Decolonial Resistance in Agriculture:

The Role of Spirituality in the Work of Food Sovereignty Organizations in Mexico

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Abstract

Recent decades have exposed the crisis inherent in the globalized agriculture system characterized by nature commodification, trade liberalization, corporatization and environmental destruction. The crisis is driven by a colonial and neoliberal-capitalist ideology grounded in the supposed universality of western knowledge. Smallholders are particularly affected, with the dominant system threatening both their practices and knowledges, but are increasingly cultivating resistance through the practice of food sovereignty. Based on an understanding of the connectedness of agricultural and epistemological monocultures, the study explores how spirituality as a non-western way of knowing informs the work of three food sovereignty organizations working among Indigenous Maya communities in the Yucatán peninsula, Mexico, and how spirituality is employed as a decolonial tool of resistance. The case study is based on interview, text and video sources. It was found that spirituality plays a major role within the organizations through contextualizing their food sovereignty work in two main ways: through relations to land emphasizing interconnectedness and non-human agency and through associated values of reciprocity and respect, which taken together inform a socio-ecologically just agriculture in contrast to the commodifying and extractive character of industrial agriculture. Hence, spirituality is used as decolonial knowledge inspiring resistance to the coloniality of industrial agriculture and practice, fostering the emergence of a pluriverse in which multiple ways of knowing and being coexist.

Keywords: *food sovereignty, decolonial knowledges, spirituality, Indigenous knowledges, resistance*

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In solidarity, always.

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List of Abbreviations

DS	Diálogo de Saberes
FS	Food Sovereignty
GS	Guardianes de las Semillas (Kán nán iinájóob)
KK	Ka Kuxtal
LVC	La Via Campesina
TNCs	Transnational Corporations
UYK	U Yits Ka'an

1 Introduction

Agriculture constitutes a central area of interaction between humans and their environments. Recent decades have seen a resurging interest in agriculture and its importance for human communities both directly and indirectly relying on these relationships to land in the context of the ever-increasing pressures of interconnected ecological, social and economic crises and a growing disillusionment with the accelerating corporatization of agriculture (McMichael 2012; Rosset 2011). The food and agriculture crisis manifests in a globalized food system characterized by commercialization and commodification of nature, the dominance of corporations, trade liberalization, large-scale monocultures heavily reliant on external inputs, and land appropriation (Altieri and Toledo 2011; Holt-Giménez and Altieri 2013; McMichael 2005; Ploeg 2010). Smallholders, who are responsible for growing a majority of the world's food, often in more sustainable ways than big agribusiness, are particularly affected by these dynamics (Ploeg 2014; Wittman 2011). The assault on their traditional knowledges and practices makes their agriculture increasingly unfeasible and leaves many no choice but to integrate into the very globalized agribusiness structures that harm them (Edelman et al. 2014).

It has increasingly been argued that the crisis needs to be seen against the ideological backdrop that fostered its emergence, namely colonial continuities and neoliberal capitalist globalization (Figueroa-Helland et al. 2018; McMichael 2005; Toledo et al. 2015). Such ideologies drive practices of extractivism and profit maximization at the expense of environmental and social wellbeing, violating not only land and peoples but also their particular knowledges and practices (McMichael 2014). A dualistic view of human/nature relations has long dominated western thought and significantly shaped development theory and practice throughout the 20th century, which has led agriculture to be seen mainly as a productive economic activity, disregarding the complex socio-cultural and political dimensions of food production, and the diverse ways in which communities create and use knowledge in their practices with the land (Martínez-Torres and Rosset 2014; Grey and Patel 2014). While some pillars of agro-industrial practices have seen increased criticism, the hegemony of western knowledge monocultures arguably continues to be reproduced through the hegemony of corporate agribusiness interests revolving around profit, technology and intensification (McMichael 2005).

The exacerbation of food and interrelated crises has triggered the emergence of resistance movements offering an alternative agricultural vision captured in the concept of food sovereignty (FS). The fight for FS is one for self-determination and the right to healthy, just and socially appropriate food structures in the face of the extractive agricultural model seeking to erase them (Desmarais 2015). These dynamics can also be observed in the Yucatán peninsula in Mexico, which constitutes the basis of this research. Growing assault on territory and Indigenous ways of life has given rise to strong resistance through the cultivation of alternative agricultures (Toledo et al. 2015). Indigenous Mayan cosmology is central to such endeavors, prompting

questions regarding the importance of non-western ways of knowing in agriculture, not only technical but also spiritual ones (Figueroa-Helland et al. 2018).

Considering the violence and inequality associated with the current food system, engagement with resistance efforts and alternative agricultures visions is of crucial importance. Studies need to consider not only practical dimensions of resistance but also their epistemological dimensions and particularly the interconnections between knowing and practicing. While recent years have seen increased interest in non-western knowledges, there are issues of selective integration into the dominant system, that undermine their potential to fundamentally question such system, hence posing the danger of co-optation and de-politicization (Briggs and Sharp 2004). It is against this backdrop that my research is located in trying to explore non-dominant agricultural knowledges and practices, and their relevance for FS. Based on an understanding of the homogenizing claims to universality advanced by western knowledge and the ways they drive globalized industrial agriculture practices, the study seeks to explore the role of spirituality in FS efforts and add to the growing body of research engaging with decolonial knowledges.

1.1 Aim and Research Questions

The research seeks to explore the role of spirituality in food sovereignty initiatives in Yucatán, México. The aim is to establish a deeper understanding of the connections of spirituality to FS efforts and the interrelatedness of knowledge and practice. The study furthermore strives to explore whether and how spirituality can be perceived of as a decolonial way of knowing that informs Indigenous resistance to dominant agricultural development patterns and the coloniality of western knowledge underpinning it.

Based on the stated aim, the following research question has been developed:
How do notions of spirituality inform the work of organizations involved in fostering food sovereignty among Indigenous Maya communities in the Yucatán peninsula, México?

Additionally, the research will be guided by the following sub-question, which aims to investigate how systems of knowledge are tied to power hierarchies, while simultaneously exploring the potential of decolonial knowledges and their connections to practiced resistance:
How is spirituality employed as a decolonial way of knowing within food sovereignty organizations in resistance to the coloniality of western knowledge?

The research question is of relational nature in its exploration of the connection between spirituality and FS, offering both a specific geographical and development studies dimension. The geographical basis can be found in the research's context-specificity, focusing on the case of Indigenous communities in Yucatán while furthermore exploring human-land relationships in agriculture and FS, which reflect human geography's

broader interest in the study of human interactions with the environment. As far as development studies are concerned, the research is positioned in proximity to the resurgent interest in agriculture and its contributions to development in recent decades, aiming to offer insights into the importance of centering localized and small-scale peasant approaches to food systems change.

1.2 Delimitations

The research is limited to investigating the work of three organizations involved with FS in the Yucatán peninsula. Due to the unique conditions of the context, the study does not seek to produce generalizable data but rather a deep insight into the specific case. Focusing on notions of Mayan spirituality and agriculture warrants a truly contextual focus in order to value the circumstances giving rise to specific and relational ways of knowing. Nevertheless, the case may offer valuable insights and inspiration for researchers and organizations involved in similar resistance struggles elsewhere, due to the global nature of the food systems crisis and the paradigm of western universality underpinning it.

1.3 Definitions of Terms

At this point it is appropriate to clarify the understandings and applications of certain key terminology throughout this thesis. Spirituality is defined as a way through which individuals relate to the world and ascribe meaning to it, while also guiding their actions (Kourie 2006). In the context of this study, spirituality is particularly understood as being comprised of a strong relation to the living world, often grounded in animist and pantheist beliefs.

Recognizing their inherent shortcomings, the terms ‘global North’ and ‘global South’ will be used in a metaphorical not geographical sense, relating to the relative positions of power associated with them, while ‘west/western’ is understood (albeit in a simplistic way) as a set of hegemonic ideologies based on Greco-Roman and Judeo-Christian origins as well as renaissance and enlightenment thought, with inextricable ties to European imperial and colonial projects (McEwan 2019, pp.17-21; Santos 2014). Regarding the study, western knowledge is considered based on European modernity as well as nature/culture and subject/object dualisms, which will be discussed in more detail in the literature review (Ch.3). These concepts are reductive and artificially impose binary views on inherently complex and interconnected circumstances with the dangers of reinforcing the very binaries underlying the research problem. However, they also offer a conceptual backdrop against which to problematize their material implications in terms of power imbalances and inequality that continue to persist globally.

1.4 Structure of Thesis

The introductory chapter is succeeded by a background chapter that offers contextual understanding of the chosen case. Secondly, existing literature on FS, spirituality and decolonial knowledges is examined before the theoretical base and the study's conceptual framework are introduced. Next follows a chapter explaining the research design and the main methods guiding the inquiry. Subsequently, the results are presented and discussed, guided by the conceptual framework and connected to pre-existing literature. Finally, a conclusion offers answers to the research questions based on the study's findings.

2 Background

The study focuses on the Yucatán peninsula in Mexico, comprised of the states Campeche, Yucatán and Quintana Roo (fig. 1). The area is known for its high biodiversity and is home to a large Indigenous Maya population, together characterizing a unique socio-ecological agricultural context (Barrera-Bassols and Toledo 2005; Rodríguez-Robayo et al. 2020). Rural areas see different degrees of integration into global industrial agro-capitalism, but small-scale peasant agriculture based on traditional Mayan practices is still widespread. This can be attributed to the early 20th century agrarian revolution which led to large areas of land being split up and returned to peasant and Indigenous communities, with the majority of agricultural land currently being managed by small-scale farmers, often through collective property structures called ejidos (Toledo et al. 2015).

Particularly noteworthy within the context of traditional agriculture is the milpa, an agrarian system commonly practiced throughout Mesoamerica since before colonization and still widely in use (Rodríguez-Robayo et al. 2020). Definitions are complex and vary greatly but it generally refers to a system "of rotational 'shifting cultivation' slash and burn agriculture with a traditional low-intensity practice in which staples of maize, beans, and squashes are produced", often promoting high agrobiodiversity (Rodríguez-Robayo et al. 2020, p.47). Most understandings also highlight the centrality of socio-cultural dimensions alongside productive ones, emphasizing local knowledge and cosmology (Rodríguez-Robayo et al. 2020).

Mesoamerica is home to large agrobiodiversity, resulting from a process of co-evolution between plants and the Indigenous communities that have domesticated and diversified them throughout millennia (Toledo and Barrera-Bassols 2017). Maize in particular occupies a central position in both productive and socio-cultural or spiritual terms, playing an essential role within the milpa, as well as in Mayan cosmology (Barrera-Bassols and Toledo 2005; Bassera-Bassols et al. 2009; Toledo and Barrera-Bassols 2017; Rodríguez-Robayo et al.

2020). There is a strong cultural identity surrounding maize, drawing on the spiritual understanding of being "hombres y mujeres de maíz"[1] (Toledo and Barrera-Bassols 2017).

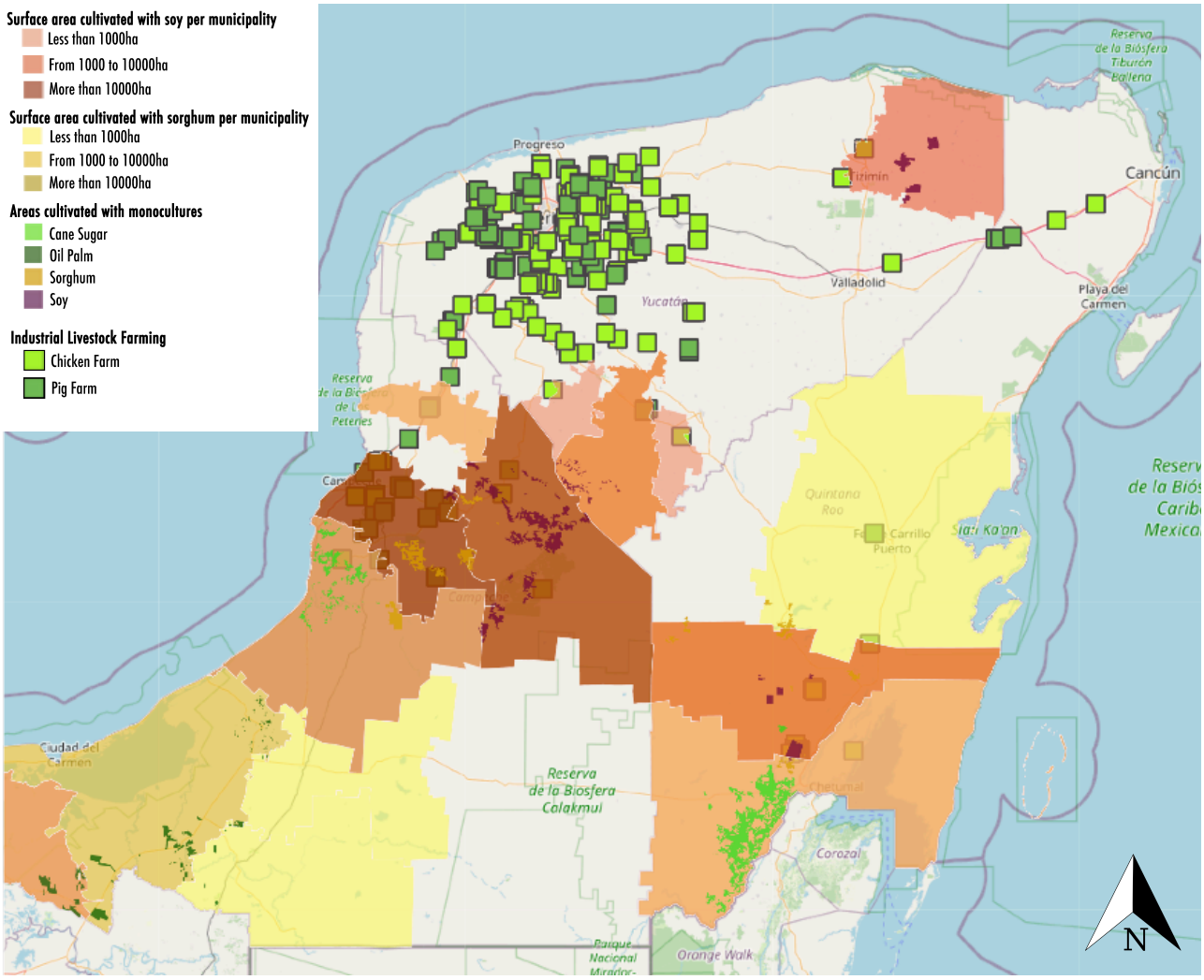

Figure 1 Industrial Agriculture in the Yucatán Peninsula (elaborated by author based on data from Geocomunes 2019-20)

Recent decades have seen increasing threats to Mayan communities and their traditional agriculture practice (Colectivo Geocomunes 2020; Toledo et al. 2015). Throughout the Yucatán peninsula an increasing presence of megaprojects can be observed, driven by neoliberal development processes (Colectivo Geocomunes 2020). These megaprojects are sanctioned by the Mexican and Yucatecan government and generally enforced by large corporations in the tourism/real estate sector, in renewable energies and agroindustry (Colectivo Geocomunes 2020). Within the agricultural sector such endeavors consist of large monoculture farming (soy, sorghum, some sugar cane and palm oil), and large industrial pig and chicken operations (Colectivo Geocomunes 2020). Problems surrounding their enforcement relate to assault on Indigenous territories, land

[1] men and women of maize, expressed in the sacred text Popol Vuh (all translations by author unless stated otherwise)

and water contamination due to high pesticide and chemical fertilizer application, and the use of genetically-modified seeds (Colectivo Geocomunes 2020; Toledo et al. 2015).

As socio-environmental conflicts proliferate, so does resistance, both through defense of territory and the promotion of alternatives (Toledo et al. 2015). In the face of growing assaults on their livelihoods through megaprojects and wider processes of neoliberal globalization associated with them, rural communities increasingly mobilize to defend their productive and socio-cultural foundations of life (Toledo and Barrera-Bassols 2017; Toledo et al. 2015). Local Indigenous knowledges and practices play a central role in such struggles (Barrera-Bassols and Toledo 2005; Barrera-Bassols et al. 2009). This is illustrated for instance in the resistance to genetically-modified corn by the growing focus on the practical and symbolic significance of maize, for example through seed saving and maize fairs celebrating productive capacities and spiritual significance alike (Toledo and Barrera-Bassols 2017). While resistance movements regularly face violent repression from government entities, often in collaboration with companies, resistance keeps growing and fostering the emergence of alternative socio-agricultural systems (Toledo et al. 2015).

These unique conditions of material and epistemological assault faced by Mayan communities and the strong resistance emerging in response make the region a very insightful and important case to study in the context of the research's interest in spirituality and food sovereignty work from a decolonial perspective.

3 Literature Review

The thesis deals with the topic of food sovereignty and the role that spirituality plays within it. The following section will therefore review the existing literature regarding FS and the importance of decolonial knowledges more generally before exploring existing syntheses between the two in academic discussions, as a foundation for the study's conceptual framework discussed subsequently.

3.1 Food Sovereignty

Food sovereignty emerged as a concept from social movement practice rather than academia but has nevertheless been treated extensively in academic writing, especially in the past decade. Different aspects have been explored, with much of the literature focusing on its historical emergence and development, as well as the multidimensional nature of FS. The following section will thus first trace the development and

multidimensionality of FS before discussing its interpretation as vision and movement, as well as its practical foundation.

3.1.1 Origins and Vision

The origins of the term of FS remain debated but are generally attributed to the peasant movement that emerged in resistance to the neoliberal globalization of industrialized agriculture in the 1990s (Desmarais 2015; Edelman et al. 2014; McMichael 2014; Wittman 2011). Such globalization is characterized by increasing trade liberalization, the cut-back of national subsidies to small producers, globalization of value-chains, the rise of multinational agribusiness corporations and growing concentration of land ownership (Hall et al. 2015; Holt-Giménez and Shattuck 2011; McMichael 2005, 2009, 2014; Rosset 2011). These changes were met with increased resistance, with peasants organizing to defend their right to land and what they considered socio-economically and ecologically just agriculture, and coalesced under the umbrella of the international peasant movement "La Via Campesina" (LVC) in 1993, today bringing together 182 local and national organizations from 81 countries globally (Desmarais 2015; La Via Campesina 2021; McMichael 2014).

In the light of such diversity, Edelman et al. claim FS is best understood as a "dynamic process" (2014, p.911), rather than a static and clearly defined concept (Schiavoni 2017). FS as a diverse vision is perhaps best captured in the 2007 Nyéléni declaration, providing a compass for the diverse movement united behind it (Dunford 2020; Martínez-Torres and Rosset 2010). From the Global Forum for Food Sovereignty in Mali, the following definition emerged:

> *"Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems."* (Nyéléni 2007, p.1)

The document offers a very broad set of principles, encompassing aspects of production and consumption, territorial control and self-determination, ecological sustainability, assertions for gender equity and Indigenous rights as well as socio-cultural and epistemological dimensions. The overarching emphasis is on the importance of recognizing the value of diverse geographical, ecological, socio-culturally and epistemological contexts as the basis for just food systems.

3.1.2 Food Sovereignty as Movement

Many authors have emphasized that FS is highly multidimensional in nature, spanning political, socio-cultural, ecological and productive dimensions, while bringing together a wide range of people with the common goal of fundamentally changing the contemporary food system (Bernstein 2014; Dunford 2020; Edelman et al. 2014; Patel 2009; Soper 2020). In an overview of food movements, Holt-Giménez and Shattuck (2011) classify FS as a radical response to the current corporate food regime (as conceptualized by

McMichael 2005, 2009) due to its emphasis on deeply challenging and transforming the social, political and economic structures underlying the current agricultural system through deconstructing corporate power, redistributing land and establishing democratic land and food system control.

FS retains a strong focus on peasant agriculture and rights, perhaps most tellingly captured in van der Ploeg's calls for "re-peasantization" (2008). This emphasis on the superiority of the "peasant way" has drawn criticism in regards to who constitutes this group and raised questions about its homogeneity (Bernstein 2014, p.1031). Bernstein and other scholars assert that peasant movements are built on diverse coalitions, comprised of smallholders, landless laborers and Indigenous people, thus constituting a heterogeneous movement (Altieri and Toledo 2011; Bernstein 2014; Borras Jr et al. 2008; Martínez-Torres and Rosset 2010). LVC has also in recent years extended focus to include other groups marginalized by the global food system, while increasingly considering Indigenous perspectives and other struggles (Edelman et al. 2014; Martínez-Torres and Rosset 2010, 2014; Nyéléni 2007). Despite the diversity, the movement nevertheless manages to unite behind the broadly defined common goal of FS and the construction of a collective peasant identity (Martínez-Torres and Rosset 2010). Desmarais further emphasizes the centrality of coalition building within the movement by suggesting that while FS as a concept strongly emphasizes local context, the movement provides an opportunity to "recognize[s] the connections among these place-based struggles and how they shape one another" (2015, p.158).

3.1.3 Food Sovereignty as Practice: Agroecology

The movement is informed by an emphasis on everyday resistance, grounded in agroecological practice, community sovereignty and justice, in contrast to the extractivist and commodifying structures of global agribusiness (Bernstein 2014). In recent years, agroecology has become increasingly central within FS efforts (Altieri and Toledo 2011; Edelman et al. 2014; Holt-Giménez and Altieri 2013; Martínez-Torres and Rosset 2014). While agroecology emerged during the 20th century as an ecological science, it has increasingly evolved to be both movement and practice as well, encompassing environmental, socio-cultural and economic aspects, with the concept's interpretation largely depending on the context in which it is used (Wezel et al. 2009). Rosset and Martínez-Torres argue that agroecology is a "key pillar in, and inseparable from, the construction of food sovereignty" (2012, p.3). On a practical level, agroecology encompasses a reduction of external inputs, use of ecological cultivation methods, regeneration of degraded soil, fostering agrobiodiversity and a focus on local context specific practices and increased autonomy (Altieri and Toledo 2011; Martínez-Torres and Rosset 2014). However, many scholars write about agroecology predominantly from a wider movement perspective (Figueroa-Helland et al. 2018; Holt-Giménez and Altieri 2013; Rosset and Martínez-Torres 2012). Altieri and Toledo speak of a "threefold 'agroecological revolution', namely, epistemological, technical and social" that informs peasant resistance to neoliberal agribusiness practices (2011, p.587). Rosset et al. claim that within agrarian movements agroecology is understood as having an

explicit political basis, including feminist, anticolonial and class dimensions, with the goal "to forge a transnational sociohistorical and political subject" driving systemic food systems transformation (2019, p.1). Agroecological practice rooted in diverse and ecological farming practices is increasingly seen as a "tool" in processes of re-peasantization (Ploeg 2008; Rosset and Martínez-Torres 2012).

Several authors emphasize the centrality of peasant practice and knowledge within agroecology (Holt-Giménez and Altieri 2013; Ploeg 2011; Rosset and Martínez-Torres 2012; Rosset et al. 2019). Altieri and Toledo claim that the "roots of the agroecological process" are found within traditional peasant agriculture, which serve as the "cultural and historical platform" on which agroecology is constructed (2011, pp.591, 597). Such rhetoric has also been espoused by LVC who in a 2013-publication claim that "the origin of agroecology lies in the accumulated knowledge and wisdom of rural peoples" (LVC 2013, p.70). Agroecology has been described as knowledge-intensive with contextual knowledges considered integral to its practice (Altieri and Toledo 2011; Martínez-Torres and Rosset 2014). Against this backdrop, there has also been an increased interest in Indigenous knowledges and how they inform agroecology (Altieri and Toledo 2011).

Connected to the importance of knowledge are the several processes of horizontal knowledge sharing, which comprise an integral part of agroecology (Altieri and Toledo 2011; Martínez-Torres and Rosset 2014; Rosset et al. 2019). Within the understanding of agroecology as movement and practice, peasant educational processes such as campesino-a-campesino[2] (CAC) exchanges serve as a central way of disseminating agroecology within FS spaces (Martínez-Torres and Rosset 2014). Rosset et al. (2019) assert the importance of educational processes, allowing for conscientization regarding people's own situation and the subsequent construction of contextual knowledge exchange opportunities in order to spread agroecological vision and practice. The "diálogo de saberes" (DS) is perhaps the most well-known conceptualization of these processes and occupies a central position within the work of LVC (Martínez-Torres and Rosset 2014). DS allows for a space of exchange, in which different perspectives and knowledges are equally validated, which has been central to consolidate the common frame of FS and agroecology within LVC despite its highly diverse member base, through an acknowledgment of diversity as a strength rather than an impediment (Martínez-Torres and Rosset 2014). Apart from farmer-to-farmer processes, agroecology schools have also been identified as important spaces for learning (Rosset et al. 2019). Agroecological education not only focuses on practical farming skills but also considers traditional knowledges, experiences and socio-cultural aspects (Altieri and Toledo 2011). Rosset et al. (2019) give the example of the "pedagogy of the milpa" which is portrayed as a decolonial practice, based on strongly valuing ancestral knowledge, spirituality and community beyond the mere eco-technical sides.

[2] farmer-to-farmer

Recent years have seen resurging interest in the defense of native seed diversity to foster contextual agroecological practice. Seeds comprise a critical site of conflict between traditional peasant agriculture and the industrial agriculture system's attempts at commercializing and patenting seeds, for control over seeds grants significant influence in the food system (Kloppenburg 2010). Native seeds are increasingly central in the cultivation of FS, while also receiving attention for their potential regarding nutrition and climate change adaptation (Wittman 2011). Furthermore, seeds are valued for their cultural significance and used as tools of resistance to agribusiness. Efforts to protect native seeds and associated knowledge have proliferated, through seed banks, seed fairs and agroecological practice (Figueroa-Helland et al. 2018; Hernández et al. 2020; Parraguez-Vergara et al. 2018).

3.1.4 Critical Views

A number of criticisms have been advanced towards FS as a concept, practice and movement. Some pertain to its heterogeneity and accuse FS of being overly vague or inconsistent in its efforts to accommodate a widely diverse range of actors (Edelman et al. 2014; Patel 2009). Other scholars like Soper (2020) criticize the romanticization and essentialization of peasant realities, claiming that the FS movement does not account for the diversity of rural livelihoods and the conflicts of interest among them. Such essentialization prevents critical engagement with the ways peasant are implicated in the industrial-capitalist structures opposed by FS discourse and practice (Bernstein 2014; Edelman et al. 2014). Critics also discuss the romanticization of the local, which disregards local power dynamics and peasant involvement in global capitalist value chains (Edelman et al. 2014). Overall, such perspectives highlight the construction of binaries along the lines of peasants/corporate actors, local/global and traditional/modern (Bernstein 2014). Further criticism has been raised in regards to lacking engagement with difficult topics such as who will manage FS, the role of the state, the issue of trade, the question of property/territory and the role of the urban (Bernstein 2014; Desmarais 2015; Edelman et al 2014).

3.2 Indigenous Knowledges, Spirituality and Decoloniality

In recent decades interest in local contextualized and "traditional" or Indigenous knowledges has increased greatly, both in mainstream development practice and among decolonial scholars (Briggs and Sharp 2004; Briggs 2005; Smith 2012; Sultana 2021). The following section engages with such perspectives, considering both the assault on diverse knowledges through coloniality and ensuing reinforcement and reclamation of decolonial ways of knowing.

3.2.1 Coloniality and Knowledge

Within this study, coloniality is understood as an ongoing process of oppression that transcends institutional practices of colonialism but nevertheless continues to inform the subjugation of the "other" by western power

(Quijano 2007). This section primarily engages with more recent scholarly work in the field, mostly by writers from the Latin American context, tracing discussions on the coloniality of western knowledge more generally, and in particular relation to spirituality within the field of agriculture.

Scholarly discussions on the coloniality of knowledge involve a critical examination of the ways in which colonialism was not only a process of exploitation of lands and peoples but also involved the imposition of supposedly universal Eurocentric knowledge. Aníbal Quijano writes about the "coloniality of power", which captures the argument that global power relations are constructed along colonial lines, based on Eurocentric assertions of superiority related to constructions of racial hierarchies (Quijano 2007, p.170). The coloniality of power is based on an understanding that coloniality and modernity are constitutive of each other (Mignolo 2002). Mignolo echoes these arguments in what he terms the "geopolitics of knowledge" and the "colonial difference", which similarly serve to highlight the power dynamics inherent in the generation and assertion of different knowledges along lines of colonial division, with Eurocentric discourse revolving around modernity occupying a superior and supposedly universal position (Mignolo 2002, pp.61-62). Boaventura de Sousa Santos describes these western claims to universality as "abyssal thinking" in which western knowledge is regarded as universal and superior in opposition to knowledges on the other side of the abyss, which are seen as inferior and contextual, without acknowledging that western knowledge is itself place and context-bound (Santos 2014, pp.118-135). The coloniality of knowledge is thus understood to produce a "monoculture of knowledge" (Santos 2014, p.175), where western rationality is used to assert superiority and control.

Connected to such theorizations regarding a hierarchy of knowledges is the violence implicated in it. Santos writes of the "cognitive injustice" inherent in the generation and validation of global knowledges and the way such injustice effectively drives economic and political injustices, hence indicating the interconnectedness of epistemic and material dimensions and illuminating Santos' claim that "there is no global social justice without global cognitive justice" (Santos 2014, p.viii). The assertion of western knowledge's superiority is tied to a process of erasure of other diverse knowledges, captured in the term "epistemicide" and reiterated in the writings of Quijano (2000, 2007) and Mignolo (2009). Through a process of colonization and ongoing coloniality, based on the violent destruction and oppression of other knowledges, western thought assumed its claim to universality (Mignolo 2002; Quijano 2000, 2007).

3.2.2 Decolonial Knowledges

Scholars like Mignolo and Santos have written extensively not only about the coloniality of knowledge but also the various responses from the global South. The first major theme in such writings is the importance of contextuality and embodiment, emphasizing the inherently contextual nature of knowledge and thus counteracting any singular knowledge's universal superiority. In his work on the "Epistemologies of the South", Santos (2014) discusses Southern knowledges emerging from the historical particularities of ongoing

coloniality and oppression. Through the validation of non-western knowledges, western knowledge is decentered and replaced by an "ecology of knowledges" which holds space for the coexistence of a diversity of knowledges (Santos 2014, p.191). In deconstructing knowledge universality, the focus is on "a labor of erasing or multiplying the center" (Barreto 2014, p.408). Mignolo (2009, 2011) writes about similar ideas captured in the "decolonial option" as an alternative to western-focused epistemic narratives, framing it as an option that questions the universal claims to knowledge, particularly western universality, and instead makes spaces for other ways of knowing to be heard. The decolonial option has its starting point in acts of "epistemic de-linking", meaning efforts to detach from western universality and create epistemological conversations outside of the structures dictated by western knowledge (Mignolo 2009, p.174). Such delinking informing decolonial thinking is found in processes of "epistemic disobedience", acts of expressing and practicing different ways of knowing that through their very existence challenge the dominance of the western knowledge system (Mignolo 2009, p.174).

The increasing popularity of the words decolonial and decolonize have also prompted critical reflections. In their article "Decolonization is not a metaphor", Tuck and Yang (2012) trace the increasing co-optation of decolonization language in education and social justice spaces, which they claim fails to deeply challenge colonial structures. Decolonization used metaphorically allows ongoing coloniality and deflects colonial responsibility, excessive focus on decolonizing the mind thus distracts from material decolonization, which is more deeply unsettling (Tuck and Yang 2012). They claim "decolonization specifically requires the repatriation of Indigenous land and life. Decolonization is not a metonym for social justice" (Tuck and Yang 2012, p.21). Mignolo (2020) also discusses the dangers of overemphasizing aspects of epistemology and the mind as opposed to land and material realities. However, he addresses these concerns by pointing at the interconnectedness of epistemic and material process of decolonization, stating that in his view "decolonisation of 'the mind' cannot be detached from decolonisation of the body, unless the modern distinction between mind and body is retained" (Mignolo 2020, p.613). This perspective will be further touched upon in the following sections by highlighting the centrality of interrelatedness and land in Indigenous epistemologies and ontologies and hence their centrality in decolonization efforts, both epistemologically and ontologically.

Another important criticism pertains the non-Indigenous identity of the authors referenced above, who speak about (de)coloniality from a particular positionality, shaped by the Eurocentric structures of academia. Perhaps hypocritically they thus nevertheless reproduce colonial epistemic dynamics through their critiques of coloniality, hinting at the complexity inherent in these discussions. Mignolo and Quijano in particular have been criticized for limited reference to Indigenous scholarship in their writing and hence accused of reproducing the colonial extractivist dynamics they criticize within academia (Grosfoguel 2014). While their popularity within decolonial studies cannot be denied and some of their conceptual work was considered useful for this study, these criticisms warrant serious reflections (see also Ch.5.4).

3.2.3 (De)coloniality and Spirituality

Spirituality plays a central role in the lives of many people worldwide (Holloway and Valins 2002; Ver Beek 2000). Several scholars have emphasized the difficulty in defining spirituality (Kourie 2006; Michopoulou and Jauniškis 2020; Shahjahan 2005). This study adopts Kourie's perspective in maintaining that spirituality is not just about a relation to the supernatural, but rather "refers to the *raison-d'être* of one's existence, the meaning and values to which one ascribes" and that offer direction to people's lives (2006, p.19). Spirituality can hence take diverse forms, depending on the particular context from which it emerges (Kourie 2006). Spirituality or the cosmologies to which it gives rise not only offer a way to make meaning of the world but also to create knowledge about the world and the ways of interaction with it (Shahjahan 2005). Yet, spirituality is often sidelined, which is explored in the following section. First, a brief overview of how spirituality has been treated in the academic literature is given, before focusing more on the position of spirituality within the coloniality of knowledge, with a particular emphasis on agriculture and land relations.

Spirituality does not receive much attention within the academic literature. Ver Beek (2000) and Lunn (2009) for instance illustrate how there is little engagement with spirituality in development theory and practice, while Shahjahan (2005) points at insufficient engagement within academia overall. While Kourie (2006) and Lunn (2009) contend that there has been some growing engagement, spirituality remains at the margins. It is often relegated to the personal sphere, being ascribed an inferior position based on a western separation of secular and sacred, where the secular is associated with "science" and hence "universal" validity (Kirschenmann 2005; Lunn 2009; Shahjahan 2005; Ver Beek 2000). Spirituality is considered an inferior way of knowing, if it is even considered a valid way of knowing at all (Shahjahan 2005). Scholars locate reasons for that within the role of subject/object division guiding much of mainstream scientific inquiry, which raises questions regarding the coloniality of knowledge in the context of spirituality (Middleton 2015; Shahjahan 2005).

Linda Tuhiwai Smith talks about the significance of spirituality in relation to ongoing coloniality by claiming that "[t]he values, attitudes, concepts, and language embedded in beliefs about spirituality represent, in many cases, the clearest contrast and mark of difference between Indigenous peoples and the West" (2012, p.74). Along the abyss separating supposedly universal western knowledge and other knowledges, spirituality is a form of knowing that has been invisibilized under the colonial frame of what counts as knowledge and what does not (Santos 2014; Shahjahan 2005; Smith 2012). Indigenous spirituality was dismissed as inferior, pushed into categories such as "folklore" or "myth" in contrast to the universality of western science (Mignolo 2009, p.177; Shahjahan 2005). Within Indigenous knowledge systems, however, spirituality commonly constitutes an integral component of knowledge generation through processes of relationality (Middleton 2015). Shahjahan argues that people's spiritual relationships with nature "have been difficult arguments for

Western systems of knowledge to deal with or accept (…) due to the anthropocentric nature of such theories that renders all other animate and inanimate beings nonexistent" (2005, p.695). The role of nature relations is what the next paragraph turns to in its consideration of the role of spirituality in agriculture.

3.2.4 Coloniality, Spirituality and Agriculture

Land relations encapsulated in western understandings of the world are grounded in a nature/culture dualism that can be attributed to enlightenment thought and specifically the work of Descartes, whose dichotomous thinking continues to inform an understanding of humans as separate from nature (Kirschenmann 2005; Shahjahan 2005). However, scholars like Adelman (2015) and Watts (2013) argue that such binary views can be traced back even further to Christianity and the Christian origin story which positions humans outside and above nature, but that they were consolidated through Enlightenment rationality and the industrial revolution. Such separation enabled the assault on land at the center of colonialism, extractivism and more recently industrial agriculture, as Adelman claims in saying that "epistemologies of mastery [that] reinforce the false assumption that humanity can exercise dominion over nature without repercussions" (2015, p.9). Figueroa-Helland et al. draw connections between the dominance of western knowledge and the destructiveness of the modern-industrial global food system, claiming that it is constructed upon

> "a complex intersection of deep power structures: anthropocentrism, patriarchy, coloniality, eurocentrism, structural racism, industrial and developmental modernism, capitalism (including its latest stage—neoliberalism), and the Westphalian nation-state system (…) These infrastructures underpin a mode of civilization whose aggressive globalization has sought to colonize the planet by subjecting both humans and nature to a world-system that accepts no alternatives" (2018, p.195).

Vandana Shiva (1993) has also drawn connections between western knowledge and its manifestation in practices of industrial agriculture, by writing about "monocultures of the mind". Agricultural monocultures are thus understood as rooted in the epistemic and ideological basis of western knowledge monoculture. Such perspective is reflected in Kirschenmann's view of modern science as "a monologue" (2005, p.12) that disrupted the place-specific relations to land that are crucial building blocks of Indigenous knowledges (Middleton 2015). Based on an understanding that "indigenous identity, knowledge and spirituality are grounded in place, so coloniality and colonial violence are also expressed in and through place" (Middleton 2015, p.562), the following section will examine the ways Indigenous knowledges and spirituality stand in contrast to objectified and extractivist colonial patterns of agriculture.

3.3 Bringing Food Sovereignty and Decolonial Knowledges into Dialogue

Academic engagement with FS and issues of (de)colonial knowledges has grown in recent years and it is particularly this discussion that this study is inserted into, aiming to add to a growing body of literature that

brings the two perspectives into dialogue. The following section will briefly review the connections that have been drawn between FS efforts and Indigenous and decolonial ways of knowing, focusing on resistance to dominant food system structures and the practice of alternatives.

In light of the above discussion on the effects of the coloniality of knowledges on relations to land and agricultural practice, a short overview of Indigenous and decolonial understandings of these relationships merits attention. Middleton (2015) argues that coloniality is deeply tied to land, something echoed by scholars speaking to the interconnectedness of peoples and land, maintaining that colonization is a form of deep violence on the peoples living with that land and the cosmologies that inform their being, where commodification of land is understood as "enslavement" (Grey and Patel 2014, p.436; Watts 2013). Dispossession of land and means of production is thus equated to a dispossession of knowledge (McMichael 2014). Watts speaks to the way sacred relations to land are actively undermined and how "it is not only the threat of a lost identity or physical displacement that is risked but our ability to think, act, and govern becomes compromised because this relationship is continuously corrupted with foreign impositions of how agency is organized" (2013, p.23). However, some authors also emphasize that it is precisely these deep relations to land, where social relations include all life and humans are embedded in this intricate web of life, that inspire resistance to the material and epistemic assault of coloniality (Grey and Patel 2014; Middleton 2015; Watts 2013). As Mignolo states "decolonial options start from the principle that the *regeneration* of life shall prevail over primacy of the *production and reproduction* of goods at the cost of life" (2009, p.161, emphasis in original).

As discussed previously, acknowledgment of Indigenous knowledges and practices has grown within the FS movement in recent years, which is reflected in increasing academic engagement. McMichael (2014) asserts the importance of rehabilitating local knowledges for FS, while Grey and Patel (2014) write about decolonization efforts within FS. FS is increasingly presented not only as a way of ensuring just means of sustainment but also of uplifting the underlying knowledges through its focus on diversity and context-specificity. The diálogo de saberes discussed above exemplifies the way in which diverse knowledges are asserted in a horizontal manner, evoking connections to Santos' concept of an ecology of knowledges comprised of multiple coexisting knowledges (2014). Dunford (2020) writes about similar understandings by incorporating the concept of pluriversality into the FS debate. Pluriversality is understood as "radically committed to diversity", inspired by the Zapatista notion of a world where many worlds fit (Dunford 2020, p.793; EZLN 1996). The industrial agribusiness system based on western knowledge is understood to inhibit such diverse coexistence through its active assault on diverse ways of living with the land, for instance through land grabbing or unjust trade patterns (Dunford 2020). In line with decolonial scholars' emphasis on the need to "dethrone" western knowledge in order to cultivate an ecology of knowledges, pluriversality within agriculture necessitates resistance to and dismantling of the dominant agricultural system in favor of one based on pluriversality (Dunford 2020). The connections between FS and decolonial knowledge will be

further operationalized in the theory section to follow, where aspects of both fields are integrated to form the study's conceptual framework.

4 Theory

4.1 Political Ecology

The research is situated within the broad field of political ecology, which contends that there is a political dimension to all processes within socio-environmental systems, focusing particularly on issues of inequality and power (Robbins 2012). Hence, phenomena cannot be understood without sufficient engagement with the complex contextual conditions in which they are grounded. Political ecology is a normative field, attempting to critically examine power structures within environmental discourse and practice, while simultaneously exploring responses and alternatives to these unjust systems (Robbins 2012, p.20). Political ecology is thus not simply an academic approach criticizing the way the world is, but also engages with questions of resistance to the conditions of injustice produced by current hegemonic structures, and the alternative visions and practices informing resistance (Moragues-Faus and Marsden 2017). This research draws on shifts within political ecology that increasingly embrace critical feminist and decolonial perspectives (Sultana 2021). Such perspectives embrace reflexivity and knowledge plurality, which is in line with the study's efforts to question the universality and coloniality of western knowledge. Emphasis is given to the situatedness of knowledge and the interconnectedness of different oppressive systems, which offers meaningful direction to the research process (Sultana 2021).

4.2 Conceptual Framework

To explore the role of spirituality in FS work a conceptual framework has been devised, which synthesizes concepts derived from the reviewed literature on FS and the field of decolonial knowledges (fig. 2). The framework is grounded in a critical understanding of and opposition to the dominance of western thought and practices as they manifest in the monocultures underlying industrial agriculture and the "monoculture of knowledge" based on the supposed universality of western knowledge. The following section will elaborate on the framework's key concepts, following a heuristic division of resistance to monocultures into resistance through practice, associated with FS efforts, and resistance through knowing, associated with efforts to decolonize knowledge. While such distinctions are of course slightly contrived, the structure was considered useful to break open the collected data for analysis, and their interrelations are discussed and captured in the concept of the pluriverse.

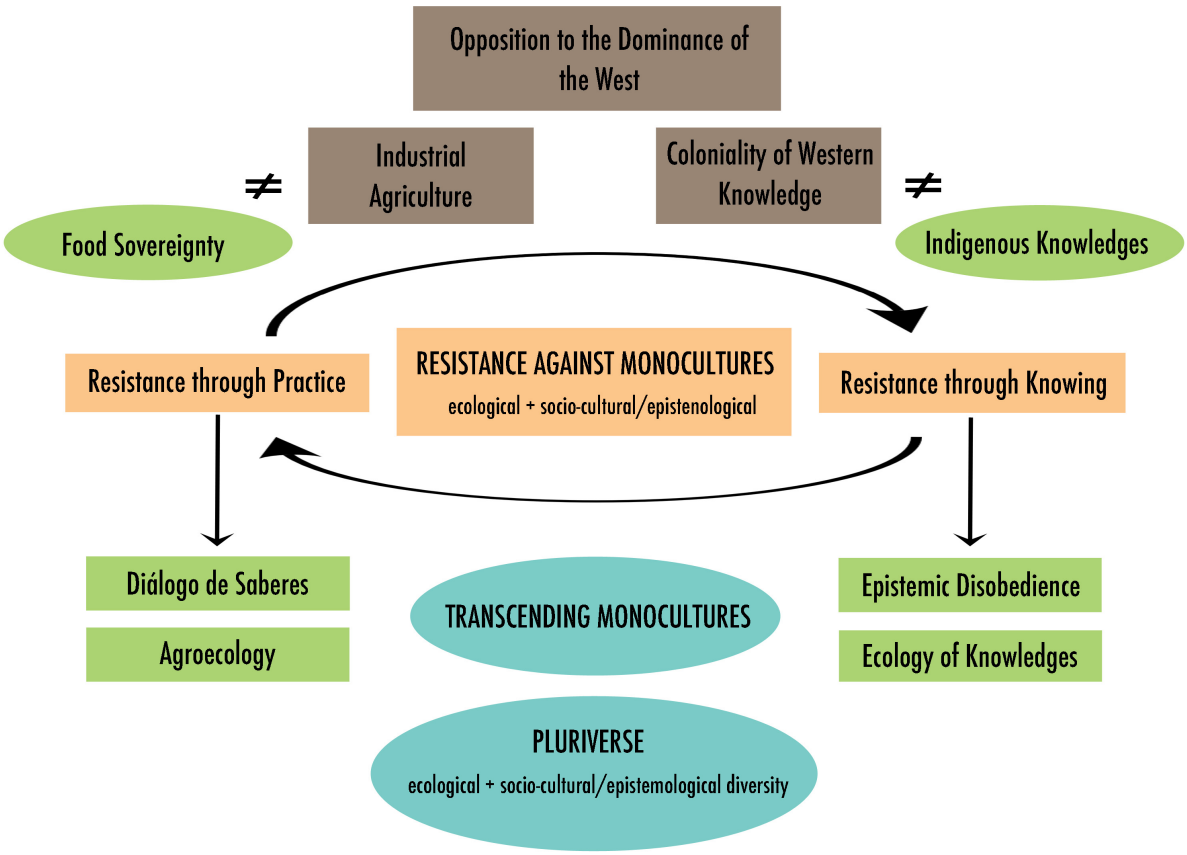

Figure 2 Conceptual Framework, elaborated by author

4.2.1 Resistance through Practice

The reviewed literature has shown that FS is a highly diverse concept, encompassing various different perspectives. The framework utilizes two of the aspects discussed above: agroecology and the diálogo de saberes. Agroecology offers a practical foundation to FS while the DS enables dialogue between diverse ways of knowing and practicing agriculture, which is highly relevant in the context of decolonial knowledges.

FS is constructed through practices of everyday resistance, often based on agroecology, which offers an agricultural foundation aimed at fostering socio-ecologically just practices. It can be read as vision, movement and practice alike and does not provide a fixed set of agricultural practices but rather a toolbox guided by visions for more sustainable and just food systems that give consideration not only to productive but also to social, political and cultural dimensions sustaining such systems (Wezel et al. 2009). In the context of the study, the concept is useful by offering a practical foundation to FS work through socio-ecological practices enabling a different agriculture in the face of homogenizing industrial agriculture, while simultaneously acknowledging the multifaceted nature of food systems and agricultural resistance (Altieri and Toledo 2011; Rosset and Martínez-Torres 2012). Agroecology embraces the multidimensionality inherent in agricultural relations to land and the diversity of agricultural practices implied in those relations. Hence agroecology is

considered a useful concept encapsulating the way resistance to the monocultures of industrial agricultures is carried out through practice.

Connected to an acknowledgment of diversity is the concept of a DS, which makes possible a space of horizontal exchange and learning between diverse peasant realities. Through such dialogue different experiences, practices and ways of knowing are shared (Martínez-Torres and Rosset 2014). In opposition to the monoculture of knowledge informing industrial agriculture, predicated on an ideology of profit maximization, productivity, efficiency and nature commodification, DS values diverse knowledges and practices equally, emphasizing contextuality (Martínez-Torres and Rosset 2014). Most often in FS spaces, DS is used to acknowledge difference as a starting point for establishing common ground towards the shared goal of FS. The concept is nevertheless deemed useful for this research, which works on a smaller scale, concentrating on only three organizations working in similar contexts, due to its focus on those knowledges invisibilized by the dominance of industrial agriculture. Furthermore, DS is valuable for fostering a dialogue within spaces subjected to the tensions between different ways of knowing and practicing agriculture, as is the case in the Yucatán peninsula.

4.2.2 Resistance through Knowing

Based on an understanding that the monocultures of industrial agriculture are not solely environmental but connected to a "monoculture of knowledge", the second part of the framework is concerned with how resistance to such monocultures is expressed through knowing. Drawing heavily on the work of Mignolo, Santos and Quijano discussed above, such resistance starts off on the premise of the coloniality of knowledge and the cognitive injustice tied to it, embracing as a response an array of decolonial knowledges. Knowledges outside of the homogenizing frame of supposedly universal western knowledge can be considered a form of "epistemic disobedience" by challenging claims to universality (Mignolo 2009, 2011). Within the context of agriculture, such knowledges might entail relationships to land and their influence on agricultural practice that challenge the extractive and commodifying rationale underlying industrial agriculture (Figueroa-Helland et al. 2018; Kirschenmann 2005). Embracing different ways of knowing cultivates an ecology of knowledge, described by Santos (2014) as the coexistence of multiple diverse knowledges connected through spaces of mutual recognition, all equally valid within their particular contexts.

4.2.3 Pluriverse

The conceptual framework draws on the concept of a "pluriverse", as increasingly discussed in recent years by scholars such as Escobar (2015), Blaser (2013) or Kothari et al. (2019). The pluriverse embraces the coexistence of a diversity of ways of knowing and being (Kothari et al. 2019, p.xxviii). Both FS and decolonial knowledge emphasize the importance of diversity, in terms of practices and knowledges, as captured in the concepts of DS and ecology of knowledges. In writing about the pluriverse, Escobar (2015)

connects Santos' work on the Epistemologies of the South with the idea of relational ontologies, asserting that epistemological and ontological issues are interrelated and thus transcend the subject/object separation informing dualist western knowledge. Relational ontologies refer to the idea that knowledge and being are generated through interrelations with the living world and do not exist outside of such relations (Escobar 2015). The integration of an ontological dimension means that not only the coloniality of knowledge but also the coloniality of reality are acknowledged, which reduces Indigenous ontologies to simply different cultural interpretations of the same reality under "an all-encompassing modernity" (Blaser 2013, p.548; Burman 2017). The pluriverse embraces the notion of situated knowledges and realities that are generated through specific spatiotemporal relations. It is particularly this understanding that the study's conceptual framework draws on and juxtaposes with the ecological and socio-epistemological monocultures that form the starting point of opposition. The study is guided by the conceptual framework that brings together elements within FS and decoloniality, which offer tools of resistance through practice and knowing, and together work towards the construction of a pluriverse.

5 Research Design

The research draws strongly on the concept of situated knowledges as formulated by Donna Haraway in her seminal 1988-paper "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective". She holds that all knowledge is shaped by the historical and socio-political contexts in which it is produced and that it is therefore crucial for researchers to embrace their subjectivities. Hence she frames objectivity not as neutral but inevitably shaped by power relations, challenging the supposed universality of the dominant western, white and male gaze, instead "arguing for politics and epistemologies of location, positioning, and situating, where partiality and not universality is the condition of being heard to make rational knowledge claims" (Haraway 1988, p.589). Along with this perspective comes a view of the research subject as "actor and agent, not as a screen or a ground or a resource", which translates to efforts for constant reflexivity in my research (Haraway 1988, p.592).

Such perspective heavily informs the ontological and epistemological basis of this research, in that it questions the polarizing tensions between excessively realist and relativist perspectives. Instead, a stance is adopted that views knowledge and reality as a result on relational interactions, captured in notions of Barad's agential realism (1996). On the one hand, there remains space to acknowledge the influence of social construction, while on the other hand existence beyond the human mind is not denied. Rather, the situatedness and relationality of knowledge is emphasized. Agential realism offers meaningful epistemological tools for

this research in allowing dominant western science and the dualist separations underlying it to be questioned, while also making space for considering pluriversal ways of knowing and being in the world and continuous focus on how knowledge is situated, emerging through relation with the living world.

The overall approach to the research topic is of qualitative nature, following the intention of exploring the complex circumstances of a phenomenon with the goal of providing a holistic and multidimensional account of the various perspectives of the research participants (Creswell 2014, p.185). Qualitative inquiry enables increased access to "understand different and often competing 'subjectivities' in terms of very different accounts of 'facts', different meanings and different perspectives" (Mayoux 2006, p.118). The research focuses on counterhegemonic ways of knowing, specifically those connected to spiritual beliefs and practices, which are highly personal and subjective and thus, such an approach was found to be useful (Mayoux 2006, p.118).

The study follows a single instrumental case study design to gain a deeper and more holistic understanding of the particular research topic (Punch 2005, p.144; Creswell et al. 2007, p.246). Since the research explores how different ways of knowing inform the practice of FS, both aspects deeply rooted and embedded in a particular context, a case study approach was found to be useful for cultivating a holistic understanding of the research issue. The Yucatán peninsula was chosen as a case area due to the unique and meaningful context it offers (see Ch.2). The case study is of exploratory nature, which allowed me to stay open in regards to the research process and findings and position myself as a learner in relation to the research participants. This is in line with my research approach overall stressing the significance of my subjective positionality in shaping the research interaction and the possible understandings I can acquire. Based on a critical view of approaches to research grounded in assumptions of the universality of western science, I thus strive to critically reflect upon some of these assumptions that have shaped my education by trying to position myself as an active learner in my interactions with the research participants and throughout the process of analyzing and presenting the results.

5.1 Data Collection

The research is based on several textual and visual sources, as well as an interview and engages with three different organizations in the Yucatán peninsula. These organizations were selected through purposive sampling, based on their engagement with issues of FS in the case region and the specific emphasis on spirituality that guides their approaches. Such sampling approach ensured that the organizations were well-suited to the research topic (Bryman 2012, p.422). They were found through a certain degree of personal familiarity with the context, which facilitated an online search. I then explored the website and Facebook presence of the organizations and found them to be well-suited for my research interest due to their focus on spirituality in combination with FS work. The organizations are the Mayan collective Ka Kuxtal Much' Meyaj

(KK), the agroecology school U Yits Ka'an (UYK) and the Mayan organization Guardianes de las Semillas (Kán nán iinájóob) (GS), and are introduced in more detail in chapter 6.1 and Appendix A.

5.1.1 Textual and Visual Sources

Document and video material provided the main source of data for this study. These sources included both material published by the organizations and by external actors. A selection was made based on their relevance to the research questions, including aspects of FS and spirituality, for instance agroecology or spiritual relations to land. Sources by members of the organizations were given preference due to the situated insights they provide into the organizations' work. Following such purposive sampling strategy ensured a strategic selection of data based on its significance to the research problem. An overview of the different sources, source type, authorship and more specific reasons for sampling are given in Appendix B.

In the case of KK and UYK, the sources were obtained through their respective websites. KK's website led me to a document called "Morral de Experiencias para la seguridad y soberanía alimentaria"[3], a collaborative publication from civil society organizations in South-East Mexico working with food security/sovereignty. The document was created throughout a 2-year process of work in various communities, documenting the learning processes of different organizations. The collaborative and varied nature of the document provided rich data, including sections on all three organizations, and thus comprises a cornerstone of this study. The videos of GS's work were found on Youtube, based on previous awareness of the use of video tools within GS. Using different source types allows for increased credibility and serves as a form of triangulation in combination with the interview (Bowen 2009; Punch 2005, p.184). Working with documents provided a good basis for the case study at the core of my research, providing a rich understanding of the case in relation to the research questions (Bowen 2009).

Working with various sources facilitated a deeper understanding of the context shaping the knowledge and practice of the selected organizations (Bowen 2009). In particular the video sources were seen to be valuable in transcending the limitations of distance to the study's context. One key advantage of using already existing sources is their accessibility, particularly considering the limitations posed by the Covid-19 pandemic, and the efficiency they offer in terms of time (Bowen 2009). They are furthermore not mediated by the researcher's presence and thus dangers of being intrusive and extractive are reduced (Bowen 2009; Bryman 2012, p.543). However, there are also weaknesses to this method. Firstly, the sources were not created with the research question in mind and thus did not offer the most targeted or detailed data in some cases (Bowen 2009). Another issue was the potential biases inherent in the sources, based on an understanding that all sources are created with an agenda in mind (Bryman 2012, p.551). This is particularly relevant for sources produced by the organizations, since it can be assumed that they were published with the intention of portraying the

[3] bag of experiences for food security and sovereignty

organizations' work in a good light. For those sources created by people outside the organizations, there is the risk of imposed subjectivities that shape how the organizations are presented. However, these perspectives simultaneously counter the biases tied to documents created by the organizations themselves. A final concern pertains the inevitable process of document selection through which I might have imposed my own biases (Bowen 2009). The overview of the sampling process above and in Appendix B seeks to highlight the reasons for why I have chosen certain sources and is thus a way in which I disclose the subjectivity created through my particular positionality (see also Ch.5.4). All sources were chosen with criteria of authenticity, credibility, representativeness and meaning in mind (based on Scott, discussed in Bryman 2012, p.544).

5.1.2 Interview

The study intended to use key informant interviews for all three organizations, however only one interview took place. I respect the organizations' decision to not participate in the research due to time limitations or other priorities, and adjusted my research accordingly to focus more on available publications, which elicited rich data nonetheless. The interview was conducted with Nora, one of KK's co-founders, who was considered a meaningful key informant (Bryman 2012, p.440). It took a semi-structured form, which allowed for the collection of rich data targeted at the research questions, since it enabled me to obtain a deeper "understanding of the *lived* experiences" of the interviewee, beyond what publically available document sources could offer (Linabary and Hamel 2017, p.99, emphasis in original). Conducting the interview in a semi-structured way allowed considerable freedom for the interaction to develop naturally without too many restrictions enforced by the researcher (Willis 2006). The participant was able to express her perspectives using her own language, while also retaining a larger degree of flexibility in steering the conversation towards aspects she deemed important. Conducted in such way, the interview facilitated a deeper learning experience, grounded in the practice of active listening on my part (DeVault and Gross 2014). The use of a rough question guide (Appendix C), however, allowed some structure to be retained, keeping the interview focused on the study's topic and providing a useful basis for the analysis process (Willis 2006).

Initial contact was established through email, introducing the research and establishing a foundation of trust before the actual interview. An information and consent sheet (Appendix D) was shared with the participant in order to ensure transparency and accountability through informed consent (Banks and Scheyvens 2014). According to the preferences of both researcher and participant, the interview was conducted through a Zoom video call. Security is a risk when using internet-based means of communications, which was addressed through the use of a meeting password and careful handling of personal information. While using online spaces has the advantage of offering more flexibility, there are also questions of accessibility in terms of the "digital divide" (DeVault and Gross 2014). Insufficient comfort with online tools or access to reliable internet connection and a private talking space may have influenced what people I was able to reach out to and include in my research. Furthermore, a main challenge were difficulties of familiarizing myself with the context and

building relationships with participants as a basis for open and constructive interview communication. In this regard, the use of video enabled a more personal and interactive space for the interview to take place in and initial small talk facilitated trust building and a more comfortable interview setting for both sides (Willis 2006).

5.2 Data Analysis

Interview data was processed in a respectful way that ensured confidentiality, and the participant was given the option to remain anonymous (Banks and Scheyvens 2014). All Spanish data was translated by the author and is attached in Appendix E for accountability. Interviews and textual/visual data were analyzed using thematic analysis, which provided a flexible approach to the data, allowing for themes and possible explanations in regards to the research questions to emerge (Nowell et al. 2017). Thematic analysis enabled the consideration of "the perspectives of different research participants, highlighting similarities and differences and generating unanticipated insights" (Nowell et al. 2017, p.2). The analysis process was guided by a predetermined coding framework based on the conceptual framework (fig. 2) that emerged through an extensive engagement with literature and theory regarding the research topic.

The flexibility of thematic analysis ensured that I could adequately grasp the perspectives conveyed by the sources and the meanings they portray without being overly limited by reductive analytical approaches. However, as this flexibility also poses weaknesses by possibly prompting incoherent and messy results, the conceptual framework provided useful guidance to keep the analysis process closely connected to the research questions. Furthermore, I made an effort to counter these risks through careful analysis, accompanied by a process of extensive note taking and reflection (Nowell et al. 2017). Analysis results were shared with the interview participant, asking for feedback through a process of member-checking. Through these practices I strived to minimize the extractive character of my research, while further emphasizing a process of critical reflexivity, rather than simply exercising my research authority and thus reproducing the unequal research structures that I seek to, at least partially, challenge.

5.3 Limitations

Certain limitations impacted the interview process. Unequal power dynamics between researcher and participant may have influenced what the participant chose to share with me, based on what she expected me to hear or omitting aspects due to my insufficient familiarity with the context (Willis 2006). Such dynamics might be rooted in contextual differences and an insufficiently developed personal relationship, as well as historical legacies of violent and extractive (colonial) research interactions (Smith 2012). The interview was conducted in Spanish and thus language barriers could also have been an issue since Spanish is not my first language (Stewart-Withers et al. 2014). Furthermore, it needs to be acknowledged that Spanish is a colonial

language and thus carries oppressive connotations and is limited in the way Mayan spiritual understandings can be communicated (Mignolo 2009; Peraza 2020).

Furthermore, a limitation is found in the focus on a few key people representing each organization and thus shaping the perspective I obtain about their work. Organizations are complex institutions, comprised of various people with different perspectives but due to constraints of time and access I had to rely on a few sources, often written by people who have central roles within the organizations. The inability to visit the context further complicated issues of gatekeeping and limited the data I was able to obtain (Banks and Scheyvens 2014). However, efforts were made to obtain as rich and diverse a data set as possible under the given limitations. Furthermore, some previous familiarity with the context existed, which facilitated an understanding of it beyond what I was able to access through online spaces. In spring 2020 I spent some months in Yucatán and got the chance to visit both UYK and GS.

5.4 Positionality and Ethical Considerations

It is imperative for researchers to consider ethical issues, especially considering the asymmetrical power relations commonly characterizing research efforts (Banks and Scheyvens 2014). As a researcher from an academic context in the Global North, enjoying certain privileges pertaining class, race, citizenship and ability, it was crucial for me to be reflexive throughout the entire research process (Sultana 2007). Such reflexivity demanded active engagement with how my positionality affected the research process and the interpretation and presentation of collected data. I strived to center these issues throughout the research process by clearly expressing my subjectivities and how they inform the research. Nevertheless, my positionality also significantly limited the voices that I was able to engage with, both in the theoretical and empirical sections of this work. While efforts have been made to seek out Indigenous voices, access and exposure to such sources was often limited due to the academic circumstances framing my research, and language barriers preventing me from engaging more substantially with Spanish or Indigenous literature.

Haraway's concept of situated knowledges (see Ch.5) offered a meaningful framework to approaching my positionality. A research journal was maintained throughout the entire process, which encouraged reflexivity and ongoing learning. Viewing the thesis as a learning process and knowledge as embodied constructed a valuable foundation from which to approach the topics of spirituality and diverse knowledges across different contexts that constitute the main focus of this research. Such foundation enabled a reflexive and respectful perspective on the research findings, informing efforts to reduce potential extractive or harmful research dynamics.

Throughout the study a continuous effort was made to center the organizations' perspectives and make space for their voices to be heard, particularly considering the study's premise of the coloniality of knowledge.

However, I acknowledge that such efforts inevitably remain partial due to issues of translation and the constraints of the academic context in which they are produced, as well as my particular position within dominant western knowledge structures. Nevertheless, I hope to have fostered a reflexive learning process in myself and those who will read this thesis.

6 Results and Analysis

The following chapter presents the results, analysis and discussion of the collected data in relation to the research questions. First, the work of the three organizations is presented, including the context of their resistance, their practices and the role of spirituality. Based on these results, a more in-depth analysis is carried out, guided by the study's conceptual framework. In line with the research question, the interconnection of spirituality and FS is examined, as well as the role that spirituality plays in resistance to the dominance of industrial agricultural and western knowledge systems.

6.1 The Organizations: Food Sovereignty as Resistance

6.1.1 Ka Kuxtal Much' Meyaj

The work of the Mayan collective Ka Kuxtal Much' Meyaj[4] (KK) is a response to the multiple threats faced by Indigenous Maya communities in the region of Hopelchén, Campeche. These include the loss of native seeds resulting from the expansion of industrial agriculture and its practice of monocultures using genetically-modified, patented seeds and large quantities of agrochemicals, as well as deforestation (Tzec-Camaal 2021; fig. 1). Alongside large-scale corporate agriculture, including non-native genetically-modified soy, sorghum or rice meant for livestock farming and export, KK has witnessed a transition away from diverse milpa farming towards "*mecanizados*"[5], encouraged by government policies. The region has seen increasing pressures on Maya territories, not only from external corporate actors but also due to community members selling their land to companies (Tzec-Camaal 2021).

Members of KK not only observe the threat of ecological monocultures, but also the imposition of "monocultures of the mind", manifesting through what Nora calls "*the industrial scheme aimed at selling, not eating*", where profit is valued over the living world, understood by her as "*the Earth that is not for sale*" (Castillo, Dzul and Barkin 2020; Tzec-Camaal 2021). Nora says this system clashes with Indigenous cosmovisions, prompting conflict not only in relation to external actors but also within the Mayan

[4] Translation (from Maya): the rebirth of collective work
[5] Mecanizados: Nora is referring to a more industrial type of cultivation aimed at selling rather than subsistence, and using more external inputs like hybrid/genetically-modified seeds and agrochemicals

communities they work in. These different ways of relating to the earth and practicing agriculture are seen to be perpetuated through government policies, the media and the education system, which fail to integrate starkly different Indigenous conceptions (Tzec-Camaal et al. 2018, pp.67-69).

Against this backdrop, the organization was founded with a focus on the protection of native seed diversity, starting with the preservation and dissemination of native maize varieties and other crops of the milpa. Their FS work largely centers on organizing "fiestas de semillas"[6] to spread native seeds and fostering the practice of what they call "agroecología maya" as a way of resisting the monocultures of industrial agriculture (Tzec-Camaal et al. 2018; Tzel-Caamal 2018a.). Spirituality is considered an integral component of this system of knowledge and practice, expressed through specific ceremonies, the creation of altars, the telling of myths and stories, the study of the Popol Vuh[7] or Tsool Kin[8] and the reclamation of sacred sites (Tzec-Camaal 2021).

6.1.2 U Yits Ka'an

U Yits Ka'an[9] (UYK) is an agroecology school with the mission of *"promoting the good life in peasant families across the Yucatán peninsula, contributing to food sovereignty and ecological conscience for the care of our common home"* (UYK 2021a). They stand in opposition to an agricultural system that degrades resources and forms of life on Earth, prioritizes monocultures and the interests of TNCs while contributing to climate change (UYK 2021b; Loeza and Rodríguez 2020). The organization argues that these processes are driven by an ideological and epistemological basis that considers the earth a commodity to be extracted from for maximizing profits, where food and agriculture is a business rather than a right, actively standing in opposition to and violating ancestral knowledges (Loeza and Rodríguez 2020; Tzec-Camaal 2018b; UYK 2021b).

Their work is grounded in resistance to these dynamics by fostering agroecology through a *"a process of education and liberation"* constructed around notions of practical and horizontal learning (Tzec-Camaal 2018b; UYK 2021a). Agroecology is understood not only as a technical mechanism but a holistic approach and a political tool, which offers possibilities to cultivate FS and a more just and sustainable agricultural practice (Loeza and Rodríguez 2020). A strong focus is on the idea of knowledge exchange, bringing together different approaches such as technical agroecological ones and culturally embedded ones like the trojes comunitarias or Ch'iil kaaj[10] (UYK 2021c).

[6] Seed festivals
[7] Popol Vuh (book of community or counsel) is a sacred text containing myths and history of the Mayan K'iche' people
[8] Tsool Kin is a part of the Mayan calendar, referring to the organization of time
[9] dew falling from the sky
[10] Trojes comunitiarias/ Ch'iil kaaj: community granary, where seeds, especially maize, are safeguarded for the next season

There is a strong spiritual dimension to their work, constructed through a combination of liberation theology and Mayan cosmology (Valentín et al. 2020). The school was founded by a group of Catholic priests in collaboration with Indigenous peasants, indicating the school's strong but diverse spiritual foundation (Tzec-Camaal 2018b). Based on the idea of knowledge exchange, UYK embraces Indigenous Maya spirituality due to its contextuality, as founder Atilano asserts (Tzec-Camaal 2018b, p.156). Both approaches share an emphasis on the interconnectedness of all life and reject the notion of anthropocentrism (Loeza and Rodríguez 2020; UYK 2021d). The school promotes Mayan ceremonies, such as Cha Chaac[11], Paa Pull[12] or Huajil Cab[13] (Tzec-Camaal 2018b). Ultimately, the school's aim is to *"contribute to the defense and promotion of the Rights and Spirituality of Mother Earth, the cosmovision and tenure of her montes[14] in favor of Life"* (UYK 2021a).

6.1.3 Guardianes de las Semillas – Kán nán iinájóob

The third organization is Guardianes de las Semillas (Kán nán iinájóob)[15], short GS, that also fights against the loss of native seed varieties due to natural disasters, such as hurricane Isidoro in whose wake the organization was formed, and corporate agribusiness (PMR PNUD MÉXICO 2017). Corporate players and the genetically-modified seeds they espouse are perceived as a major assault on native seed diversity, threating a loss of sovereignty and subsequent dependency on TNCs, while also seen to contaminate the earth and make people sick (Ildefonso Yah Alcocer in Biodiversidad Mexicana 2018). On a socio-cultural and epistemological level, GS is confronted with the issue of disintegration of knowledge and values in relation to working the milpa (Biodiversidad Mexicana 2018).

GS works to protect native seeds through the organization of "ferias de semillas"[16] and through encouraging milpa cultivation, claiming that continuing to sow is a form of resistance (Lönnquist 2018). The conservation of seeds transcends ecological and productive dimensions to include their cultural and spiritual significance. Spirituality plays a big role in the work of GS, offering a way to more deeply connect with the land in agricultural practice, through asking for permission before taking anything and by centering values of gratitude and respect (Biodiversidad Mexicana 2018).

[11] Ceremony to call on Chaac, the rain god
[12] Ceremony asking for a good harvest
[13] Ceremony to give thanks for the obtained harvest
[14] montes: literally „mountains" but carries deeper cultural meaning; the live biodiverse forest, often place for milpa cultivation
[15] Guardians of the seeds
[16] seed fairs

6.2 Resistance through Knowing

Agriculture is a central way in which humans interact with the living world. The nature of people's relationship to land heavily impacts the way agriculture is being practiced and thus the FS work of the three organizations. Throughout the study, participants placed a strong emphasis on the perceived conflict between different ideologies underlying relationships to land. All organizations emphasized the role of spirituality in their FS work and particularly the importance of Mayan relationships to land, which are built on understandings of the interconnectedness and reciprocity between humans and the living world around them. The following section first discusses this relationship to land more broadly, before exemplifying it through the centrality of seeds in the organizations' work.

6.2.1 Relationship to Land

The reviewed literature has identified the epistemological foundation of industrial agriculture systems as one grounded in the monoculture of western knowledge. The presented results indicate that all organizations position themselves against a destructive form of industrial agriculture, which sees land simply as a resource from which to extract agricultural commodities. In the area of Hopelchén where KK works, there is an increasing number of sorghum and soy monocultures, both crops not native to the area and not used for local consumption. The following statement by Nora clearly illustrates the conflicting relationships to land of agribusiness practices in opposition to the Mayan practice of the milpa:

> *"The Earth, we say, can't be sold, it's an inheritance, that's why we need to protect her. She is also alive, so when one walks through a zone where before there was diversity and suddenly only flattened Earth with a single crop or a crop already like dead, the truth is it causes us a lot of pain" (*Tzec-Camaal 2021*)*

She emphasizes the understanding that land is not a resource to be sold and extracted from, as is common practice in industrial agriculture and especially the large-scale monocultures increasingly spreading through the region of Hopelchén. Instead, Nora asserts that the land is conceived of as alive and that monoculture practices are an assault on that life, which is not only noticed in a changing environment but felt by the communities who used to tend to the land. KK thus positions their FS work, guided by Mayan cosmology rooted in a belief in the interconnectedness of life, at odds with the commodification of nature directing an industrialized and capitalist practice of agriculture. Hence opposition is not only targeted at biological monocultures but also the knowledge monoculture driving them, rooted in notions of increased productivity, profit maximization and resource exploitation (Figueroa-Helland et al. 2018).

A related finding pertains to the idea of non-human agency. The forest (Yúum K'áax) is considered a sacred living being that is to be treated with respect, with Manuel May (KK) writing that "*without the forest we don't exist*" (May 2021). Nora also talks about how to those who listen and observe, trees, plants and animals, offer signs of what awaits people, for instance in terms of how much rain to expect (Tzec-Camaal 2021). Such

knowledge is not grounded in objectifying scientific measurements but rather in a deep relation to the natural world: "*everything is interrelated and also being grateful and recognizing that we are simply a part of everything has helped us a lot*" (Tzec-Camaal 2021). In connection to viewing the Earth as interconnected and alive arises the idea of reciprocity, captured by UYK's founders in the following statement: *"We remember the wisdom of the Mayan peasants who know very well that in order for the Earth to be able to give us the food we need, she also needs to be nourished by us"* (Loeza and Rodríguez 2020). Being in relation with the living Earth is also implicated in the Mayan cosmovision underlying KK's work, as Nora expresses: "*as Mayans, in reality we don't view ourselves alone, we always view ourselves in community, and when we talk about community we don't talk only about people. We have the same relationship with animals, and plants, and sacred sites that are the memory of our ancestors*" (Tzec-Camaal 2021). Such approaches stand in stark contrast to the dominant knowledge informing industrial agriculture that sees non-human forms of life as passive objects rather than subjects and agents (Adelman 2015; Dunford 2020). Spirituality recognizing the agency of nature could thus be considered a form of "epistemic disobedience", an act of de-linking from the dominant knowledge system, fostering decolonial thought through a radical questioning and rearranging of the very framework and foundation of knowledge (Mignolo 2009). In line with Smith's (2012) reflection that Indigenous spiritual relationships to the living world are difficult to synergize with western knowledge systems, it can be argued that a spiritual belief in the agency of nature is a profound way of resisting the oppression of supposedly universal knowledge and the violation of the living Earth it enables.

Western knowledge's claim to universality and the associated eradication of other knowledges are reflected in the conflict between the hegemony of industrial agriculture and the contrasting relationship to land espoused by the three organizations, as discussed above. European modernity is closely associated with Cartesian dualism that emphasizes the distinction between object/subject and nature/culture, thus relegating "nature" to the position of external object (Adelman 2015; Leff 2015). A spiritual belief in the interconnectedness of life and non-human agency challenges such binary thinking in which humans are positioned as external observers and actors upon nature, rather than implicated in it. This thinking too is reflected in the idea that knowledge and reality can be separated (Burman 2017; Escobar 2015). Knowledge instead is seen as inherently embedded in context, evoking earlier considerations of Haraway's (1988) arguments for the situatedness of knowledge. Such perspectives offer a meaningful frame for the collected data, pointing at the importance of contextualized spiritual knowledge in shaping agricultural practice, and through its use in FS work challenging the objectifying thought that enables the extractivism underlying much of industrial agricultural practice and reflected in the many monocultures across the Yucatán peninsula.

While the productive dimension and the goal of achieving a secure livelihood for farmers remains an integral part of the organizations' FS work, it is just one aspect of many comprising their understanding and practice of FS. As Margarita (GS) expresses "*the milpa is not for making us rich. The milpa is so that we have a quality of life"* (Biodiversidad Mexicana 2018). This view of practicing agriculture for the sustainment of life

and wellbeing, rather than merely as a source of income, was repeatedly brought up across the three organizations, indicating that the spiritual relationship to land also shapes the ideologies influencing the organizations' work. At this point it is interesting to examine the ideology and system of knowledge underpinning the extractive industrial agriculture that the organizations work against with their visions for FS. As discussed previously, authors like Figueroa-Helland et al. (2018) have emphasized the interrelated nature of biological and epistemological monocultures and how dominant knowledge shapes relationships to nature. This is reflected in the data, for instance when Nora talks about the profit maxim underlying agribusiness in opposition to the more holistic and integrated spiritual relationships to land valued in their organization's work.

Margarita (GS) tellingly sums up the discussed ideological frictions by stating that "*these principles of gratitude and respect are not taught in the neoliberal, capitalist system*" (Biodiversidad Mexicana 2018), hinting at the irreconcilability of an extractive, anthropocentric relationship to nature with one based on notions of interconnectedness and reciprocity. They evoke connections to Santos' concept of abyssal thinking, whereby Northern knowledge is asserted as true and universal, while those knowledges on "the other side of the line" are rendered invisible (Santos 2014, p.131). Such thinking not only establishes a knowledge hierarchy along the "colonial difference" (Mignolo 2002), but also denies space to the coexistence of multiple knowledges on equal grounds (Santos 2014). This is reflected in the results of the study in relation to the context-blind imposition of industrial agriculture and its ideological basis grounded in western universalist and objectifying thought which the organizations oppose in their practice of contextualized agriculture based on a belief in the interconnectedness of life.

When examining differing land relationships in connection to agricultural practice, there is a danger for narratives to digress into an essentialist and binary view of "Indigenous vs. western" (Briggs and Sharp 2004; Briggs 2005). While the above analysis has indicated an overarching consensus regarding the importance of respectful and interconnected relationships to land in the organizations' FS work, conflicting data was also collected. Nora for instance talked about how some members of their own communities are selling land to companies because they have already internalized this "*mentality of making money*", or how many of them have switched over to "*mecanizados*" due to market and government pressures (Tzec-Camaal 2021). There is thus no easy way of returning to a static romanticized agricultural knowledge rooted in interconnected understandings of human-land relationships. Throughout the consulted sources the word "*recuperar*"[17] occurred repeatedly (13 times in the interview with Nora for instance), indicating that there is a strong focus on restoring and strengthening past practices and ways of knowing. Yet such work needs to be considered within the context of the continuous colonial imposition of supposedly universal and superior western knowledge, based on a dualist conception of human/nature relationships and the different degrees to which

[17] recuperate

people have internalized it or are presented with no other choice but to comply with it in order to secure their livelihood basis.

Another example given by Nora indicates this complexity when she speaks of some people simultaneously cultivating a diverse milpa to feed their own family and a more industrialized monoculture according to market demands to earn money (Tzec-Camaal 2021). Considering the importance of re-asserting contextualized knowledges thus needs to recognize these intricacies, working not to assert an essentialist vision of an "indigenous knowledge" rooted in the past but rather to embrace a notion of post-abyssal thinking in which different knowledges can coexist, despite their multiple tensions. The following quote by Atilano aptly captures how UYK aims to build on such nuanced understanding, treating knowledge as dynamic, with past knowledge, in the sense of spiritual relations to land, considered a foundation to build on:

> "*We have to make the memory speak (...) It is a bit of that that we have found with this path of agroecology. How do we rummage in the past not to anchor ourselves in it but to step on it like a trampoline to the future?*" (Tzec-Camaal 2018b, p.155)

When trying to understand the way spirituality affects the work of FS organizations in Maya communities across the peninsula, a nuanced understanding of farmers' relationship to land is central. The above discussion served to illustrate the importance of land relationships in shaping the epistemological foundations of the organizations' work. Spirituality was presented throughout the data as an important foundation affecting people's relationship to land, and in turn the agricultural practice on that land. Land relations are characterized by beliefs in the interconnectedness of all life and the agency of nature, resulting in respectful and reciprocal relationships to nature. However, the organizations also experience conflicts based on tensions between the industrial agribusiness system and Mayan milpa farming, due to the different ways of relating to land inherent in them. Retaining and reviving Mayan spirituality within agricultural practice was thus presented as integral to the organizations' work, offering a tool for resisting industrial agriculture and the coloniality of knowledge.

6.2.2 The Centrality of Seeds

The significance of spirituality for agricultural practice within the organizations' FS work is perhaps best illustrated by the central role that seeds play, in both a spiritual and practical way. The work of KK and GS is centered on the effort to protect native seed varieties, while UYK more recently established a community seed bank to preserve the region's native seed diversity. The focus on preserving native seeds is directly related to them being threatened by the monoculture practices of industrial agriculture based on externally purchased hybrid and genetically-modified seeds (Biodiversidad Mexicana 2018; Tzec-Caamal 2018a). However, the importance of seeds transcends productive or biodiversity spheres, capturing also a significant cultural and

spiritual dimension. Nora speaks of native seeds as "*a heritage of the pueblo*[18]" and a form of "*how we have recuperated these knowledges*" (Tzec-Camaal 2021). These statements point at the cultural significance of seeds and the intergenerational DS inherent in them (see ch. 6.3.1), a way of continuously perpetuating both the knowledge and presence of Mayan communities in the face of coloniality that seeks to erase them (Mignolo 2009; Santos 2014; Quijano 2007).

In particular maize carries profound meaning, as indicated by the data. Maize has long occupied a significant role in cultivation and diet of Mayan communities across the peninsula, with the region home to a large diversity of maize varieties (Barrera-Bassols et al. 2009). However, the significance goes way beyond that, which GS point at when referring to passages in the Popol Vuh that describe humans as created from maize (Biodiversidad Mexicana 2018), reiterated by Álvaro Mena Fuentes (KK) in saying that "*maize is the origin of life*" (Tzec Camaal 2018a, p.163), considering Mayans "*men and women of maize*" (Tzec Camaal 2018a, p.158; Biodiversidad Mexicana 2018). Nora further illuminates the sacredness of maize:

> "*Maize for us is much more than a plant that feeds us, there is a whole cosmovision surrounding it, (...) it touches aspects of the memory of all those knowledges that are very profound. In the seed itself there is also a form of teaching us to respect, and also to give us some values that still are alive in our culture, our pueblo*" (Tzec-Camaal 2021)

Maize carries spiritual meaning and is not considered an object but rather a being with agency, ixiim or "*señor del pueblo*"[19] (Tzec-Camaal 2021). Hence, dualist and objectifying notions of nature inherent in the knowledge underpinning industrial agriculture are challenged (Middleton 2015; Watts 2013). To continue sowing a diversity of maize and considering the plant in all its complexity is a form of resisting the homogenizing threat of industrial agriculture, in practice but also epistemologically.

The significance of native seeds forms a red threat through the organizations' work, illustrated not only in the promotion of agricultural practice and associated spiritual meanings, but also in the organization of seed fairs. Such "ferias" or "fiestas de semillas" form a cornerstone of KK's and GS's work, offering a space for both the exchange of seeds and knowledges (Tzec-Caamal 2018a; Biodiversidad Mexicana 2018). It is a space for collective reflection and strengthening cultural meaning (Tzec-Camaal 2021). In making the decision to refer to these events as "fiestas", KK points at their profound significance, not as commercial spaces but as spaces celebrating native seeds, to "*reclaim the value of maize*" and to celebrate life (Tzec-Caamal 2018a, p.162).

The above discussion has illustrated that seeds, especially maize, play an essential role in the organizations' work towards FS in resistance to the dominant agricultural and knowledge system based on monocultures and commodification. Reasserting the spiritual and cultural significance of maize was framed as a guiding principle for FS work, by offering a more profound challenge to the coloniality of knowledge systems

[18] pueblo: literally village, usually meaning a particular community, in this case Mayan communities
[19] lord of the pueblo

underpinning industrial agriculture. The connection between knowledge and practice inherent in seeds indicates how spiritual conceptions of interrelatedness translate into the organizations' work by drawing together elements of agricultural practice and spiritual knowing. Nora claims that *"in the physical spaces like the milpa (...), all those elements of the Mayan culture are reproduced"* (Tzec-Camaal 2021).

6.3 Resistance through Practice

The following section examines the influence of spirituality on the agricultural practices constituting the foundation of the organization's FS work, illustrating the interconnection between ways of knowing and relating spiritually to the land, and ways of engaging with it through practice. Spirituality is seen to inform how the organizations practice resistance to the dominant industrial agriculture model through everyday agricultural practice, facilitated through a DS and captured in the use of agroecology.

6.3.1 Diálogo de Saberes

The FS movement emphasizes the importance of diversity and contextuality in order to make space for different knowledges and practices outside of and in opposition to the dominant and universalizing presence of western knowledge in agriculture. The preservation and strengthening of these alternative knowledges and practices is facilitated through processes of horizontal learning, through a diálogo de saberes. The following section discusses the significance of DS for the work of the three organizations and how it relates to their emphasis on spirituality.

The work of the agroecology school UYK heavily draws on the concept of horizontal learning and knowledge exchange through a DS. Such dialogue occurs on different levels within UYK. Most commonly perhaps, DS elicits understandings of a horizontal knowledge sharing process grounded in CAC-processes, originating from Central America and brought to UYK with the Mayan refugees from Guatemala that played a significant role in the school's founding in the 1990s (Valentín et al. 2020). Such processes include the sharing of concrete practices, as well as the knowledges sustaining them. As the previous section on relationship to land has indicated, knowing and practicing are closely interrelated, with agricultural knowledge being rooted in the spiritual approaches characterizing relationship to land. DS is based on an acknowledgment of multiple equally valuable, contextual ways of knowing. Within UYK that translates not only into recognition of Mayan spirituality and knowledge, but active engagement with it due to its contextual value, thus fostering the search for common ground rather than difference (Tzec-Camaal 2018b). An example is found in mutual emphasis on honoring the interconnectedness of life as a basis for a just FS practice, as discussed in the previous section. The DS hence offers a space for spirituality to be recognized as a valid way of knowing, while also being a practical tool to bridge potential inter-organizational frictions based on different ways of knowing.

A process of horizontal knowledge exchange also played a significant role in the emergence of agroecología maya, discussed in more detail below. Before the organization's formation, founding members of KK learned about agroecology at UYK but then molded the acquired knowledge to suit their context. Instead of agroecology becoming yet another agricultural model based on external knowledge and imposed on the Mayan context, it was integrated into existing Mayan agricultural practices through a process of horizontal dialogue that emphasized the validity of different types of agricultural practices. Nora explains how they noticed parallels between what was taught as agroecology and their own practice of the milpa, which led them to refer to their specific agricultural practice as agroecología maya. However, there were also differences. She for example explains how they learned about the use of rice husks to make natural fertilizer but since rice is not native to the area and hence not cultivated, they instead used maize husks (Tzec-Camaal 2021). DS enables the coexistence of multiple ways of knowing and practicing agriculture, rather than establishing what Santos calls "abyssal thinking" in which western knowledge is rendered superior and supposedly universally applicable while other knowledges are deemed inferior (2014, p.118). Instead, DS evokes connections to Santos' concept of the "ecology of knowledges", an arrangement where multiple equally valid knowledges fit (2014, p.191).

DS is grounded in an exchange of both knowledges and practices, informing everyday resistance connected to cultivating FS in the face of the assault of industrial agriculture on the territories and livelihoods of the communities the organizations work with. The DS practiced within the organizations strongly focuses on lived experience. During workshops on agroecología maya, members of KK invite participants to visit local peasants practicing according to agroecological methods as a way of fostering exchange not based on abstract theoretical learning but on the practiced reality of individuals in similar circumstances. This promotes a dialogue not only between different perspectives but also between theory and practice that enables mutual learning (Tzec-Camaal et al. 2018). In the context of the loss of traditional agricultural knowledge, GS use video tools to foster increased knowledge sharing between different generations within the communities. Through using interactive video making, different practices in the milpa and their spiritual foundations are captured and shared with community members to ensure the continued existence and practice of the milpa. Based on this evidence, it can be concluded that processes of knowledge exchange take various forms within the organizations but serve a common purpose of establishing the importance of contextualized knowledges grounded in the lived experience of different people.

The study's findings suggest that DS is operationalized by the organizations in two main ways. On the one hand, DS validates a diversity of contextual knowledges outside the dominant agricultural model. On the other hand, such horizontal learning spaces facilitate the sharing of knowledges and practices that provide ground for everyday resistance through the practice of "alternative" agricultures. The organizations thus facilitate the preservation and multiplication of Mayan spirituality in agricultural practice, while simultaneously making space for new perspectives to be considered and integrated if they are considered meaningful.

6.3.2 Agroecología Maya

Agroecology has recently become increasingly significant within global FS efforts, a development reflected in the studied organizations. All three organizations practice some form of agroecology, with UYK explicitly working as an agroecology school and KK employing the concept of "agroecología maya" to characterize their work. While GS do not specifically refer to the term agroecology, they advocate traditional milpa farming, in line with what KK has conceptualized as agroecología maya. The following section discusses how the organizations practice resistance to the dominant agricultural model through everyday agricultural practice based on agroecological principles.

UYK has a strong focus on promoting the use of agroecology, with their central mission being to use agroecology as the "vertex" from which to work towards FS (Loeza and Rodríguez 2020). Agroecology is not only understood as an eco-technical tool but rather as "*something systemic and holistic*", based also on knowledge originating from indigenous communities (Tzec-Camaal 2018b, p.156). While technical knowledge does play a central role in their work of multiplying agroecological knowledge and practice, it is incomplete without consideration of the cultural, political and epistemological dimensions of FS. Atilano for instance asserts that agroecology is a political tool because it evokes "*guidelines that define life against the public policies defending death*" (Tzec-Camaal 2018b, p.156). This statement illustrates the multidimensional understanding of agroecology as both an oppositional practice to dominant industrial agriculture, as well as an ideological perspective grounded in a spiritual relation which considers the aliveness of the Earth, thus hinting at the spiritual belief in interconnectedness underlying the organization's endeavors.

The work of KK around the emergence of agroecología maya illustrates the importance of contextual agricultural practice to resist the monocultures of industrial agriculture. Nora claims there are different agroecologies and for them practicing the milpa can be considered agroecología maya (Tzec-Camaal 2021). The evolution of agroecología maya is deeply tied to learning processes in which diverse knowledges are equally honored, based on a recognition that what they have been taught as agroecology is not external knowledge but deeply connected to Mayan spiritual and practical foundations. As Nora asserts:

> *The essence in reality is part of those same knowledges of our grandfathers and grandmothers (...) what we are doing is what you are calling agroecology (...) we have always done it, sowing with diversity, treating everything like a system."* (Tzec-Camaal 2021)

Her words point at the understanding that the practice of the milpa can be seen as an agroecological one, even without explicitly being called that. Altieri and Toledo (2011) advance similar claims when discussing how agroecology is built upon foundations of traditional peasant and Indigenous agriculture. The practice of the traditional milpa emphasizes a diversity of crops, such as different types of maize, beans and squash, grown in a system of intercropping, using organic cultivation methods rather than relying on external inputs such as

hybrid or genetically-modified seeds and chemical fertilizers. The focus of agroecología maya is thus on contextuality and asserting such contextual practices as valid and valuable. It is described as a type of agroecology that is "*very much emerging from those Mayan knowledges that have to do with values, with relations to animals, Mother Earth, the care of the soil"*, indicating again the foundational meaning of the spiritual connection to the Earth for KK's FS work (Tzec-Camaal 2021).

The idea of context and the emergence of contextual knowledge warrant a short discussion here. The consulted proponents of agroecología maya repeatedly use expressions such as "*we have always done it*", "*practices that come very much from those ancestral knowledges*" or "*a conjunction of agrobiological practices that were developed in the biophysical and sociocultural context of the pueblo Maya*" to describe it (Tzec-Camaal et al. 2018; Tzec-Camaal 2021). An uncritical and homogenous understanding of context perhaps again involves the danger of essentialism, obscuring internal differences to highlight the difference to industrial agriculture and the colonial ways of thinking implicated in it. However, contextuality does not equate to homogeneity but rather implies historical contingency, as opposed to knowledge imposed externally from "nowhere", as Haraway (1988, p.589) refers to supposedly universal western knowledge. The analyzed findings have indicated the way spirituality shapes context, which is illustrated in the statements above. Spirituality informs knowledge generation and practice both through relations to non-human life, and through honoring ancestral connections. The role of ancestors has been repeatedly brought up throughout the sources, indicating their important influence. This is reflected in statements such as the ones above, as well as Aiselo Ukamo Cul (GS) saying that they are "*protecting what is the seed of the grandparents*" or Ricardo Piña Cab (GS) expressing that "*the ancient grandparents have shown us [the practices of the milpa] and now we continue doing it as well*" (Biodiversidad Mexicana 2018). In connection to the discussion regarding the DS, context can thus be understood as an emergence from ongoing interaction and dialogue with different sources, and as a deeply relational process informed by spiritual knowledge.

Grounded in recognition of knowledge diversity, the organizations assert that processes of DS in agroecology create space for knowledges outside of the hegemony of western science to be recognized. They allow for an agricultural practice not only shaped by biological and technical understandings, but one respecting the influence of spiritual ones as well. In the practice of agroecología maya, spirituality is deeply implicated in agricultural practice, offering a way for adopting and contextualizing agroecology. As Albert Chan Dzul, member of the agroecología maya working group, expresses: "*speaking of agroecología maya gives us strength and allows us to recognize local knowledges*" (Tzec-Camaal et al. 2018, p.67). Embracing the spiritual foundation of agriculture in the Mayan context of the organizations thus enables the emergence of a more meaningful and embedded form of agroecology.

7 Conclusion

The study explored the ways in which spirituality informs the work of food sovereignty organizations among Indigenous Maya communities across the Yucatán peninsula in Mexico, looking specifically at the use of spirituality as a decolonial way of knowing in resistance to the coloniality of western knowledge driving destructive patterns of industrial agriculture in the region. Drawing on theoretical concepts from the fields of food sovereignty and decolonial knowledges, a conceptual framework was devised that guided the analysis process.

Based on engagement with interview, textual and visual data, the thesis found that spirituality plays a significant role in the work of the studied organizations, serving as a way to contextualize their FS work within the Indigenous Mayan environment in which it is situated. In the face of impeding monocultures of industrial agriculture and the dominant western knowledge driving it, a focus on spirituality offers the organizations a decolonial tool of resistance. A spiritual foundation was expressed by the organizations in two main ways: Firstly, through the relationships to land grounded in notions of interconnectedness and non-human agency and secondly, through the associated values of reciprocity and respect towards the living world, which taken together inform an agricultural practice much in contrast to the commodifying and extractive character of industrial agriculture. By embracing spiritual notions of interconnectedness the organizations build a foundation from which to challenge monocultures of the land and the mind in multidimensional ways, transcending nature/culture and subject/object dualisms while simultaneously demonstrating the interconnectedness of knowing and being.

These findings were demonstrated by examining both resistance through knowing and resistance through practice. The former entailed a discussion on conflicting land relations, both theoretically and based on the data, and was exemplified by the importance of seeds, while the latter focused on the contextual practice of agroecología maya and the diálogo de saberes as a way of validating spiritual knowledge. Throughout the analysis it has become apparent that such distinction mainly served artificial academic purposes and that knowing and practicing are deeply interrelated. This finding is reflected in the notion of the pluriverse, in which a diversity of ways of knowing and being in the world coexist in equally valid forms. The work of the FS organizations contributes to fostering the emergence of the pluriverse in their efforts to emphasize spiritual knowledge and ensuing contextual agricultural practice in resistance to the homogenizing dominance of industrial agriculture and western knowledge.

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Appendices

Appendix A – Overview of Organizations

Name	Location	Type	Formation and Current Work
Ka Kuxtal Much' Meyaj	Hopelchén, Campeche; working in different communities in the region	Indigenous Collective	• In 2010 by 24 Mayan men and women in the region of los Chenes in Hopelchén, to organize for the defense of native maize • Expanded to include work regarding agroecology, defense of territories and rights, economic autonomy, community health
U Yits Ka'an	Maní, Yucatán; branches in three other locations in Quintana Roo and Yucatán	Agroecology School	• Formed in 1991 by a group of Catholic priests inspired by liberation theology, together with Mayan peasants who fled from Guatemala, as well as academics from local universities • Focus on agroecology and strengthening cultural identity among Maya communities
Guardianes de las Semillas (Kán nán iinájóob)	Chacsinkin, Yucatán	Indigenous Collective	• Associated with the civil society organization Misioneros A.C. which provides the legal frame for the organization • GS was formed in 2014 • Goal of conserving practice of the milpa, native seeds and the rituals accompanying milpa cultivation

Appendix B – Selection of Document and Video Sources

Title of Source	Type of Source	Author	Reason for Sampling
KA KUXTAL (KK)			
Yúum K'áax, la Selva Maya es un Ser Sagrado (*Yúum K'áax, the Mayan forest is a sacred being*)	Guest post on dofdmenno.org, published on KK's website	Manuel May (KK)	• Offers perspective by someone from KK • Talks specifically about spiritual relations to land
Grupo Temático Agroecología Maya: La	Collective document in "Morral de	Nora Tzec-Caamal (KK) in collaboration with	• Written by someone from KK • Talking specifically about agroecology and food sovereignty, as well as the

Agroecología Familiar (*Thematic Group Mayan Agroecology: family agroecology*)	Experiencias para la seguridad y soberanía alimentaria", a collaborative publication from various civil society organizations in South-East Mexico working with food security and sovereignty; published on KK's website	other authors	particular Mayan foundation of it
Las Fiestas de Semillas Nativas en Campeche (*The Native Seed Festivals in Campeche*)	Section in "Morral de Experiencias para la seguridad y soberanía alimentaria"; Published on KK's website	Nora Tzec Caamal (KK)	• Written by someone from KK • Talks about the work of KK and the significance of seeds from both a practical food sovereignty perspective and a more cultural/spiritual one
Repensando la economía ecológica: una visión Maya (Rethinking ecological economics – a Mayan vision)	Conference paper (isecoeco.org - Economy and livelihoods after covid-19); Published on KK's website	Manuel May Castillo (KK), with Albert Chan Dzul (from another Mayan organization called U Yich Lu'um) and David Barkin	• Written by someone from KK • Offers a more structural and systemic perspective on KK's food sovereignty work and the significance of Mayan knowledge
U YITS KA'AN (UYK)			
La escuela de agricultura ecológica U Yits Ka'an: agroecologia desde la teología de liberación hasta la espiritualidad mayense (*The school of ecological agriculture U Yits Ka'an: agroecology from liberation theology to Mayan spirituality*)	Section in "Morral de Experiencias para la seguridad y soberanía alimentaria"	Nora Tzec Camaal and long passages of direct quotes from interview with Padre Tilo (UYK)	• Good overview of UYK's work and mission in the context of food sovereignty and a clear focus on the role of spirituality in their work, looking at both liberation theology and Mayan spirituality • Includes many direct quotes from Padre Tilo, one of UYK's founders

Tsool K'iin[20] 2021	Document and calendar; published on UYK's website	UYK (not specified)	• Offers insights into how Mayan spirituality is included in UYK's work • Illuminates the hybridity of different spiritual within UYK • Illustrates a form of spiritual Mayan knowledge
UYK's website • Homepage • Quienes somos (*Who we are*) • Espiritualidad (*Spirituality*) • Manifiesto de la Escuela de Agricultura U Yits Ka'an (*Manifesto of the agriculture school U Yits Ka'an*)	Pages on UYK's website	UYK (not specified)	• Offers insights into how UYK presents themselves and their work • Focus on food sovereignty and spirituality
Coronavirus – una Mirada desde U Yits Ka'an (Coronavirus – a perspective from U Yits Ka'an)	Longer statement on website	Atilano Ceballos Loeza and Raúl Lugo Rodríguez (UYK)	• Written by two central people within UYK • Very current perspectives touching upon various perceived threats to peasant agriculture and how food sovereignty and spirituality inspire responses to them
GUARDIANES DE LAS SEMILLAS (KÁN NÁN IINÁJÓOB) (GS)			
Guardianes de las Semillas y Misioneros: el video ante la preocupación de la transmisión de conocimientos a las nuevas generaciones (*Guardianes de las Semillas and Misioneros: video in the face of concern with knowledge transmission to new generations*)	Section in "Morral de Experiencias para la seguridad y soberanía alimentaria"	Compiled by Linda Lönnquist but contributions from others, including many passages of direct quotes from Margarita Noh Poot (GS)	• Introduction to GS's work • Directly connected to food sovereignty and the preservation of traditional knowledge

[20] Tsool Kin (also Tzolkin or Tzolk'in) is a part of the Mayan calendar, referring to the organization of time

Guardianes de las Semillas, Yucatán	Video (17.30min), shown during the presentation introduced below	Produced by GS in collaboration with Fundación Todo por el Cine in the context of a film workshop	• Good insights into GS's work • By GS, including various different people involved in the organization and thus allowing me to get insight into various perspectives • Deeper insight into the context due to the richer data conveyed though cinematic means which was particularly meaningful considering I was not able to visit the context and directly talk to members of the organization • Focus on food sovereignty efforts and the centrality of Mayan knowledge in their work
Guardianes de las Semillas, Yucatán	Video (10min), presentation in the context of the 8th week of biodiversity by CONABIO (*National Commission for knowledge and use of biodiversity*)	Speaker: Margarita Noh Poot (GS)	• Perspective of one of the members of GS • Presented to an external audience and thus offered a comprehensive insight into GS's work
Historias de éxito – Guardianes de las semillas del sur de Yucatán (*Success stories – Guardianes de las semillas from the South of Yucatán*)	Video (8min)	PMR PND MÉXICO (Support program for the reduction of risks from disasters in Mexico, part of UNDP)	• Good overview of GS's work • Strong focus on food sovereignty work as a way of resistance to various external threats

Appendix C – Interview Guide

Personal Dimension

- ¿Qué significa la espiritualidad para usted? / *What does spirituality mean to you?*

Within the organization

- ¿Cómo practica su espiritualidad en su trabajo con Ka Kuxtal Much' Meyaj? / *How do you practice your spirituality in your work for Ka Kuxtal Much' Meyaj?*
- ¿Cómo se manifiesta la espiritualidad en acciones concretas en el trabajo de Ka Kuxtal Much' Meyaj? / *How does spirituality manifest in concrete actions within the work of Ka Kuxtal Much' Meyaj?*

Agroecology

- ¿Cómo entiende y practica la agroecología? / *How do you understand and practice agroecology?*
- ¿Puedes hablar un poco más sobre el significo del intercambio de saberes? / *Can you talk a bit more about the significance of knowledge exchange?*

Spirituality in agriculture

- ¿Cómo influye la espiritualidad en su practica de la agricultura? / *What influence does spirituality have on your agricultural practice?*
- ¿Cómo forma la espiritualidad sus relaciones con la tierra? (las suyas y las de las comunidades con las que trabajan?) / *How does spirituality shape your relationship with the land? (your own and those of the communities you work with?)*
- ¿Qué importancia les parece la espiritualidad para la práctica de la agroecología y para cultivar la soberanía alimentaria en sus comunidades? / *What importance does spirituality have for your agricultural practice and for cultivating food sovereignty in the communities KK works in?*
- ¿Pueden hablar un poco sobre las conexiones entre la defensa de las semillas nativas y la fortalecimiento de la cultura y los saberes indígenas mayas? / *Can you talk a bit about the connections between the defense of native seeds and the strengthening of Mayan culture and indigenous knowledges?*

Spirituality as resistance

- ¿Cómo y de que manera la espiritualidad inspira la resistencia de las comunidades mayas de los Chenes contra el modelo de desarrollo agroindustrial? / *How and in what ways does spirituality inspire the resistance of Mayan communities against the agroindustrial development model?*
- ¿Qué significa la descolonización para ustedes en el contexto de la soberanía alimentaria? ¿Qué papel se juegan los saberes indígenas y la espiritualidad en este contexto? / *What does decolonization mean to you in the context of food sovereignty? What role do indigenous knowledges and spirituality play in this context?*

Closing

- ¿Hay algo que quieren añadir? */ Is there anything you would like to add?*
- ¿Hay algo que he olvidado? / *Is there anything I forgot to ask?*
- ¿Tienen algunas preguntas sobre mi tesis/ la investigación? / *Do you have any questions regarding my thesis or study?*

Appendix D – Information and Consent Sheet

Mi nombre es Milena Garbers y soy estudiante en la Universidad de Lund en Suecia, estoy haciendo mi licenciatura en estudios de desarrollo con un enfoque en geografía humana. Por el momento estoy trabajando en mi tesis de licenciatura, que explora el papel de la espiritualidad en el trabajo por la soberanía alimentaria. Particularmente me interesa la manera en que la espiritualidad funciona como forma de saber en contraste con el saber occidental y cómo se puede usar como herramienta y práctica decolonial en el contexto de la soberanía alimentaria. Me estoy concentrando en el contexto de la península de Yucatán porque estoy muy

inspirada por diferentes formas de resistencia maya contra la violencia de megaproyectos colonialistas y extractivos. Considero el trabajo de **Ka Kuxtal Much' Meyaj** como ejemplo de esta resistencia y por eso me sentiría muy honrada de platicar con ustedes. Su participación es completamente voluntaria y se puede revocar en cualquier punto sin razón especifica.

Espero que la entrevista se dure aproximadamente una hora y tendría lugar en Zoom, en una reunión protegida por contraseña para asegurar confidencialidad. Con su permiso la entrevista sería grabada en audio pero usted puede revocar dicho permiso en cualquier momento. La grabación me va a ayudar a capturar precisamente lo que diga para el análisis escrito. Tiene el derecho de sólo responder a las preguntas con las que se sienta cómodes y de hacer preguntas sobre el estudio en cualquier momento.

Los datos de la entrevista los procesaré y guardaré de manera respetuosa y sólo yo voy a tener acceso a los datos originales. Su nombres no serían incluidos en el documento final si no me dan permiso explicito para incluirlos. Los datos de la entrevista se van a usar como base de mi tesis que yo voy a presentar enfrente de un examinador y compañeres de estudio al principio de junio y después se publicará en el sitio de web de la Universidad de Lund. Antes de enviar mi tesis compartiré con ustedes las partes de la entrevista que me gustaría usar para su consentimiento. También voy a compartir la tesis final con ustedes.

Aquí están mis detalles de contacto y las de la universidad:

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Muchas gracias por participar en el estudio, valoro mucho su contribución.
Milena Garbers

Appendix E – Translation of Spanish Material

6.1.1
este esquema industrial para vender, no para comer - *the industrial scheme aimed at selling, not eating*
la tierra que no se vende – *the earth that's not for sale*

6.1.2

Promueve el Buen Vivir en las familias campesinas de la Península de Yucatán, contribuyendo en ellas a la soberanía alimentaria y a la conciencia ecológica, para el cuidado de nuestra Casa Común
- promoting the good life in peasant families across the Yucatán peninsula, contributing to food sovereignty and ecological conscience for the care of our common home
un proceso de educación y liberación - *a process of education and liberation*
contribuye a la defensa y promoción de los Derechos y Espiritualidad de la Madre Tierra, la cosmovisión y tenencia de sus montes en favor de la Vida – *contribute to the defense and promotion of the Rights and Spirituality of Mother Earth, the cosmovision and tenure of her montes in favor of Life*

6.1.3
Somos hombres de maíz, blancos y amarillos, como dice Popol Vuh - *We are men of maize, white and yellow, like the Popol Vuh says*

6.2.1
la tierra, decimos que no se vende, es una herencia, entonces hay que cuidarla, también está viva, entonces cuando uno pasa por esa zona que antes era diversidad y de repente solamente la tierra aplanado con un sólo cultivo o con el cultivo ya cómo muertos en vida, la verdad es que nos causa mucho dolor - *the Earth, we say can't be sold, it's an inheritance, that's why we need to protect her. She is also alive, so when one walks through a zone where before there was diversity and suddenly only flattened Earth with a single crop or a crop already like dead, the truth is it causes us a lot of pain*

Sin la selva no existimos – *without the forest we don't exist*

todo está relacionado y también el ser agradecido y reconocer que somos solamente una parte de todo nos ha ayudado mucho – *everything is interrelated and also the being grateful and recognize that we are simply a part of everything has helped us a lot*

Recordemos la sabiduría de las y los campesinos mayas que saben muy bien que, para que la tierra pueda darnos la comida que necesitamos, ella también necesita ser alimentada por nosotros - *We remember the wisdom of the Mayan peasants who know very well that in order for the Earth to be able to give us the food we need, she also needs to be nourished by us*

como maya, en realidad no nos vemos solos, siempre nos vemos en comunidad, y cuando hablamos de comunidad no hablamos solamente de las personas, lo mismo esta relación que tenemos con los animales, también con las plantas, con los sitios sagrados que son memoria de nuestros ancestros – *as Mayans in reality we don't – as Mayans, in reality we don't view ourselves alone, we always view ourselves in community, and when we talk about community we don't talk only about people. We have the same relationship with animals, and plants, and sacred sites that are the memory of our ancestors*

La milpa no es para que nos hagamos ricos. La milpa es para que tengamos una calidad de vida – *The milpa is not for making us rich. The milpa is so that we have a quality of life.*

Esos principios de gratuidad y de respeto no se enseña en el sistema neoliberal, capitalista – *These principles of gratitude and respect are not taught in the neoliberal, capitalist system*

mentalidad de hacer dinero – *mentality of making money*

Hay que hacer que la memoria hable (…) Un poco esto es lo que hemos encontrado con esta vertiente de la agroecología. ¿Cómo hurgar en el pasado no para anclar- se en él, sino para pisarlo como trampolín hacia un futuro? – *We have to make the memory speak (...) It is a bit of that that we have found with this path of agroecology. ¿How do we rummage in the past not to anchor ourselves in it but to step on it like a trampoline to the future?*

6.2.2
una herencia del pueblo – *a heritage of the pueblo*

cómo hemos recuperado estos saberes – *how we have recuperated these knowledges*
el maíz es el origen de la vida – *maize is the origin of life*
hombres y mujeres de maíz – *men and women of maize*

El maíz para nosotros es más allá de una planta que nos alimenta, hay todo una cosmovisión alrededor de ella, (…) toca aspecto de la memoria de todos esos saberes que están muy profundos. En la propia semilla, también es una forma de enseñarnos, de respetar, y también de darnos algunos valores que todavía están vivos en nuestra cultura, nuestro pueblo – *Maize for us is much ore than a plant that feeds us, there is a whole cosmovision surrounding it, (…) it touches aspects of the memory of all those knowledges that are very profound. In the seed itself there is also a form of teaching us to respect, and also to give us some values that still are alive in our culture, our pueblo"*

reivindicar el valor del maíz – *reclaim the value of maize*

6.3.1
algo sistémico e integral – *something systemic and holistic*
lineamientos que definen la vida frente a las políticas públicas que defienden la muerte – *guidelines that define life against the public policies defending death*

la esencia en realidad es parte de esos mismos saberes de los abuelos y abuelas (…) lo que estamos haciendo es lo que ustedes llaman agroecología (…) nosotros siempre hemos hecho, sembramos con diversidad, tratamos de lo allá como un sistema – *the essence in reality is part of those same knowledges of our grandfathers and grandmothers (…) what we are doing is what you are calling agroecology (…) we have always done it, sowing with diversity, treating everything like a system*

muy desde estos saberes mayas, que tiene que ver con los valores, con la relación con los animales, la madre tierra, el cuidado del suelo – *very much emerging from those Mayan knowledges , that have to do with values, with relations to animals, Mother Earth, the care of the soil*

nosotros siempre hemos hecho- *we have always done it*

practicas que vienen mucho desde esos saberes ancestrales – *practices that come very much from those ancestral knowledges*

un conjunto de prácticas agrobiológicas que se desarrollan en el contexto biofísico y sociocultural del pueblo maya – *a conjunction of agrobiological practices that were developed in the biophysical and sociocultural context of the pueblo Maya*

cuidando lo que es la semilla de los abuelos – *protecting what is the seed of the grandparents*

nos enseñó los antiguos abuelos y ahora seguimos haciendo también –*the ancient grandparents have shown us and now we continue doing it as well*

Hablar de agroecología maya nos da fuerza y nos permite reconocer los saberes locales – *speaking of agroecología maya gives us strength and allows us to recognize the local knowledges*