed that due to the actions of international funding agencies and NGOs, access to HIV/AIDS drugs increased in sub-Saharan Africa. My research shows that due to the activities of the FOs and the alliance access to health information, PPE, and other materials increased in the communities they serve, confirming that non-governmental actors have a place in health-related responses, even if the organizations in my dissertation are not generally operating in the health field. However, I cannot surmise that the actions of FOs or agri-agencies had a larger scale impact on decreasing the spread of the virus or increasing access to care.

In addition to other health concerns, mental health is often affected in disasters, both during and after (Seale-Feldman 2020). In my research, challenges to mental health were common occurrences in all regions included in the study, confirming the assumption. This

research cannot surmise psychological effects to a clinical degree, but in many encounters the topic was discussed although not directly asked. The psychological impacts of the lockdowns and fear were many. People with children often proclaimed that the whole period was very hard for the children as schools had been closed, or that it was increasingly stressful to work at home, while children were present. On the other hand, some were saying how the presence of family may have prevented feelings of loneliness. These, of course, can be true simultaneously. What is important to note is that many studies show that disasters may have mental health implications in the region where the disaster has taken place. This disaster is a global one, and this research suggests, in relation to the organizations in question, that the mental health implications are global as well. Remote working seems to have had this double-sided effect of increasing, or at least contributed to increasing in what I have described as solidarity but had negative effects on mental health. Some organizations in the research offered mental health or counseling services to their staff or members during the pandemic, but they were a minority, as most were not able to offer such services. It is possible that offering services to members could increase the mental health resilience of the organizations.

Financescapes and Power

In addition to social capital, the FOs in the AgriCord network are gaining financial capital. The farmers' organizations in my research depend on support and funding from the AgriCord Alliance. For some FOs, the funding support is very critical, and they might not be able to provide for their members without it. Some of the FOs, on the other hand, are well established and have a solid foundation to which the additional support is beneficial, but not always crucial. Either way, how the money spent is strictly guided by documents created before the implementation of the projects begin. As FO and agri-agency participants underlined, the

use of the budgets is rigid, and it is time-consuming and difficult to change what had been budgeted for which activity or purpose. During the pandemic funding and the use of budgets became flexible. This flexibility originated as everyone understood the gravity of the situation.

One of the most significant areas for power relations inquiry is in money, or more accurately how it is distributed. In this dissertation research, the money, the funding, mostly comes from the EU through IFAD from where it is distributed through the agri-agencies to the FOs, essentially meaning that the donors have more power than the other organizations, particularly the FOs. It should be noted, though, that the agri-agencies have other sources of funding as well. EU and subsequently IFAD are large organizations with rigid systems in place due to several reasons, such as large institutional bureaucracies, guidelines on spending due to the money originating from member states, and accountability measures, to name a few. Regardless of the reason, the experience of the recipient organizations is quite strong in that the stiffness of the system may hinder certain aspects of the development work. The other side is, of course, that the organizations depend on that funding for their operations as well.

During the pandemic this power momentarily subsided as more weight was given to local desires and wishes. I argue that this constitutes one of the key findings of the research – that it was a paradigm shift. It seems this pandemic as a disaster has, at least ephemerally, developed new power relations as suggested by Oliver-Smith (1996), or at least dented the previous relations. Is this an anomaly in agricultural development that will be ‘fixed’ as we slowly, and partly, return to the way things were, or is it something that remains, as some other practices will. How funding flexibility came to be is of course political. Decisions were made which allowed for easier and quicker processes and plasticity on mandates. This is particularly true when moving to health responses instead of agricultural value chain approaches. This

flexibility of budget reallocation is different than bottom-up or participatory approaches. Based on my research, agri-agencies in the Alliance rely on those more engaging ways of creating projects, but the budgets have nonetheless remained rigid. This increased flexibility is key and where a shift has happened. Similarly, Ngo (2022) has found that the disruptive nature of the pandemic allowed for a more inclusive or participatory budgeting, leading to organizational commitment. In a political ecology of the pandemic, Mehta et al. (2022) claim that governmental top-to-bottom Covid-19 responses in Mumbai, India have failed to take into account the vulnerable populations thus leaving the responses inadequate. In this dissertation I argue, as shown by the data, that the transformation into a more of a listening mode in the AgriCord network has increased the success of the local level responses to the pandemic. How these dynamics will play in the future remains to be seen, but there were some indications that slowly things are returning back to pre-Covid times. Begging the question, is the paradigm shift a lasting one. It was, however, clear that not many, if any, had a desire to return. One agri-agency participant explained the importance of flexibility of funding:

> "The lesson learned was, I hope that the donors would have this, this lesson there. Sometimes when dealing with the farm organizations, it's easier it's better to have this agility on funding. And this requirement to plan everything in forehand when you are dealing with the livelihoods and markets and complications which may appear very suddenly and change the situation. This was the only time I felt that the donors were open to access these changes. Normally, if you ask these kinds of things, it's very bureaucratic and sometimes when you get the green light to react to the situation is over."

In thinking about Appadurai's (Appadurai 1990) *financescapes*, we can ponder whether the funding carries more than money within the transactions. It is commonly understood that the funding at least maintains knowledge transfer. Are there cultural values that are transported with the flow of funds? In a top-to-bottom development approach, the answer surely must be, yes. The decisions on what to fund and how the money should be used cannot be bereft of cultural

values. As I have demonstrated, development work or the field of development may promote certain capitalistic models and ideals as part of the project design. This is, of course, not always the case, as we have seen with the AgriCord alliance, especially during the pandemic. The altered financescapes and the way the alliance has listened during the pandemic, emphasizing the participatory, bottom-up approach which may counteract the previously mentioned cultural flows. In the following section I interpret the results of how the decisions made during the pandemic have impacted agricultural landscapes and FEWs.

Agricultural Development and FEWs

The AgriCord alliance approach resembles the participatory development paradigm first introduced in the 70s (Rahnema 1990), as different from some of the other more colonial development cooperation practices. They rely in many instances on farmer-to-farmer principles that assure participatory approaches. As I have mentioned, the participatory approaches have been criticized for lack of genuine participation, missing community engagement for example, due to limited budgets and time constraints (Sollis 1992). This dissertation research reconfirms this critique, because in 'normal times' budgets are rigid and project timespans limited, while at the same time provides understanding that operating in a capitalist world system, where funding flows from donors to FOs, it is still useful and provides much needed support for FOs. Agricultural development has relied heavily on modernization as a way to improve yields and subsequent income of smallholder farmers. The AgriCord alliance aims at improving smallholder livelihoods of which are often dependent on agricultural production and the improvement of such. Therefore, modernization ideas have been on the agenda of the organizations in question. This pandemic has, however, guided the agencies and FOs to focus more on localized production, agroecology, and circular agricultural economies as ways to

promote more sustainable livelihoods. These ideas have been on the agenda of many of the organizations, as similar responses are key in climate change adaptation as well. Martey et al. (2022) suggested that the expectation of pandemic shocks may intensify the application of sustainable agricultural practices, although not uniformly. Further claiming that participation in a member-based organization may increase the likelihood of adopting those practices. This dissertation research shows that in agricultural development settings, the intensification has indeed happened, especially with the support of the organizations in question.

As the pandemic and the subsequent responses created the feeling of unity and solidarity through understanding and listening, perhaps it offers an opportunity to look at agricultural climate change issues as equally serious, although maybe more gradual than with the pandemic. The data shows that the gradual nature of climate change is really what differentiates it from the pandemic disruptions. Although floods and droughts emerge swiftly and are treated as emergencies, the overall climatic conditions do not produce equally experienced disruptions as the pandemic. Many participants in this research proclaimed that it is because of this mutual experience of fear and insecurity and understanding of threat is what pushed the alliance towards more flexibility on funding but also underlined the need to co-produce more circular modes of agricultural production. I use the word co-production purposefully, because during the pandemic, in several cases in my research, the inputs for agricultural production came from the FOs by way of reallocated budgets approved by the agri-agencies, AgriCord, and the donors. In addition to climate change vulnerabilities, participating in (global) agricultural value chains, for example export, is more vulnerable to unforeseen disruptions in the capitalist market system than a circular food system (which has its own vulnerabilities as well). This is also why diversification is often promoted; to shield one from situations where reliance on one crop or

product produces a vulnerability and a risk. In Latin America, as suggested by Tittonel et al. (2021) and de la Peña García, Zimmermann, and Eleuterio (2020), movement toward agroecology with support of farmers' organizations can be seen as a coping mechanism during the pandemic. Similarly, Pagganini et al. (2020) suggest that local farmer groups in local food systems may have more potential to perform under shock situations "when larger food supply chains are severely disrupted or break down" (21), and to challenge food system power dynamics. I argue in this dissertation that in the global agricultural development context, similar is true, as evidenced by the home/kitchen gardens, seed provision, and other localization responses introduced in Chapter 4.

Furthermore, in some cases agricultural production is solely geared towards the markets, farmers then relying in income from sales to provide for their own nutritional needs. When the markets failed the farmers did not always experience the lack of food *per se*, but as we know one dimension of food security is preference, meaning culturally appropriate food. The home gardens and other localized option have a way of tackling this issue. If we rely only on statistics or quantifiable information on food availability, the lack of preferred food may not be indicated as a problem. This dissertation therefore shows that ethnographic research is important when thinking about any issues within the FEWs Nexus.

From a political ecological perspective, water as part of FEWs in this research is an important topic. Access to water was unequal during the pandemic, as it is in other times as well, connotating the concept of 'infrastructural violence' on a global scale, essentially meaning that there are inherent inequalities in access that have historical reasons and are based on political decisions that still weigh the systems today (Rodgers and O'Neill 2012). Furthermore, as mentioned, the biggest impact of the pandemic to energy was in the form of agrochemical

inputs, mostly the lack of fertilizer. In relation to FEWs, the pandemic did not severely interfere with the work of agri-agencies, donors, or AgriCord themselves, it was the FOs that were affected, dynamic which connects to the idea of *polis*' role being questioned as a key part of the overall agri-development system (Parker 2021), meaning that the donor countries stand on more solid ground. This is not surprising since FOs are the ones that deal with ground level agricultural landscape issues. The other organizations had, however, roles to play in dealing with the problems. Their experience was therefore more indirect, although through the work, meaningful. As Stein, Pahl-Wostl, and Barron (2018) suggested, social relations really guide cooperation and coordination with the Nexus activities. According to Star (1999), infrastructure is relational, ecological and "part of human organization." (380) Thinking through this, we understand that the inequality of access to water and energy (with implications for food production), has ecological and environmental impacts but are at the same time dependent on decisions that have been made in the past. As shown in this dissertation, issues within FEWs surface especially during disasters; but as we have seen, it is in disasters that new directions and decisions can be taken (Oliver-Smith 1996). This dissertation research elaborates on some aspects of the disaster vulnerabilities within the FEWs Nexus that could guide the evaluation of risk factors regarding climate change in the future.

Resilience and Preparedness

The negative outcomes of the pandemic are many, but the greatest positive value in experiencing a disaster resides in the lessons that can be learned. The Covid-19 pandemic revealed that the organizations participating in this dissertation research were not expecting one to happen. By no means is this an exception – everyone was unprepared. This dissertation research aimed at documenting change in the time of crisis. To accomplish this and in following

post-critical pedagogy as a way to emphasize learning, we must acknowledge what has been useful during the pandemic (Hogdson 2017). Therein lies the opportunity to learn, merely pointing out some problems does not alleviate issues with future disruptions. As elaborated in the previous chapter, risk assessments will be taken more seriously from now on by the actors within the AgriCord Alliance, including FOs and agri-agencies. Contingency plans will not simply be written and stored in a cupboard. There will be more emphasis on what could actually happen, as what is possible has a wider scope in our understanding than before pandemic. I have mentioned co-production of resilience in earlier chapters (Boillat and Bottazzi 2020), but also suggest that preparedness can and should be co-produced as well. Therefore, donors and funders with participation from local actors and communities could increase preparedness levels together. Having the ability to be prepared is often tied to monetary situations. This is true for, for example, when a hurricane hits, and you have had the means to procure a diesel-powered generator. Or you have a vehicle that you can use to escape some other type of localized disaster. These preparation possibilities may also be racialized. Environmental justice movements take those dynamics into consideration when thinking about disaster preparedness (Sherwin 2019).

In this research, there were differences in the preparation levels of the organizations in the Global North and South. This had mostly to do with access to online equipment but access to other matters as well, for example access to water became a pronounced issue during the pandemic. What is important to note, is that these are not strictly issues of preparedness, these were issues with unequal distribution on a global level, which then had impacts during the pandemic. It was not as if any of the organizations were better prepared for a pandemic, because nobody saw it coming. We can call it accidental preparation. As I explained, some organizations

had previous experiences with other types of disasters, all of which were helpful in dealing with this one in some shape or form. This goes to show that in disasters, there is an opportunity to learn. Often disasters have some similar outcomes, no matter what particular type of disaster is experienced. As disaster anthropologists have shown, disasters often exacerbate existing inequalities, regardless of the original hazard (Oliver-Smith 1996). The ethnographic research described here shows that this dynamic is seemingly true with smallholder farmers during the pandemic as well (Paganini et al. 2020).

Yet, at the same time, the resilience, and other hand, vulnerability, of farmers and farmers' organizations has been underlined in this research, as they have been in relation to other disruptions such as environmental degradation due to climate change (C.A. Harvey et al. 2014). Furthermore, development practices may increase vulnerability, unless proper hazard planning is included in the planning process (Fothergill et al. 2013). As I explain in Chapter 5, organizational resilience of the FOs, as well as agri-agencies and AgriCord, was bolstered during the pandemic because of the increasing solidarity and connections. Study findings suggest that these connections are a form of social capital, which has the potential to increase organizational resilience but also agricultural resilience. Paganini et el. (2020) have similarly found that social capital and collective action allowed a degree of flexibility for smallholder farmers to tackle the pandemic disruptions. In the events of disaster and subsequent recovery, social capital is essential (Panday et al. 2021). This dissertation research exemplifies the necessity of social capital in a global agricultural development context.

These findings underscore the relational nature of resilience, which may be a strength, but it also brings about precarity. The precariousness is often rooted in funding and partnerships that may or may not continue after a certain project or program is finished. According to Quandt

(Quandt 2016), political ecology analysis provides needed historical, political, and ecological contexts to resilience thinking and thereby understanding of resilience in social-ecological systems, such as agriculture.

This dissertation demonstrates that in a global agricultural development setting, the resilience of the organizations and thereby agricultural activities are indeed interconnected with historical and political contexts, which is also why co-production of resilience may be necessary. Essentially, this means recognizing that the organizations operate in an interconnected setting where the donors and AgriCord Alliance can provide support in resilience building activities. For example, any number of the local Covid-19 responses, the ideas to which arose from local FOs and answered to a sudden need, guide future organizational resilience. As those responses were often funded by the Alliance, this can be seen as co-production. Additionally, Casas et al. (2021) suggest that the ethic of relationality aims for "full inclusion of community." (321) This dissertation research also shows the importance of inclusion of FOs and their members as partners in risk reduction strategies and thereby resilience-increasing actions, such as agricultural climate adaptation, in the AgriCord network is essential. The pandemic has increased this inclusivity of agricultural development work, as seen in this dissertation. Whether these aforementioned aspects of preparedness and resilience in the development field will persist or whether they are fleeting, remains to be seen.

Recommendations

As an applied anthropology project, one of the most important goals of this research was to provide recommendations to the organizations participating in the research and others

working in the agricultural development field in general. As the pandemic restrictions are slowly lifted in the areas where the organizations operate and things are partly returning to their prior state, it is good to keep in mind that other disasters may come, whether due to climate change or any other cause. The purpose of this section is to provide data driven recommendations that may help in planning for future agricultural development projects or programs and especially for crisis situations. The recommendations are as follows:

1. Budget Flexibility: It has become apparent that flexibility on budget use has been one of the most important responses to the pandemic. All organizations agree that this practice was most beneficial and because of this the FOs felt heard, it should be more included in the future.

2. Preparedness and Contingency Plans: Invest in solid preparedness and contingency plans, which take into consideration varied potential risks arising from different sources, be it climate related, economic, viral, or any other. Include description of responsibility and responsible person or people in relation to the described disturbance.

3. Emergency Budget: Budget should be reserved in overall budgets for unexpected disruptions and to be able to implement the actions underlined in preparedness or contingency plans. This is of key importance for FOs, especially if budget flexibility otherwise is not allowed.

4. Quick action: If a crisis situation arises, swift action is necessary. Sometimes governments move slowly, and smaller organizations are able to maneuver faster. By acting quickly, initial delays can be reduced. In order to act quickly, the preparedness plans and emergency budgets need to be in order. This applies to all organizations from donors to FOs, when a calamity strikes, one needs to able to access funds quicker than in normal times.

5. Localization: Increase localization aspects within the projects if possible. This includes hiring local experts, investigating possibilities for accessing local agricultural, possibly agroecological inputs, diversification of production and other aspects of value chain, and listening to local suggestions in relation to disaster responses but also with other activities. Here circularity, agroecology, and non-reliance on importation are key aspects, while understanding that FOs operate in a global economy.

6. Partnering: Expanding partnerships to include other local, national, and possibly international actors may provide benefits in agricultural development endeavors, such as in knowledge transfer, skills, technology, funds, and others. This can also be thought of as increasing organizational social capital.

7. FEWs Embeddedness: In all of the above, include attention to the interconnectedness of the Food-Energy-Water Nexus. This study demonstrates how the Nexus can be disrupted in multiple ways, so it is essential to think how food, water, and energy can

be affected in disasters but also in ‘normal’ times, especially if we consider climate change as ‘normal.’ This is especially important in the preparedness plans.

8. Gender Relations: As this and other studies indicate, the pandemic has had gendered effects. Therefore, it is important to recognize that FO members are not a homogenous group, and that inclusivity should be underlined and cherished within each organization.

9. Mental Health Services: Investigate whether it would be possible to include some type of provision of mental health support in the organization’s agenda. This should not be limited to counseling services, however helpful they may be, but an overall approach that includes thought for mental well-being. This could include peer support, free online materials, phone-in services, or others.

Conclusion

“I think that's the new normal now. Things have changed.” (Interview, FO participant, Kenya)

I conclude this dissertation study by broadly summarizing the key research findings in relation to the research aims and questions. This section will also underline the value and contributions of those findings to anthropology and related fields. Furthermore, in this section, opportunities for future research are proposed.

Our understanding of disasters remains incomplete because previous research has not examined disasters on a global scale. Everyone has felt some effects of the global Covid-19

pandemic. The pandemic disrupted the lives of millions, if not billions, in some shape or form. In this dissertation, using online and offline ethnographic methods, I aimed to document responses and changes in the agricultural development context within the AgriCord Alliance and network as they had appeared during the pandemic, with specific focus on co-production of resilience and the FEWs Nexus. The aim was to elucidate experiences representing the whole 'food chain' of a global agricultural development network. As the Covid-19 pandemic was a global event, it offered an opportunity for global disaster research.

Building on 42 semi-structured in-depth interviews, the results from this global multi-sited study indicate that networked agricultural development actors have responded to the pandemic and subsequent lockdowns and restrictions in a variety of ways. In addition to health impacts, health interventions beyond organizational mandates, and moving to remote working, the farmers' organizations and their members faced economic stress as marketplaces closed and other income sources were diminishing. Further findings show that development funding became more flexible during the pandemic as organizations with the power to decide also felt the effects of the pandemic, possibly informing future development endeavors. Although flexibility on budget use is one of the primary impacts of the pandemic, it altered possibilities for control and, therefore, power relations. Anthropology of development argues that donor agency policies drive development interventions and that buzzwords guiding funding policies have ideological foundation. My findings reveal that, at least, during the pandemic, aspects of that ideology were set aside, and policies were swiftly altered in unprecedented ways.

Additionally, the FEWs Nexus was distressed as agricultural inputs and food imports became less available or more expensive and water more needed for hand washing. Overall, these findings may inform organizations in the field of agricultural development on how to

better co-produce resiliency, especially in relation to funding and the FEWs Nexus. While the dominant framework of resilience research and practice asserts that vulnerable systems have "lost" resilience, my findings point out that with preparedness or co-production of preparedness (underlining the relational nature of resilience) systems, vulnerable or not, may become more resilient.

In this dissertation, I have demonstrated the usefulness of online ethnographical methods in a global multi-sited inquiry, contributing to the expansion of the methodological approaches of anthropology. Situating the study on a global level disaster, I have contributed to theories of anthropology of disaster, offering insight into mental health aspects on a global scale as well as co-production of preparedness in an agricultural development setting, and revealed how the pandemic has indeed been able to transform global development practices. The colonial past is evident in development work and understanding of it provides valuable insight to the analysis of power dynamics of development actors. This dissertation therefore used anthropology of development as a theory to understand this history and to reflect on it while integrating insights from political ecology to investigate the ways power relations shifted in response to a global pandemic, within the global agricultural development field. Furthermore, I evaluated the weaknesses of the Food-Energy-Water Nexus trend in development and engineering studies, recommending the utility of a political ecology lens to better contextualize the political, sociocultural, and historical local and regional contexts, Consequently, I was able to surmise how decisions in global development practice influenced local FEWs dynamics, applying one of political ecology's key concepts of multi-scalar relationships.

Future research in the field of agricultural development should focus on how changes in global development practices during the pandemic were experienced by the local communities

where the FOs operate or who are members of the FOs, directly. This would involve ethnographic field work within the communities that FOs attempt to represent, informing how or whether the farmers' organizations represent the diversity of communities' interests. In this way more in-depth information on, for example, gendered differences in the impacts of the pandemic for FOs organizational staff could be investigated. Additionally, it is not known whether longer term funding changes as a result of the pandemic will continue. Future research should investigate how the funding dynamics introduced in this dissertation will continue to evolve in the years to come. Furthermore, my aim was not to study mental health during the pandemic, but it was eventually very much present as a topic, I suggest research looking into long term mental health issues caused by the pandemic in the development context.

As the pandemic is receding, global systems are in recovery. Furthermore, many places in the world are facing an energy crisis. The Russian attack on Ukraine has brought energy and fertilizer dependencies into the front pages of news outlets in Europe, revealing the fragility of our food systems to external shocks, again. I write this from Finland, where prices of fertilizer and energy that already increased of the pandemic and have further increased due to the Russian attack, making agriculture increasingly less profitable. Furthermore, climate change is increasingly causing difficulties for food production. During the summer of 2022, extreme droughts caused rivers to dry and agricultural crops suffered. And on the other hand, sudden and extreme rainfall and subsequent flooding, similarly strained agricultural production systems. It seems as though we and our systems are in a perpetual state of disaster. The pandemic instigated changes in the field of agricultural development, changes that all the actors insist were positive. Were the changes in funding flows and budget flexibility ephemeral, or will they remain, is a question all the actors involved would like to see answered.

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APPENDIX I: USF IRB LETTER OF APPROVAL

UNIVERSITY of SOUTH FLORIDA

EXEMPT DETERMINATION

May 26, 2021

Dear Atte Penttila:

On 5/26/2021, the IRB reviewed and approved the following protocol:

Application Type:	Initial Study
IRB ID:	STUDY002689
Review Type:	Exempt 2
Title:	Farmer Organizations and Development Actors in a Pandemic: Responses to COVID-19 and the Food-Water-Energy Nexus
Funding:	None
Protocol:	• Atte Penttila Protocol v2.docx;

The IRB determined that this protocol meets the criteria for exemption from IRB review.

In conducting this protocol, you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Please note, as per USF policy, once the exempt determination is made, the application is closed in BullsIRB. This does not limit your ability to conduct the research. Any proposed or anticipated change to the study design that was previously declared exempt from IRB oversight must be submitted to the IRB as a new study prior to initiation of the change. However, administrative changes, including changes in research personnel, do not warrant a modification or new application.

Ongoing IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities impact the exempt determination, please submit a new request to the IRB for a determination.

Sincerely,

Gina Larsen

Institutional Review Boards / Research Integrity & Compliance
FWA No. 00001669
University of South Florida / 3702 Spectrum Blvd., Suite 165 / Tampa, FL 33612 / 813-974-5638

APPENDIX II: LIST OF ACRONYMS

AsiaDHRRA – The Asian Partnership for the Development of Human Resources in Rural Asia

FAO – Food and Agriculture Organization of the United Nations

FFD – Finnish Agri-Agency for Food and Forest Development

FFP – Farmers Fighting Poverty Program

FEWs – Food-Energy-Water Nexus

FO – Farmers' Organization

GAD – Gender and Development

IFAD – International Fund for Agricultural Development

MDG – Millennium Development Goals

OECD - Organisation for Economic Co-operation and Development

SDG – Sustainable Development Goals

UPA-DI – l'Union des producteurs agricoles Dévelopment International

WAD – Women and Development

WID – Women in Development

WTO – World Trade Organisation