Activist Resistance Against Mega-Projects in Yucatan.
A *Buen Vivir* and Degrowth approach

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Abstract:

This thesis looks at the activist resistance in Yucatán from the perspective of theories of *Buen Vivir* and Degrowth. Based on a critique of mega-projects, economic growth and development, as well as a theoretical explanation of resistance in the Global South and its links to *Buen Vivir* and Degrowth, this research explores how mega-projects in Yucatán have existed since the age of henequen, during the middle of the 19th century. Mega-projects, it is argued, have continued to this day, with infrastructure development like renewable energy parks, industrial farms, GMO soy plantations and, more recently, the planning of the Maya Train, with effects that represent a threat to the quality of life of local inhabitants, more than improvements to it. The thesis offers insights of activists against these projects and the model of development they are based on, as well as alternatives to them, that activists have constructed and practiced over time, as signs of the beginning of a process of conflict with the growth-based model of development and their search for *Buen Vivir*.

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Glossary

Ah Kinsa K'ax: Farmer. Maya expression which literally means "he who kills the forest". Used to name peasants turning the forest into milpa.

Cenotes: Subsoil interconnected depressions that serve as water reservoirs.

Cenoteros: Owners of cenotes.

Ejido: Form of property where a piece of land is assigned to a specific community for agriculture purposes.

Henequen: *Agave fourcroydes*. Agave species used as domestic Maya crop before the conquest and as industrial monoculture during the 19th and 20th centuries.

H'men: Shaman.

Karst: Porous and highly permeable type of soil, present in a great portion of Yucatan's ground.

Kanan Ts'ono'ot: The Guardians of Cenotes. Cooperative of cenote owners in Homún.

K'ax: Forest.   Monte in Spanish.

Ma'alob Kuxtal: Better Life. Maya expression for *Buen Vivir*.

Maquiladoras: Factories focused on low-skill manufactures and assembly lines.

Milpa: Traditional Mesoamerican system of polyculture.

Yum K'ax: Mayan for Lords of the Forest.

Abbreviations

ASI: Assessment of Social Impact. "Evaluación de Impacto Social" in Spanish.

CFE: Federal Electricity Commission, state-owned power provider in Mexico. "Comisión Federal de Electricidad" in Spanish.

CCWYP: Citizen Council for the Water of the Yucatán Peninsula. "Consejo Ciudadano por el Agua de la Península de Yucatán".

Conabio.   National Commission for Biodiversity Use and Knowledge. "Comisión Nacional para el Uso y el Conocimiento de la Biodiversidad" in Spanish.

LAECPE: Latin American Evangelical Center of Pastoral Studies. "Centro Evangélico Latinoamericano de Estudios Pastorales" in Spanish.

EIA: Environmental Impact Assessment. "Manifestación de Impacto Ambiental" in Spanish.

NRRJ: Network of Resistance and Rebellion Jo'. Activist organization. "Red de Resistencia y Rebeldía Jo'" in Spanish.

NIC: National Indigenous Council. "Consejo Nacional Indígena" in Spanish.

SEA: Strategic Environmental Assessment. "Evaluación Ambiental Estratégica" in Spanish.

1. Introduction

Mainstream trends of development operate in Yucatán through mega-projects at least since the middle of the 19th century. Currently, the state faces the installation of mega-projects such as renewable energy projects, industrial farms, GMO soy plantations and the Maya Train. The alteration of ecologies, ecosystems and social relations that these mega-projects entail are identified by activists opposing not only the mega-projects as construction sites, but as examples of the Western notion of development.

This thesis seeks to explore practices of resistance and *Buen Vivir* in peasant, indigenous and activist organizations in Yucatán. The interest here is in understanding the resistance practices from the perspective of concepts of Buen Vivir and Degrowth, proposals coming from the Global South and the Global North respectively. Although these concepts have different geographical origins, they have similarities in terms of questioning the current, mainstream perceptions about development and what constitutes a good and happy life. The thesis thus contributes to an understanding of how everyday experiences of resistance relate to more abstract concepts of Buen Vivir and Degrowth in order to contribute to the proliferation and use of these concepts as we seek alternate understandings of development.

The questions that guide this research are the following:
- Why do activists in Yucatan resist the installation of mega-projects?
- What are their alternatives to mega-projects?
- What are the elements of their perceptions, practices and lifestyles that would support a transition towards a *Buen Vivir* and Degrowth approach?

In presenting this case of activists and their organizations, the second chapter sets the theoretical notions that guide the analysis of the case. Mega-projects are identified as part of the Growth Programme, a series of policies and institutional actions that promote economic growth as the only way to reach a particular notion of a developed lifestyle.

Economic growth and development are analyzed in the light of their limitations to provide well-being to people. In turn, the activist resistance to mega-projects is seen as a movement which criticizes such notions and strives to find alternatives in practices of *Buen Vivir* and Degrowth. The third chapter sets the epistemological and methodological criteria that guide this research and explains the criteria used in analyzing the empirical data. Information on the empirical data collection process as well as about the activists and the organizations engaged in the research is also provided.

The fourth chapter makes a historical review of the installation of mega-projects in the peninsula since the middle of the 19th century. According to the definition of mega-project used in this thesis, the review identifies henequen as the first mega-project in the state. Maquiladoras and the project of a Special Economic Zone (SEZ) are also taken into consideration, along with current megaprojects in the sectors of renewable energies, agribusinesses and infrastructure development. The fifth chapter provides an analysis of the insights gained during the fieldwork stage upon the base of four themes: awareness of effects, strategies to resist, critique to development and alternatives to development before the thesis in concluded in chapter six.

2. *Buen Vivir* and Degrowth as resistance to development

The roots of activist resistance originate in a deeper dissatisfaction with the top-down approach to development that occurs with mega-projects. In this chapter I present a theoretical framework that situates the resistance within established critiques of top-down development. The first section explores the problematic links between mega-projects and the goal of reaching development through constant economic growth, in a context of neoliberal capitalism. In the second section, activist resistance is situated as part of Global South resistance to globalization processes and their struggles are seen as an effort to maintain and continue the construction of a local meaning of *Buen Vivir*. I argue that this

process of resistance to mega-projects and the hegemonic development model is the way through which activists articulate a degrowth process.

2.1 The Growth Programme and the "need" for development

I frame the Growth Programme as the complex configuration of top-down projects, policies and goals ordained by governments and supra-national institutions that push "toward two [main] purposes: promoting economic growth and extending modern/western institutions" (Paulson 2018, 86). The Growth Programme pursues constant development, which is "more than just material progress and economic growth [but] a western model of judgement and control over life itself" (Walsh 2010, 15). In that sense, mega-projects are one of the starting lines for the Growth Programme and its need for a particular form of modern, colonial, capitalist development.

2.1.1 Mega-projects: the start

Mega-projects are here defined as "projects which transform landscapes rapidly, intentionally and profoundly in very visible ways, and require coordinated applications of capital and state power" (Gellert and Lynch 2003, 15); many of them are imposed on local communities with the support of governments. They also have the potential for "fundamentally altering long-standing ecologies, biodiversity, and social relations" (Schindler, Fadaee and Brockington 2019). From a human ecology perspective, such projects are thus responsible for a fundamental change of the social, cultural and ecological elements of human-nature relations.

According to this definition, mega-projects are found in the recently announced the Maya Train, in renewable energy projects -wind and solar parks-, and in industrial farms -mainly containing pig and chicken-, as well as GMO soy plantations in the neighbor state of Campeche. Old mega-projects include henequen plantations and maquiladoras. The projects are not just about the individual material impacts but a great vision and development programme that is reshaping the state in fundamental ways. Indeed, mega-

projects have been praised by organizations like the IMF for contributing to economic growth and being a vital part of the economy (Doris Ross, et al. 2014), as well as wealth creation, competitiveness and prosperity (del Cerro 2019). They are then a central part of many neoliberal capitalistic agendas.

Mega-projects can be seen as a start of the Growth Programme because economic growth is at the core of their existence: they are planned as a way to stimulate growth and bring development to those areas. Through my critical reading of academic literature (Altshuler and Luberoff 1992), to policy documents (Mexican Government 2018) and mega-projects' Environmental Impact Assessments (Jinkosolar Investment 2016, PAPO 2017), it is evident that mega-projects find one of their reasons in the economic growth that they bring. In Yucatán, the state government supports mega-projects in the assumption that they will bring economic growth and improve the quality of life for their constituents (Yucatán State Government 2019), fitting the global pattern where mega-projects are key component of top-down economic activity. In that sense, economic growth is purported as a benefit because it is seen as the means to achieve a developed, good life.

2.1.2 Economic growth: the path

The main reason why economic growth is here portrayed as a means through which the Growth Programme operates is because, development agencies, supra-national organizations and governments have framed growth in the Global South as "an 'intermediary step' to achieve progress and development with both of these concepts being defined by Western modernity" (Dengler and Seebacher 2019, 249).

The emergence of growth as a powerful indicator originated in lines of economic thought and public policy that proposed that "movement in one variable [...] would bring about change in predictable directions in the others" (Cooper 2005, 120). In fact, economic growth hides consequences that compromise improvements in the quality of life for those people living in the Global South. It has been proven that growth can happen and thrive in

contexts where there is little respect to Human Rights, corrupt democratic institutions (Mokyr 2017), or rising carbon emissions (Sim 2010).

From a strictly economic perspective, growth is a problematic index because "whatever is purchased, for whatever reason, pushes the GDP up" (Ibid. 159), which makes it difficult to distinguish whether or not a given purchase improves quality of life or actually hinders it. Actually, GDP growth correlation to well-being is very limited: "It is not just that GDP is not strongly correlated with human development after a point—it is also that GDP growth past a certain threshold often has a negative impact" (Hickel 2019, 880). From an ecological economics approach, growth requires "energy and materials, and […] the availability of sinks for waste such as carbon dioxide" (Kallis, Kerschner and Martinez-Alier, The economics of degrowth 2012, 176). When unlimited growth is seen as a permanent means to achieve development, natural resources needed to fulfill basic needs may be compromised for wide sectors of the society, due to small, highly-privileged groups taking advantage of them for profit-making purposes.

Achieving GDP growth is a macro-economic measure that does not take notice of the equality of income distribution or access to resources. In that sense, one of the main aspects of GDP growth at a social level is that it obscures who are the sectors benefitting from extraction, production, commercialization and consumption (Rodríguez-Labajos, et al. 2019). The achievement of economic growth through mega-projects, does not necessarily translate to well-being, especially for those deprived of using those resources. For the purposes of this study, the emphasis on economic growth means that valuable criteria of well-being are left out of considerations of well-being; besides, the negative effects brought by growth are also obscured. This study thus focuses on both resistance to growth projects as well as articulations of well-being in different ways.

2.1.3 Development: the goal

The discourse of development is based on a linear notion of progress (Quijano 2007) and well-being, where certain countries are 'developed' and others 'underdeveloped'. Such linearity implies that underdeveloped countries aspire to reach the state of developed ones: "high levels of industrialization and urbanization, technicalization of agriculture, rapid growth of material production and living standards, and the widespread adoption of modern education and cultural values" (Escobar 1995, 4). Development is thus not to be confused with quality of life, which is "the possibility of satisfying basic needs. It refers to the well-being of the individual according to ontological (being, having, doing) and axiological categories (subsistence, protection, affect, understanding, participation, creation, and leisure)" (Walsh 2010, 16).

Ever since the post-war period, development discourse, policies and practices were adapted to underdeveloped countries where the positive effects of development needed to be felt the most. As such, regions like Latin America fostered its own versions of development, where "anti-neoliberal" modes of development placed a huge importance in the role of the state (Merino 2016) or later through the "multicultural logic of neoliberal capitalism" (Walsh 2010, 17) and more recently, into eco-friendly 'sustainable development' (Dengler and Seebacher 2019) that seeks to reconcile economic growth with sustainable policies.

As a policy approach, development is also the ultimate goal behind mega-projects in the Global South: it is understood that, because the South needs development, then technification, industrialization and urbanization need to occur so that quality of life improves. As such, development "had a profound impact on how Asia, Africa, and Latin America, [which] came to be seen as 'underdeveloped' since the early post- World War II period and treated as such thereafter" (Escobar 2015, 4). The effects, however, were not the promised: development policies, discourses and practices have been counterproductive and led to a deterioration of the living conditions for those people living in underdeveloped

countries that include impoverishment, economic and social inequality and environmental degradation (Escobar 1995, Demaría, Kallis and Bakken 2019, Acosta 2015).

In presenting the evolution of different societies as linear, with a single defined goal reached only by some, development masked colonial aims where specific groups were allowed to profit from human and natural resources (Paulson 2018, Walsh 2010), while externalizing the negative costs to underdeveloped regions of the world that are usually far from developed countries, as Andre Gunder Frank has shown previously (1978, 23-24). In doing so, development also obscured the different pathways that societies can embrace in the search of improving their quality of life.

By resisting the implementation of mega-projects, activists express a fundamental rejection of the model of development imposed through top-down mega-projects that threaten long-standing ecologies, ecosystems and social relations. In doing so, their resistance highlights alternatives that have been negated by development which "violently disacknowledges the dreams and the struggles of underdeveloped peoples (Acosta 2015, 303)". The next section aims at highlighting the frameworks that, in their resistance, are uncovered and followed by activists resisting mega-projects in Yucatán.

2.2 Activist resistance in the Global South

The actions of people against mega-projects in Yucatán are conceptualized as activist resistance due to the fundamental opposition that they present not only against specific mega-projects, but against the very development model that alters and threatens ecosystems and socioenvironmental dynamics. Their alternatives to the Growth Programme are also part of their resistance and, due to their articulation, such resistance is considered as embedded in a context belonging to the Global South.

Actions of resistance articulated by activists are part of long-term, structuration processes where a myriad of social actors intervene to shape trends of individual and collective

contestation against the actions of States, governments or companies. In that sense, these processes follow a principle of structuration, a mechanism through which social agents and structures influence one another. The structuration model "says that structure and agency are two different strata with separate powers and properties, that structures constrain and enable the actions of the agents, and that agents reproduce and transform structures" (Danermark, et al. 2002, 181). Actions of current activists are inserted in a process where other activists in the region, and even in other parts of the world, have articulated resistance trends against hegemonic powers.

2.2.1 Resistance in globalized contexts

In a context of globalization, where sources of economic and political power are diffuse and can adopt local, national regional or global approaches, resistance is having "possibilities of identifying and contesting forms of domination, expanding political space, and opening new venues - hence redefinitions of politics" (Ibid. 41). From a global perspective, mega-projects are the link between communities and what is called 'globalization-from-above': they are the entry point to global markets that in Yucatán can be traced from the middle of the 19th century until today, as is explained in the third chapter. But activists, even if their cause does not have a social movement behind, are not alone. In that sense, 'globalization-from-above' is met with 'globalization-from-below': networks of transnational criticism and resistance "involving the linking of knowledge, [resources], and political action in hundreds of civil initiatives" (Falk 2003, 49). In a globalized scenario, resistance against mega-projects in Yucatán benefits from global resources within their reach and transcends purely regional, state-wide strategies of resistance.

Resistance, however, is not only a rejection of a particular infrastructure development, but a negation of the model of development and its consequences for quality of life. Activists in Yucatán, as well as in other places in Latin America (Dueholm 2012, Zanotti 2015), expand their political space by opposing the model of development imposed on them through

mega-projects. "Resistance reflects more than the struggle for land and living conditions; it is above all a struggle over symbols and meanings, a cultural struggle" (Escobar 1995, 167), where onto-epistemologies are at stake: on the one hand, the modern onto-epistemology of development that values material progress, and makes a clear cut between nature and culture, and on the other, the myriad of alternatives to development that are usually constructed from the bottom-up by communities. "Through processes of collective learning and knowledge production, […] movements are crafting their oppositional imaginaries, practices and utopias" (Motta and Nilsen 2011, 22).

2.2.2 The perspective of the Global South

The integration of such imaginaries, practices and utopias mean the problem of development is also epistemic. "Processes of oppression and exploitation, by excluding groups and social practices, also exclude knowledges used by those groups to realize such practices" (De Sousa 2009, 12). As stated before, development, as a unifying linear way to see the evolution of society, violently disacknowledges these other knowledges, practices and alternatives to improve the quality of life of people. The epistemic consideration is key for considering the resistance as part of the Global South.

The latter is here understood not as those countries situated in the geographical south, but "as a metaphor of human suffering caused by colonialism and capitalism" (Ibid. 12). As such, the Global South is to be found in the geographical north, where mega-projects and the Growth Programme also cause suffering and find opposition. Conversely, "the geographic […] south contains not only the systematic suffering caused by global colonialism and capitalism, but by local practices of complicity with them" (Ibid. 12). That definition also resembles the way Leigh Anne Duck has conceptualized the Global South: resistances to "exploitative and hegemonic economic and political forms [existing both] in discrete geopolitical spaces and through broader collaborative networks" (2015). In Yucatán, the Global North is represented by private actors like Jinkosolar and Grupo PAPO and government agencies like the Ministry of Energy and Yucatán's Ministry of Urban

Development and Environment, that promote mega-projects and contribute to land-grabbing and resource-exploitation processes.

2.2.3 *Buen Vivir* as an on-going project

The process of conflict articulated by activists against mega-projects in the state is not only a rejection of initiatives threatening the livelihoods of people and the equilibrium of local ecosystems. It is also a process through which activists hold knowledges, practices and lifestyles as alternatives to the material consumption, industrialization, technification and other goals proposed by development to improve quality of life.

Their engagement in the process of creating alternatives is seen here as engagement in *Buen Vivir* as an on-going, performative project. *Buen Vivir* is a Latin American proposal "consisting of values, experiences and practices coming from indigenous community life that focus on harmony among individuals living in community, among other peoples and nature" (Acosta 2015, 299). In social terms, *Buen Vivir* favors, "the transition to a solidary and sustainable economy, which includes degrowth of extractivism and the attention to local, participative policies" (Ibid. 299).

Since it also

> identifies as goals the satisfaction of needs, the achievement of a dignified quality-of-life and death, to love and be loved, the healthy flourishing of all in peace and harmony with nature, the indefinite prolongation of cultures, free time for contemplation and emancipation, and the expansion and flourishing of liberties, opportunities, capacities and potentials' (Thomson 2011),

Buen Vivir also implies changes in "knowledge, codes of ethics and spiritual conduct in relation to the environment, human values and the vision of future" (Kothari, Demaria and Acosta 2014, 367).

While the traditional notion of *Buen Vivir* relates to indigenous Quechua and Aymara concepts like *Sumak Kawsay* or *Sumak Qamaña* respectively, the concept is not exclusive of

the Andean region and is rather a holistic approach that, while rooted in indigenous knowledges and practices, (Gudynas 2011, Acosta 2015), it also recognizes the existence of similar philosophies in multicultural settings (Gudynas 2011) or critical trends of Western thought (Escobar 2015).

Buen Vivir does not have a blueprint nor a single pathway to follow. It is approached by every community in its own way, relating to their own knowledges and practices (Acosta 2015, Gudynas 2011, Escobar, 2015, Paulson 2018, Thomson 2011). *Buen Vivir* is thus an on-going project articulated against development through which alternative projects of well-being are constructed, from the bottom-up and upon criteria different to those of the Growth Programme. In this thesis, I will use Buen Vivir to understand the alternative development that communities are articulating.

2.3 Degrowth as a conflict process

Degrowth is an idea based on the premise that the current capitalist, growth-based system is a trigger of human exploitation and suffering as well as environmental destruction. In the current state of the planet and societies around the world, where climate change exacerbates and issues like capital accumulation and economic inequality go hand in hand, degrowth advocates for a series of transformations that span from the broad decolonization of the social imaginary of growth (Latouche 2009), whereby economic growth is considered as a legitimate and almost necessary goal to achieve, to the deployment of specific, context-based measures to promote the decrease of economic activity in particularly socially and environmentally harmful industries.

Degrowth aims to build "a society with a smaller metabolism, but more importantly, a society with a metabolism which has a different structure and serves new functions" (D'Alisa, Demaria and Kallis 2015, 93)". It is both a "a philosophical and policy proposal for reduced consumption and voluntary simplicity" (Nirmal and Rocheleau 2019, 2), but it also recognizes that "voluntarism alone cannot go far, if it is not expressed in collective and

political action to ensure the conditions necessary for making simple living possible or for ensuring that resource savings are not reinvested in further accumulation" (Kallis 2013, 95).

In the current global scenario, where the Western notion of development is normalized as the single goal to pursue in economic terms, degrowth aims to re-politicize economic decision-making (Schneider, Kallis and Martinez-Alier 2010), which means to craft and promote alternative pathways for societies to live in a just, ecologically sound economic system. It also means to trigger a process of conflict with the current economic orthodoxy, in local and global arenas around the world. From that point of view, the Degrowth movement shares affinities and similarities with activists, both in the Global North and the Global South, that seek to resist specific damages against their livelihoods, their local ecosystems of their ways of living, imposed by the agenda of the Growth Programme.

While some of these affinities are explicit and activists openly recognize their embrace of degrowth as a coherent set of shared goals, others work from their own philosophies and goals. In that sense, degrowth can be thought of not as a "blueprint for a global transformation proposed by the Global North and imposed on the Global South, but rather as a Northern supplement to Southern ideas and movements, which already exist" (Dengler and Seebacher 2019, 249). Examples of this are Zapatista communities and activists in Yucatan, whose resistance focuses "on externally conceived and managed, growth-driven projects of private and government entities, from national to international levels" (Nirmal and Rocheleau 2019, 11).

While many of these ideas and movements have their own epistemological basis, and therefore should be understood within their own context, there is a number of areas where collaboration with degrowth thinkers and activists can be fruitful. Rodríguez-Labajos (Rodríguez-Labajos, et al. 2019) has pointed out, for instance, to a reduction of resource extraction and consumption, the critique of mega-projects, the destructive role of finance and commodification, the rescuing of the commons, the localization of the economy and

the struggle for food sovereignty as areas of analogies between degrowth and socioenvironmental resistance in the Global South.

By defending the land from deforestation, pushing for better water quality and accessibility despite the jobs they are offered and standing up against urbanization trends that promise to include them in high-consumption lifestyles, activists use their agency to negotiate with the structural mechanisms through which the Growth Programme is reproduced. They instead advocate and practice localized forms of economy and self-sufficiency built from the bottom-up. In doing so, they contradict the notion that, as people in the Global South, they need to grow.

Due to the contestation of top-down mega-projects and processes whereby ecologies, ecosystems and social relations lead to deterioration of life, activists are seen here as engaging in a conflict with the growth-based notion of development. Such struggle is part of a definition of degrowth that comprises "a process that emerges as a model of growth encounters its limits and people challenge the consequences" (Demaría, Kallis and Bakken 2019, 437).

3. Methodology

This chapter presents an overview of my methodological framing of the research as well as the details of the methods used for data collection and analysis in Yucatan.

3.1 Agential realism

Epistemological assumptions for this research follow an agential realist framework in which the researcher performs an agential cut to define the object of study (Barad 2003, 815). In that sense, the agential cut I perform in reality allows me to see activists living in Yucatan as both my object of study and the persons I learn from. According to agential realism, the notion of objectivity this research relies on is that "objective knowledge is situated knowledge" (Barad 1996, 180). The knowledge I learn from them is objective to the extent

that it is embedded in a specific context, with defined space and time, as well as specific socioenvironmental features.

Along those lines, theory used "is epistemologically and ontologically reflexive of context" (Ibid., 182), and thus, further validations and refutations depend on how useful theory is for explaining practices on the ground. Likewise, based on an ethics of knowing, I am mindful that knowledge has real consequences. I know this applies not only to the knowledge activists have shared with me, but also to the knowledge this very research will contribute with.

My positionality is clear: I stand on the side of activists, I learn from them and their quest for alternatives for *Buen Vivir* and against the Growth Programme. Agential realism allows me to position myself in their context, as an inevitable disturbance whose presence can be, hopefully, valuable to them as well as myself. Agential realism allows me to be mindful of the particularities of the context and the conditions under which activists teach me, what I learn and what I hereby write.

My incursion in the field is both a necessary and useful disturbance of the social dynamics among activists in Yucatan. The data I gather in the field are thus dependent on who I am: a Mexican person, identified as male, Spanish-speaking, who is not part of the Yucatecan context, nor has Maya roots or is Maya-speaking.

3.2 The extended case method

The extended case method (Buroway 1998) is based on the premises that the observer is also a participant, since its presence changes the dynamic of the studied phenomena; that a situation can be extended in space and time since it contributes to the reproduction of a given state of things; that a single case can be extended into a process through the principle of structuration and that in the field, the researcher must look for theory's refutations (Ibid, 16-20).

In order to highlight the insertion of current mega-projects within a historical process, during which the Growth Programme has operated in Yucatán long before these mega-projects came, the first chapter makes a historical review of former mega-projects and the way they changed ecologies, ecosystems and social relations. Such historical context is important because it frames the insights of activists in relation to current operations of the Growth Programme.

3.3 Empirical sources: historical background and interviews

In the fourth chapter, insights will be drawn from 13 in-depth interviews with 17 local activists living, and opposing mega-projects, in Yucatan (Table 3.1). The fieldwork was conducted in several towns on Yucatán, like the capital Mérida, Homún, Maní, Buctzotz and Hunucmá during January and February of 2020. The 13 semi-structured interviews were scheduled through a snow-balling sampling method (Figure 3.1), which has the advantage of helping the researcher to decrease the initial lack of trust between interviewer and interviewee, and "seek out more easily interviewees with particular experiences and backgrounds" (Valentine 2005). In this case, the required background was to be an activist against mega-projects in the state or be working for an alternative to them.

Each interview was conducted in Spanish and lasted between one and two hours each. The advantages of such technique are it allows interviewees "to construct their own accounts of their experiences [and] raise issues that the interviewer may not have anticipated and" (Valentine 2005). The overall goal of such a technique was "to obtain descriptions of the interviewees' lived world with respect to interpretation of the meaning of the described phenomena" (Kvale 2011, 11).

The input from the interviews, as well as the interviewees themselves required to be handled carefully, especially so at a time when the Mexican government, private sectors and alleged criminal groups target activists as their public rivals. In that sense, I tried to be

as mindful as possible in respecting the activists' motivations and conditions to be interviewed, as well as their permissions to be quoted and use their names in this research. The tables (3.1 and 3.2) and figure (3.1) below offer a quick glimpse about their background (based on their own ascription during the interviews), the organization they work with and the mega-projects they are against.

Table 3.1. Activists' backgrounds and situated resistance

Name	Background	Organization	Situated Resistance
Martha Flores	Indigenous	Network of Resistance and Rebellion Jo' (NRRJ)	Renewable energy projects in Ixil and Valladolid. Maya Train
Pedro Uc	Religious/Indigenous	Múuch Xíinbal (MX)	Renewable energy projects in Ixil and Valladolid. Maya Train
Jazmín Sánchez	Academic	Articulación Yucatán	Renewable energy projects in Ixil and Valladolid. Maya Train
Rodrigo Patiño	Academic (Applied Physics, Center for Research and Advanced Studies)	Articulación Yucatán	Renewable energy projects in Ixil and Valladolid. Maya Train
Rodrigo Llanes	Academic (Anthropology, Peninsular Center for Humanities and Social Sciences)	Independent	Renewable Energy project in Tipceh. Maya Train
Aurelio Sánchez	Academic (Architecture, Autonomous University of Yucatán)	Independent	GMO Soy in Los Chenes. Maya Train
Gabriela Torres-Mazuera	Academic (Anthropology, Center of Research and Higher Studies in Anthropology)	Independent/Equipo Indignación	GMO Soy in Los Chenes and Pig farm in Homún
Doroteo Hau	Indigenous	Kanan Ts'ono'ot (KT)	Pig farm in Homún
Clemente May	Indigenous	Kanan Ts'ono'ot (KT)	Pig farm in Homún

Name	Background	Organization	Situated Resistance
Atilano Ceballos	Religious	U Yits Ka'an	U Yits Ka'an Agroecology school in Mani
Raúl Lugo	Religious	U Yits Ka'an	U Yits Ka'an Agroecology school in Mani
Minelia Xiu	Indigenous	U Yits Ka'an	U Yits Ka'an Agroecology school in Mani
Pedro León	Indigenous	U Yits Ka'an	U Yits Ka'an Agroecology school in Mani
Rudy Pérez	Indigenous	U Yits Ka'an	U Yits Ka'an Agroecology school in Mani
Cecilia Uh	Religious/ Indigenous	U Neek Lu'um and Citizen Council for the Water of the Yucatán Peninsula (CCWYP)	U Neel Lu'um Agroecology school in Hunucmá/National Water Law. Maya Train
Carlos Escoffié	Academic (Law, Free School of Law)	Independent	GMO Soy in Los Chenes. Cattle farm in San Antonio Chel. Maya Train
Gustavo Monforte	Academic (Industrial Engineering, Merida Institute of Technology)	Citizen Council for the Water of the Yucatán Peninsula (CCWYP)	Solar Park in Oxcúm-Umán. National Water Law. Maya Train
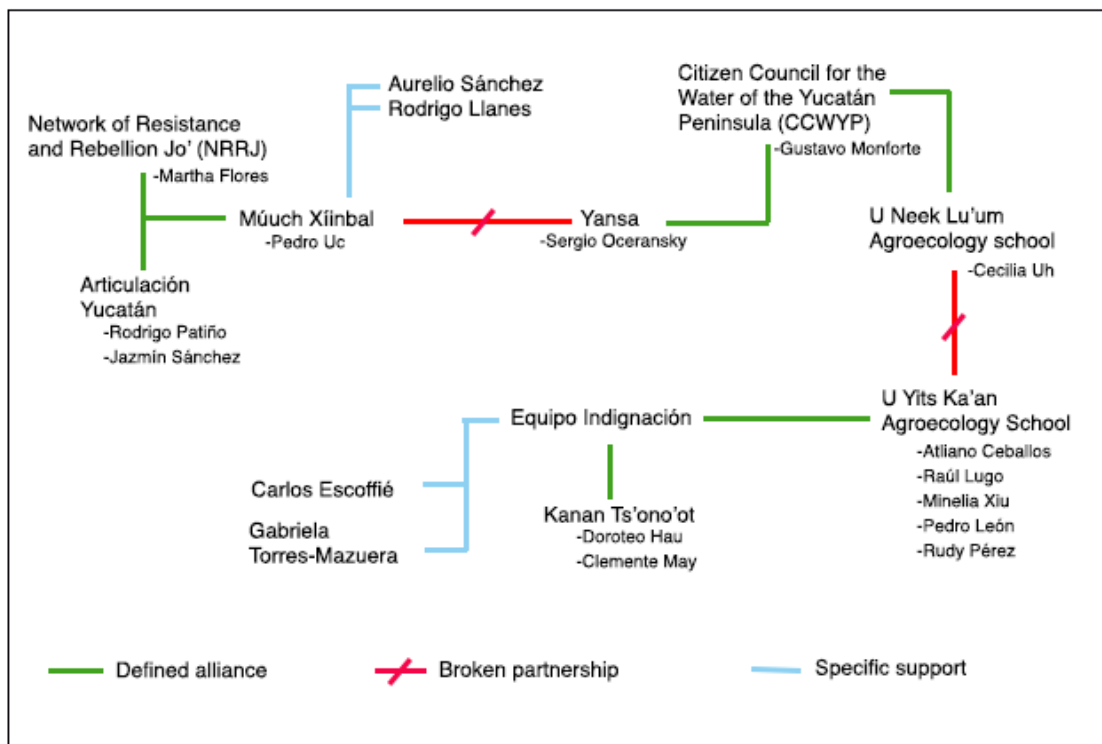
Figure 3.1. Stakeholders map

To analyze the interviews, I translated them and then conducted a Systematic and Reflexive Interviewing and Reporting Method (SRIRM) (Loubere 2017) together with a verbatim transcription, through which I detected confirmations in the words of activists about the same events. When relevant, a match with news pieces is also provided. For the information processing, four main themes were created, each one a respective list of 2 or 3 subthemes (Table 3.2).

Table 3.2. Themes and subthemes

Themes	Subthemes		
1. Awareness of effects	Socioenvironmental		Ecosystemic
2. Strategies to resist	Outreach and Communication	Legal	Lobbying
3. Critique to development	Influence and Role of Private	Mega-projects	Development model

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		Companies		
4. Alternatives	Agroecology	Cenote Tourism	Community-owned Wind Parks

4. Yucatán and its history with mega-projects

Research conducted in the state by scholar-activists has found that even though "authorities and local politicians proudly speak of the new economic model and the process of re-industrialization of Yucatan" (Llanes 2019, 116-117), in Yucatán, "infrastructure projects are often developed in societal and territorial peripheries that may be affected by "structural violence" related to poverty, inequality, and a lack of opportunities or effective forums for dialogue and participation" (Cruz, Duhalt and Cruz, Report. Social Conflicts and Infrastructure Projects in Mexico 2019). Even if these megaprojects have the apparent goal of improving people's lives, the reality is that they are mostly aimed at strengthening labor and natural resource exploitation schemes (Alfaro, 2018; Torres-Mazuera, 2018) and have rarely led to an improvement in the quality of life for the majority of the population (O. Baños 2000, 172)

This chapter gives an initial outlook of ecological, cultural and social conditions of the Maya before the colonial regime started full-on operations in the state. After that, the main economic initiatives deployed in the state so far are described: henequen, maquiladoras and a Special Economic Zone (SEZ). In that sense, local activists resist in a context already affected by them. The chapter closes with an overview of the current megaprojects located in the state and a brief characterization of the Growth Programme.

4.1 The land of the Maya

The Yucatan Peninsula has been inhabited by Maya for at least 3000 years and the signs of that presence are seen in the majority of the biophysical environment. Inhabitants shaped their territory and, in the process, developed knowledge that is reflected in cultural features. This section aims to look at the dialectical relationship of the Mayas with their environment: it influenced them and they influenced it.

4.1.1 A special kind of soil

In Yucatan, Karst is one of the most important and unique geographic features, since it is the most extensive kind of soil in the state. It is "highly permeable and [leads to] the existence of faults and fractures as a whole, [which] favors the infiltration of water to the subsoil" (DOF 2013). Estimations of the state surface being covered by this kind of soil range between 80% (Bautista and Aguilar 2006) to 95% (Medina, et al. 2019)

Due to karst, there is a lack of shallow significant water bodies like rivers, lakes or lagoons - since karst promotes filtration instead of concentration- and the development, over thousands of years of subsoil interconnected depressions that serve as water reservoirs and that are "known locally as *cenotes* [in Spanish, or] dolinas, grapes and poljes" (Bautista and Aguilar 2015) that form underground water networks, which implies that the aquifer has a high degree of vulnerability since it is relatively easy for pollutants to get to such networks and affect it (DOF, 2013; Medina, et al., 2019). The areas of the ring of cenotes as well as regions in the east of the state have been said to be particularly vulnerable (Aguilar et al., 2014 in Medina et al., 2019) to human activities like intensive pig farming, industrial waste disposal and overuse of the aquifer in regions close to the sea.
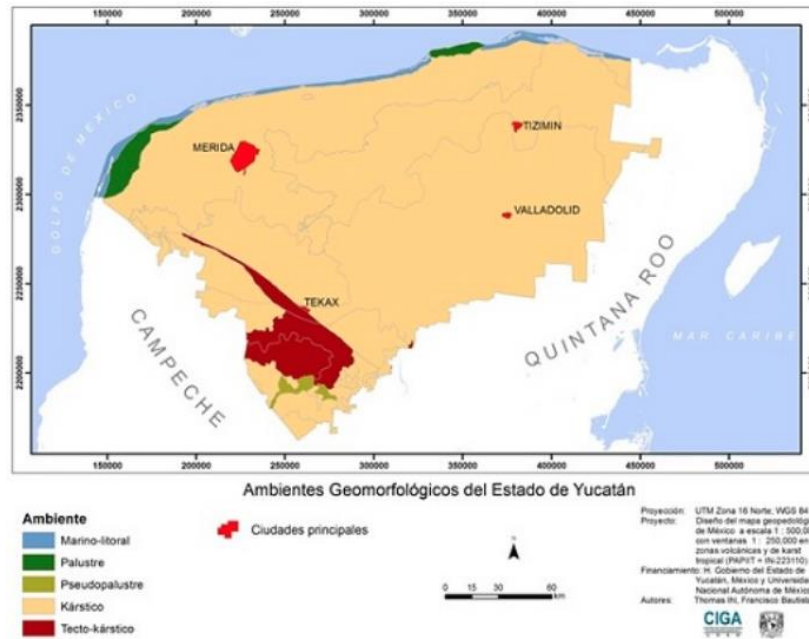
Figure 4.1. Presence of Karstic soil in Yucatán. Source: Bautista, Frausto, et al. 2015

4.1.2 The K'ax, the milpa and the Ah Kinsa K'ax

Since the karstic soil offered little fertility in itself, the Maya practiced the slash and burn system as the main component in their agriculture system. They practiced it in small pieces of *K'ax* (forest, or *Monte* in Spanish), where the *Yum K'ax*, (Lords of the Forest) live. After the conquest, the *K'ax*, (*Monte* in Spanish), was also the home of "god father, son and holy spirit, various Christian saints, and other deities, guardians and helpers of the mountain, winds, water and animals" (Yam 2011, 6), which speaks about the link between the ecosystem and the Maya spiritual practices developed over time.

The *K'ax* is communal and is the place where humans go to make *milpa*, a traditionally Mexican American system of polyculture, known to contain 28 different species (Quintanilla 2000, 264; Redfield 1977). After two or three growing cycles, food production decays given the depletion of organic matter in the soil. The peasant would then leave the *milpa* and make a new one, while the previous one would be left to regenerate for at least 30 years (Yam, 2011, p. 3). During that time, it would act as a "reservoir of medicinal plants,

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plant products such as firewood, coal, lime; of construction materials such as different woods and herbs" (Ibid., p. 5). The *milpa*, then, is part of the reasons why such a big extension of the state's tropical forest is in a secondary state of development.

The Maya agricultural methods were also reflected in the language: The expression *Ah Kinsa K'ax* means "he who kills the forest" and is used for peasants turning the forest into *milpa*, which reflects a certain awareness of the changes peasants bring to the local ecosystem. The word is also a link for many rituals that the Maya do in relation to the forest and the harvest, as a way to ask for forgiveness and show gratefulness to the *Yum Ka'x* for allowing them to get their food (Redfield 1977; O. Baños 2017; Yam 2011). Mayas were aware of the degradation they brought upon the land by farming it, hence their spiritual practices intend not to unleash the fury of the *Yum K'ax* for it.

These three terms offer a glimpse into the Maya way to relate to their biophysical environment before the conquest, but all throughout it and, at least, until 1930 (Redfield 1977). They created a way to occupy the land, to make territory, understood as "as the piece of land and its natural resources, used by a human community through an economic and political organization with the goal of securing coexistence and social wellbeing" (O. Baños 2017, 36).

4.2 Old mega-projects

Henequen, maquiladoras and a Special Economic Zone (SEZ) are the precedents of today's mega-projects in Yucatan. This section aims at looking at the effects of former mega-projects that altered long-standing ecologies, biodiversity and social relations like the ones explained above.

4.2.1 The henequen-wheat complex

The reason why Henequen went from a traditional, domestic Maya crop (Baños 2017, 113-114; Sterling 2007) to a solid profit possibility for Yucatecan elites is the early development of industrial agriculture systems in North America specifically, "with the transformation of the American and Canadian plains from a land of prairie grass where bison and later cattle grazed to a region of cereal grain production" (Sterling 2007, 1), which made necessary the development of technology to decrease human labor needed to harvest bigger amounts of grain.

The invention of the twine binder, a machine that allowed farmers to harvest wheat and tie it in bundles, greatly decreased the time and effort needed to produce grains. After long trial processes, henequen was selected as the material to bind the wheat together, and Yucatan, the biggest, closest region in the world producing the fiber, found a reason to produce it massively. "An average of two to six pounds of twine were needed to harvest every acre of wheat, or seen another way, two pounds of twine were needed to cut a thousand pounds of grain" (Ibid., p. 54). Twine binders depended on henequen cord, but production in Yucatan depended on demand in the U.S. and Canada.

As one of the first mega-projects in the region, henequen connected Yucatán to the global economy and was one of the first examples of "globalization-from-above". From the beginning, henequen as a mega-project was linked to economic growth: "In 1869, Merida newspaper *La razón del pueblo* promised henequen would be "known as the base of wealth and for public prosperity" and that economic growth seemed to be destined by Providence" (Sterling 2007, 39-40). There was, of course, little trickle-down effect: in the wake of the 20th century, only 400 families concentrated the ownership of the plantations, but they had more than 80,000 workers (Ibid) at their disposal.

Since the international market demanded the product and Yucatán laws already favored land privatization (Yam 2011), henequen's "big-scale commercial use sped up the ruin of the Mayan *milpa*, leading to a great deal of Maya families going to the henequen Haciendas

to work as peasants" (O. Baños 2017, 109). Once communal forest was either privatized or declared vacant through legal processes, Maya people progressively lost their ability to provide for their families.

Many indigenous farmers were turned into slaves and together with their families, were tied to the plantations through debt and were given labor assignments they needed to comply with (Turner 1910, 20). Slaves were normal in the whole Merida area: "slaves are not only used on the henequen plantations, but in the city, as personal servants, as laborers, as household drudges, as prostitutes" (Ibid., p. 20). For the henequen industry to be profitable, owners needed to extract the labor of a great deal of those 80,000 workers and slaves and their former lands.

In the long run, growing henequen as a single crop in the state, without combining its use with other crops and other agriculture systems, led to a huge dependence from the wheat, the twine binders and American companies. When the technology to harvest changed, so did henequen demand. Other historical events leading to the decrease in the demand of henequen in Yucatán were changes in landownership after the Mexican revolution (Alfaro 2018), drought and the Great Depression of 1929 in the United States (O. Baños 2017), and production competition with places like Kenia, Uganda, Tanzania and Indonesia (Ibid. 161).

4.2.2 Maquiladoras: Mexico's other frontier

After henequen bankruptcy, 40,000 workers were unemployed in the state, leaving authorities with the responsibility to find a sector where they could get their jobs back. The solution was found by governor Victor Cervera: maquiladoras, factories specializing in low-skill manufacture assembly lines. His administration informed entrepreneurs and companies about specific advantages: subsidized training for new workers (Baklanoff 2008), "land almost for free -thanks to expropriation of old henequen ejidos- and cheap labor -thanks to young former ejido members" (Baños, 2017, p. 170), together with a ban on workers to unionize (Alfaro, 2018).

The project, however, had a slow start. The first maquiladora was installed in 1981 (Ibid., 28) and six years later there were only 13 factories (although Baños states there were 14) employing 2,637 people (2017, 172). The real increase came until the end of the 1990s: maquiladoras went from 74 in 1999 to 109 in 2000. Differences exist between the figures presented by Alfaro and Baños, but the maximum number oscillates between 131 and 133 during the 2000-2001 period. According to Baños, the number of jobs created was 34,507 (2017, 173). Several researchers (Blakanoff, 2008; Baños, 2017; Alfaro, 2018) have concluded that such working conditions were, and are still, primarily affecting young women, who were preferred by the factories since many of them are focused on the textile sector.

In 2000 "the unemployment rate in Yucatán was 1%, and the development plans and reports painted a […] story where there was absolute confidence in a maquiladora present and a path towards the future" (Alfaro 2018, 26). However, workers earned an "average monthly salary of 2,300 pesos [91.4 euros of 2020], […] half as much as their counterparts in northern Mexico" (Baklanoff 2008, 98), with working weeks of 48 hours (Canto 2001, 78).

4.2.3 The Zone

The Special Economic Zone in the northern county of Progreso was announced in 2017. The project aimed to reduce poverty and inequality in the southeast (Animal Político 2014), under the assumption that Yucatán needed to boost economic activity to raise their quality of life. Again, growth was a presupposed target. The zone was planned to be a niche zone, focused in technological development and innovation (Forbes 2017), with an estimated investment of 2 billion USD and a potential for creating 30,000 jobs (Martin 2018).

Companies operating in the Zone would have the benefit of working within "a geographic area of the national territory, […] subject to a special regime of incentives, stimuli and

administrative facilities, among others" (AFDZEE 2017, 4). However, the SEZ in Yucatan, and in the rest of the country, did not succeed mainly due to the lack of support of current President Andres Manuel Lopez Obrador, who said "they were supposed to help, but they never did anything to help; They did business, bought land, and squandered resources" (Avila 2019).

Despite the difference in names, there are key similarities between the SEZ and the EPZ/maquiladoras (Alfaro, 2018): they primarily seek to benefit big companies while they only bring dubious changes into workers' lives: "working hours are long. […] The majority of workers are young, outsourced women. […] staff management is military-like, supervisors are arbitrary and wages are below poverty line" (Klein 2014, 249).
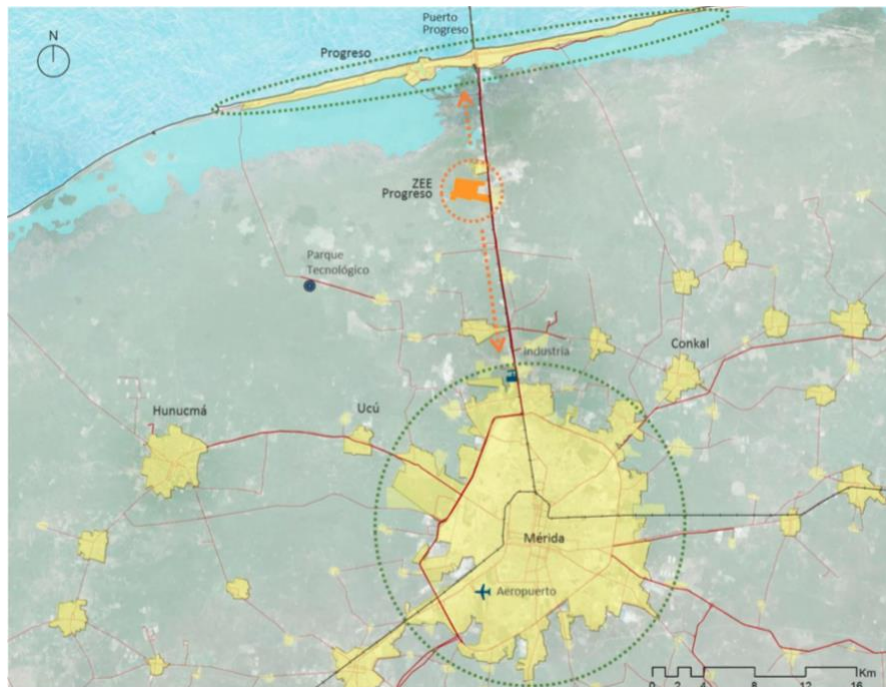

Figure 4.2. SEZ in Progreso. Source: AFZEE 2017, 7

4.3 The current megaprojects

Nowadays, the peninsula faces the presence of renewable energy, agribusiness and infrastructure mega-projects that challenge long-standing ecologies, biodiversity and social relations. They require large sums of money to be invested in areas and sectors of interest

for the government and the private sector and are deployed based on a top-down approach in which communities have little to no say in decision-making processes. They are still focused on promoting economic growth while concentrating the flow of income on a single actor, the owning company, whereby it is implied that benefits will progressively trickle-down to those working on the ground, or contributing to its supply chain.

4.3.1 'Renewables-from-above'

Yucatan is a place where the wind blows with little barriers for the most part of the year. The peninsula also has great availability of sunlight throughout the year. It is therefore a place with the necessary geographic conditions to host both wind and solar parks, which construction was made available in 2014, when Mexican Congress passed an energy reform (Morales and Arvizu 2014).

Until 2018, the Mexican Government had granted 22 permits to both private and public companies to develop renewable energy projects in the state, with 12 wind parks (Table 4.1) and 10 solar parks (Table 4.2) (Sánchez and Reyes 2018). The awarding process took little notice of the fact that many of the lands awarded were either *ejidos* or indigenous territories. This has led to companies enforcing land grabbing processes through manipulation, deceit and corruption, as well as to resistance from people who do not want to sell their lands or who want to get a fair price for them. The number of awarded projects has kept on rising, and in 2019 NGOs Geocomunes and Articulación Yucatán located and georeferenced 17 wind parks and 12 solar parks (see figure 4.3).

Table 4.1. Wind energy projects in Yucatán. Source: Geocomunes

Name	Status	Company	Date	Installed Capacity (MW)
Dzilam Bravo	Operating	Viva Energía	2014	72
Sinanché I y	In construction		2016	151

II		Fuerza y Energía Limpia de Yucatán and Fuerza y Energía Limpia de Kukulkán S.A. de C.V.		
Tizimin	Operating	Avant Energy	2016	86
Chacabal I	In construction	Aldener	2014	30
Chacabal I y II	In construction	Aldener	2014	30
La Peninsula	Suspended	Grupo Marhnos	2016	60
Chicxulub I	In construction	Elawan	2018	71
Kabil	In construction	Aldener	2018	68
Cansahcab	Suspended	BHCE Yucatán 1, S.A.P.I de C.V	2016	250
Kimbila	In construction	Elecnor	2016	159
Tunkas	In construction	Iberia Group	2017	70
Temax	In construction	Fuerza y Energía Limpia de México, S. de R. L. de C. V.	2016	152
Progreso	In construction	Viva Energía	2017	90
Chicxulub II	In construction	Elawan	2018	88
Gesan	In construction	Gesan México	2018	130
Ampliación Tizimin	In construction	Avant Energy	2018	76
Panabá	In construction	Vientos de Panabá S. A. de C. V.	2018	252

Table 4.2. Solar energy projects in Yucatan. Source: Geocomunes

Name	Status	Company	Date	Installed Capacity (MW)
Mi Granja Solar Telchac	In construction	Mi Granja Solar Telchac S.A.P.I de C.V.	2012	10
Kiin (Ticopó)	In construction	Kiin, S. A. P. I. de C. V.	2017	10
Justicia Social	In construction	Alter Enersun (Cristian Lay Grupo Industrial)	2017	30
San Francisco	In construction	Solarvento Energía, S. C.	2016	6
Sucilá	In construction	Basol de San Francisco, S. de R. L. de C. V.	2016	22
Ticul B	In construction	Actis Energy	2016	104
Ticul A	In construction	Actis Energy	2016	207
Kiin	In construction	Kiin, S. A. P. I. de C. V.	2017	20
San Juan	In construction	Basol San Pedro, S. de R. L. de C. V.	Unknown	16
San Ignacio	Operating	Jinkosolar Investment	2017	22
Oxcum - Umán	In construction	Suman S.A.P.I de C.V	2018	154
Yucatán Solar	Suspended	Jinkosolar Investment	2016	7
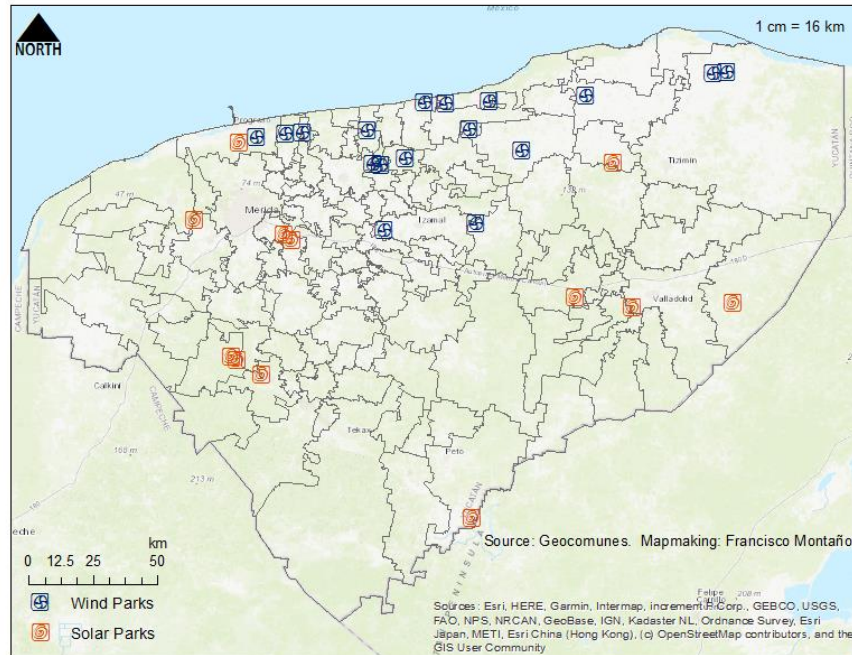
Figure 4.3. Renewable energy projects in Yucatan

Renewable energy projects are aimed at generating electricity to sell to the public distributor, the Federal Electricity Commission (CFE) or for self-supply, which is the case of big corporations like brewing, retail, cinemas, airports and real estate companies.

4.3.2 Agribusinesses

The peninsula is part of an agribusiness complex where industrial farms and GMO soy plantations work closely to feed consumers in places as far as China and South Korea (Moguel 2016). Farms operate throughout the whole state, while plantations are located mostly in the area of Los Chenes, Campeche. Farms are a threat due to the water extraction and water pollution they cause, while plantations, through the use of pesticides, also pose a threat to local clean water supply and biodiversity.

Today, there are 228 industrial farms in the state. 147 are active, while the other 81 are either suspended, out of business or getting their operation permits. Out of those 228, 134 are focused on chicken and the remaining 94 on pigs (Figure 4.4). 155 of those farms were

created in the year 2000 alone, while 13 were created in 2015 and only 3 in 2017. 158 farms have between one and ten pens, which means they can be rather small farms, especially when compared to the 27 farms that have between 21 and 76 pens.
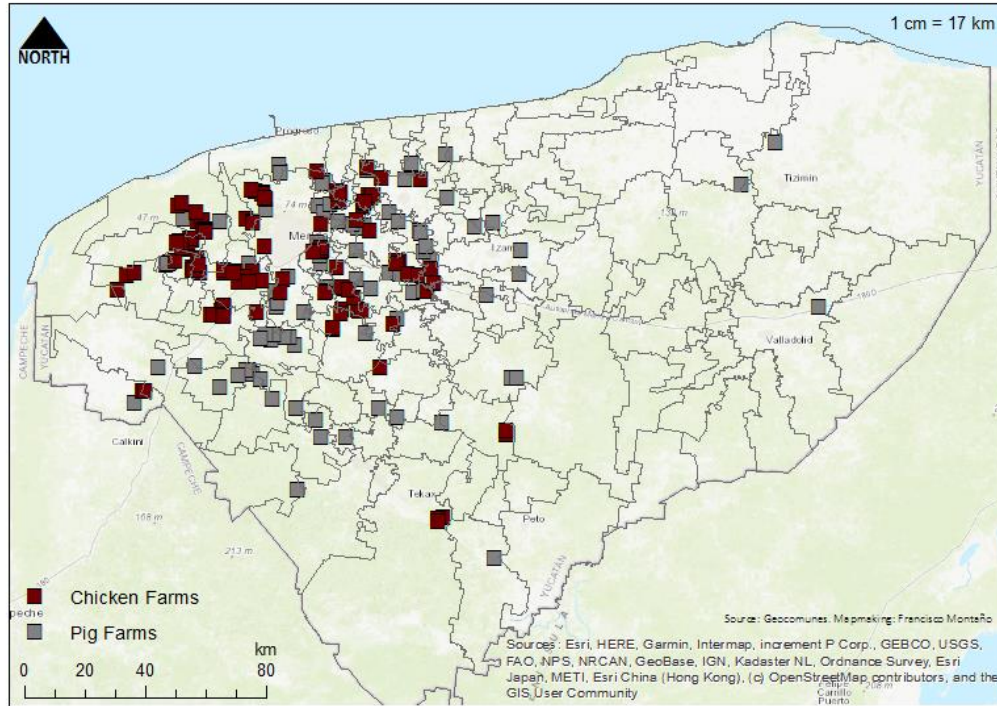
Figure 4.4. Pig and chicken industrial farms in Yucatán

4.3.3 The Maya Train

The project consists of a tourist and cargo train that will have 18 main stops throughout the southeastern states of Chiapas, Tabasco, Campeche, Yucatán and Quintana Roo. Around each stop there will be a development pole where tourists will find hotels, restaurants and other services, while inhabitants, the project goes, will find jobs, schools and hospitals.

Yucatan will have six stations, with four development poles, since the station in Mérida will not have one, and the train station in Progreso will only be for freight arrival to shipping (Figure 4.5). The development poles are not a new concept: it was a feature proposed in the SEZ in Progreso since 2016. The poles also imply a land use change whereby large areas

next to the stations are planned to become urban areas instead of the current rural villages.
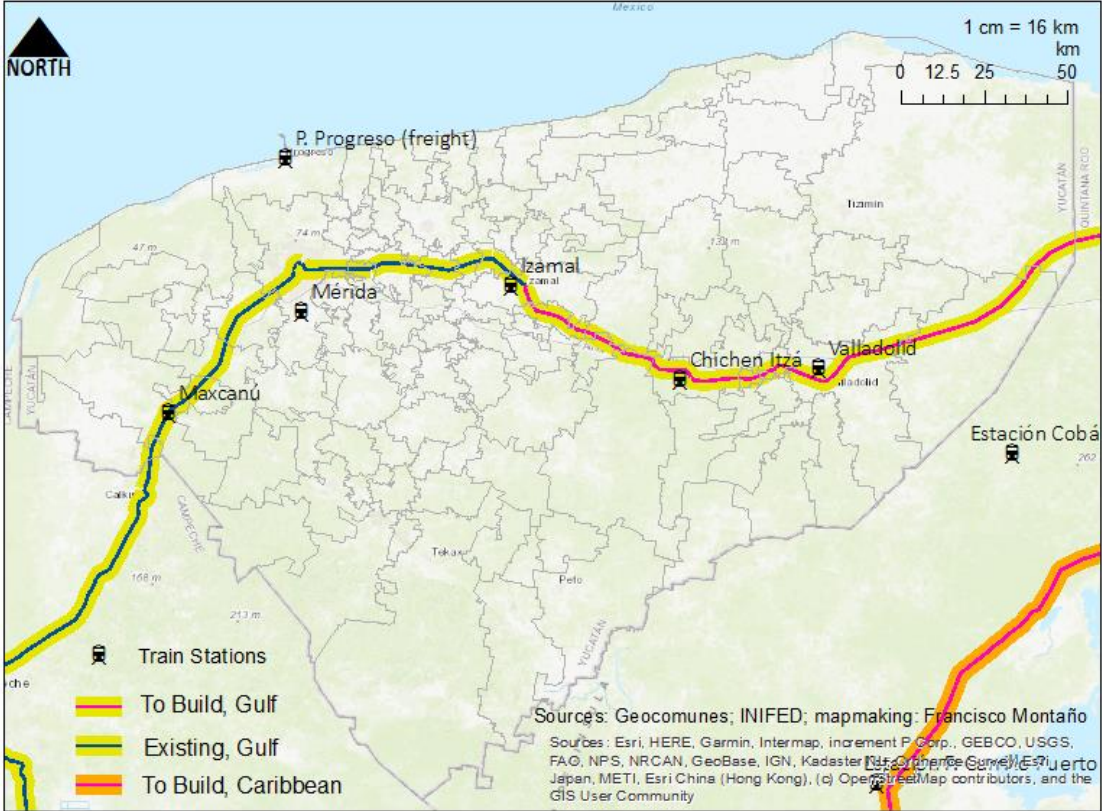
Figure 4.5. Preliminary route for the Maya Train in Yucatán

The Train will spread tourists coming to Cancun throughout the whole region and facilitate the transportation of goods produced in the region (Rangel 2020). The Train's operation and success as a megaproject is important to articulate other smaller megaprojects that are now oriented towards a modern, open, globalized economy in which local inhabitants know the role they will play: the same role many Yucatecans and people from nearby states play in Cancún as waiters, hotel maids, taxi drivers or informal, self-employed, craftspersons who work for low wages.

Together, the past and current mega-projects reflect a history of industrialized development that has long been imposed in Yucatan from outside, since colonial times and

up to the present day, in the name of improving the lives of the inhabitants of the peninsula through economic growth and a Western notion of development. The resistance against several of these mega-projects, and in defense of their own resources and ways of inhabiting the territory, will be addressed in the next chapter.

5. Activist resistance and alternatives in Yucatan

The complex geographical layout and operations of several kinds of mega-projects in Yucatán has also been met with a complex articulation of activism to resist them. I thus present the main learnings and lessons from the fieldwork conducted in Yucatan during January and February of 2020, among activists opposing mega-projects like renewable energy parks, soy plantations and pig farms.

The themes that support the analysis of the interviews are four:

1. *Awareness of effects* shows the knowledge activists have about the damage of mega-projects in socioenvironmental and ecosystemic terms.
2. *Strategies to resist* shows the pathways they take for achieving specific goals.
3. *Critique to development* explores the links they draw between mega-projects, the Growth Programme and development models.
4. *Alternatives to development* addresses the three main options to mega-projects they have come up with over time.

I will elaborate on my findings on each of these themes below, drawing on the empirical material and connecting it to theoretical references.

5.1 Awareness of effects

The reasons of activists to oppose mega-projects are based on their awareness that, by and large, mega-projects bring negative consequences for basic areas of their lives where their

well-being is compromised. Given the relation drawn by activists between social implications of the alteration of their natural surroundings, the effects are divided into (1) socioenvironmental, where activists identify a social consequence in the use of natural resources, and (2) ecosystemic, for those negative effects impacting non-human life.

5.1.1 Socioenvironmental

According to Rodrigo Patiño, from Articulación, "impacts [of mega-projects] are not given by the kind of technology, but their location in relation to communities and resources". In that sense, people's interaction with infrastructure development sites is relatively easy and therefore modifications to local environments and negative effects are experienced in a very direct way. Deforestation, quality and quantity of water supply and land dispossession are the main negative effects that mega-projects imply for local communities, according to activists.

Geographical closeness also implies cultural closeness in this case: "*Mayas depend on the forest for food, wood, medicinal plants, rituals and offerings, so when they deforest hundreds of hectares very close to communities, that's the death of the town*", says Martha. "*The solar park in San José Tipceh is located less than 100 meters away from the town and required the deforestation of 700 ha*", says Jazmín. Rodrigo Llanes talks about deforestation of wind parks and GMO soy plantations: "*The wind park in Ticul, where the community is in the middle of the park, requires the deforestation of 600 ha. In the south of Yucatán, 3000 ha were deforested in 2019 to grow soy illegally*".

In terms of water supply, the problem is similar. There are both issues of pollution of the water supply and its over-use. Due to the karstic composition of the vast majority of the state's soil, the aquifer is relatively close to pollution sources in the ground, which compromise its quality. Projects like pig, cattle and chicken farms or the Modelo Brewery in Hunucmá, use industrial amounts of the liquid. Carlos Escoffié was the attorney of San Antonio Chel, a community where a cattle farm was polluting water: "*Many communities in*

the state don't have sewage system nor running water, but they use the underground water network to get their water supply ". According to research cited by him, 70% of the cenotes in the state are polluted (Escoffié 2020). For Gabriela and Clemente, pig farms also use heavy amounts of water since they have to shower the pigs in order to prevent heatstrokes. Aurelio talks about water pollution caused by GMO soy plantations: "*Assessments of water quality in the peninsula show agrochemicals in drinking water and they are also present in breast milk, semen and urine*" Father Raúl, from U Yits Ka'an agroecological school even cites the study of the Yucatán University that made such finding (Polanco 2015).

With regards to land dispossession, Martha says "*it has always existed, but it got worse when local elites found out mega-projects were coming. They started buying [land] really cheap from locals*". Pedro Uc makes rough calculations: "*If we think of the* [Maya] *train, it will require 15,000 ha once it's finished. If we sum up the land required by renewables, it's around 10,000 ha. If we talk about menonites* [and the soy planted by them*], it's 20,000. If we talk about pig farms, the problem is in terms of land, smell and water*". Aurelio stresses the importance of land access in epistemological terms: "*if people have no access to land, their knowledge does not have a playground to replicate and be passed on to their kids*".

While some activists tend to specialize in certain kinds of projects, it is important to note that, overall, they identify common resources endangered by the construction of mega-projects: collective forests, local water sources and access to land as a livelihood source. They also perceive a high degree of interconnectedness in the peninsula and its resources: they understand that water's pollution travels through the underground karstic networks, they know land dispossession and deforestation means lack of access to collective, productive land. In that sense, this approach, through which phenomena like deforestation are linked to very practical consequences for everyday life, is aligned with research that suggests that environmental movements can build wider, more effective alliances when

they stress the direct consequences of ecosystem-degrading, pollution or heavy resource extraction for the daily life of people (Di Chiro 2008).

Activists also identify how mega-projects benefit from practices that have existed for a long time in Yucatán, like land-grabbing whereby peasant sectors have seen their land diminished by systematic, institutional, legal dispossession (Yam 2011). Their environmentalism is not a matter of protection of their properties or focused on depoliticized demands about nature, but infused with awareness about practices that compromise quality of life for people whose livelihoods depend on access to land and such nature. Such features are consistent with studies of environmental movements in other contexts where environmental activism is also linked to exercises of citizenship through which activists express their rejection of neoliberal approaches to development (Dueholm 2012) and their defense of specific identities and lifestyles (Zanotti 2015).

5.1.2 Ecosystemic Impacts/Effects

The main ecosystemic effects mentioned by activists refer to the inappropriate location of wind parks, the properties of the karstic soil and the effects of deforestation. Both Martha and Jazmín agree that wind parks in the northern part of the state can compromise wildlife: "*Wind Park in Tizimin is bordering a natural reserve, as well as Dzilam's which has a conservation area. Wind parks compromise birds and bats populations*". "*They all contribute to pollination and thus biodiversity in the peninsula*", says Martha.

For Carlos, deforestation produces heat islands, whereas for Gustavo, it triggers local feed-back loops: "*If there are no trees, there is no evapotranspiration, which affects rain frequency and recharge of the aquifer, but it also endangers existing forests in times of drought and animal populations*". It is worth noting that, while activists know of ecosystemic effects where humans are not directly affected, those are not as many as socioenvironmental effects, for which they have clarity about the negative consequences regardless of the kind of project.

Issues like the ecosystem fragmentation caused by the Maya Train (Oropeza 2019) or its effects on feline species (García 2020) are not argued as important consequences of infrastructure development, regardless of activists being familiar to them. In the interviews conducted, there is, above all, an emphasis on the relations of humans with their environment, and the way they are modified by mega-projects, even during their construction stages.

Both socioenvironmental and ecosystemic effects are examples of the negative externalities that mega-projects, as part of productive capitalist processes, cause in Yucatán. The negative costs of production, like polluted water, diminishing forest cover or presence of pesticides in breast milk, are not included in market prices and are inherent to the neo-extractivist and extractivist logics (Brand, Boos and Brad 2017) and, in fact, to capitalism in general (Hornborg 2016). The accounts from activists and evidence presented shows both the destructive material nature of mega-projects as well as the informed knowledge that activists have on the detrimental effects of these forms of development. Likewise, these effects reflect how mega-projects, policies pursuing economic growth and goals of development are based on destructive practices that, while harmful for large sectors of the society, show their worst effects in the lives of underprivileged people and are clearly pinpointed by activists.

5.2 Strategies to resist

Activists engage in resistance strategies to raise awareness, stop infrastructure development or try to influence legislation so that the current and the future mega-projects are stopped, or at least there are clear regulations in place to ensure an equitable distribution of natural resources. Below I describe three of the main strategies utilized by activists and examples of their practice.

5.2.1 Outreach and communication

Activists in Yucatán have a very active communication strategy through which they relate to their key audiences: communities, government, other activists and society in general. They communicate through different methods like community assemblies and meetings, public events, press releases and digital media posts. By doing so, they increase their presence in public space and ensure their messages reach a wider audience. Organizations like Múuch Xíinbal (MX), Equipo Indignación, the Network of Resistance and Rebellion Jo' (NRRJ) or the Citizen Council for Water in the Yucatán Peninsula (CCWYP) have a consistent digital communication, send out press releases and organize press conferences routinely. Furthermore, academics like Rodrigo Patiño, Rodrigo Llanes, Jazmín, Gabriela or Aurelio, participate in public events as speakers and write byline articles in newspapers, increasing their exposure. They do so first, because many communities don't know their rights and can therefore be easily manipulated and second, because of the low level of transparency with which government and companies implement mega-projects.

Múuch Xíinbal, for instance, aims at spreading the word about mega-projects in order to strengthen self-determination: "*We want people to follow their own process; even if late, to understand their history and situation and decide what to do with it*", says Pedro Uc. Besides informing the communities about their history and their rights, new mega-projects pose an additional challenge: "*Defense of the territory has had to learn things about environmental pollution that were not present before*", says Aurelio. This is partly the reason why academics like him have proven useful for local activism: they have managed to leverage the amount and nature of scientific information about mega-projects.

Before the surge of activism, "*there was almost no information* [available]*, EIAs were public but it was hard to get them*", says Rodrigo Llanes. The lack of information is partly explained because "*renewable energy projects are top-down planned, with technical considerations and without a specific location*", says Rodrigo Patiño. Once communities are familiar with their political and legal rights, the stages where they can get in touch with

companies and their projects, like the Public Information Consultations, interaction can be full of technical language that only specialists can understand. That's another reason why the contribution of academics is important: to be gatekeepers of the information and validate the knowledge held by communities about the damage of the project.

Outreach and communication, however, are not enough to turn people against mega-projects: "*Sometimes there are very complicated conflicts within communities, between people who want them and people who don't*", says Carlos Escoffié. "*Even in communities like Homún [..] people justify mega-projects because they will create jobs*". This speaks about how strongly communities are embedded in the global economic system where they are both dependent on jobs in mega-projects but are also influenced by the development discourse promoted in this agenda. The support of communities to mega-projects shows the extent to which "science and expert discourses such as development produce powerful truths" (Escobar 2012, 20) that circulate at local levels through images and languages that normalize priorities like job creation, business competitiveness or consumerist lifestyles.

Regardless of the position of communities towards mega-projects, by using several communication strategies to inform about their effects and the reasons why they are against them, activists politicize issues like environmental protection, mega-projects and alternatives to development. In that sense, they become resistance by expanding political space so that people can emancipate with knowledge and empower themselves to participate in contesting forms of domination, should they desire to do so.

5.2.2 Amparo trials

While community consensus is desirable, stopping mega-projects via legal means does not require it. The stopping/closure/end of mega-projects is mainly conducted through legal trials, with amparo as the main legal tool. Amparos are a tool of the Mexican legal system designed to protect constitutional rights in cases where there is a risk of irreparable, permanent damages, as is the case of many mega-projects. In Yucatan, amparos have been used against wind and solar parks, farms and the Maya Train.

Amparo trials do not need to be filed by communities, but can rather be used by individuals. However, to increase their traction, activists organizations collect signatures among affected communities who reject mega-projects and then present it together with the amparos against them. While their use is situated within their own power dynamic where judges make political considerations oftentimes fitting development goals and economic growth policies, amparos have still been an important mechanism for the environmental movement in Mexico.

Opposition, however, does not always mean people completely reject mega-projects: "*There has been a lot of conflicts for land, but in no case it has been so the land is not sold; instead, it has been to improve the price value*", says Carlos Escoffié. On the other hand, environmental cases require collective articulation, which rural and indigenous communities already have: "*when legal advice comes in, they already have a coherent narrative, a list of priorities, gathered information in terms of pollution or negative effects*".

The defense, has its limits: "*judiciary branch is only a tool for defense, not a solution*". The roots of the problem is that the executive power keeps making it easier for companies to install their megaprojects. Judges' rulings are not issued in a vacuum, but in a political context where "*judges are afraid of ruling progressive decisions that could be taken back by their bosses*". Carlos is certain that the rulings of judges about mega-projects are most of the times political decisions. In that sense, the predominance of macroeconomic thinking as policymaking criteria, could be a powerful influence by the philosophy of the Growth Programme when ruling for or against mega-projects.

The support of the legal Mexican system is in line with the adoption, by national governments and supra-national organizations, of development objectives achieved through economic growth as described in chapter two. In the last state administration report, "*one of the big news was that the EIA would only take 80 days to be processed,*

when it took 150 days before", says Gabriela. A slight precision is needed: EIAs used to take 365 days; Governor Mauricio Vila took that down to 69 working days (Llanes 2020), but the reasoning is the same: in a state with 228 industrial farms, "*it is unsustainable to keep chasing pigs [or cattle, or chicken, depending on the case] throughout the state with Amparos*", says Carlos.

Given such a political context, cases usually follow two arguments: "one, the precautionary principle […] and the lack of indigenous consultation" which is protected by international law, I was informed by Gabriela. In here, the indigenous consultation is the weakest of the two, according to Carlos Escoffié. Granting a suspension due to the lack of consultation "*doesn't mean the project is absolutely suspended, but only that the company needs to conduct the consultation. […] The consultation is a defense mechanism, since environmental criteria are very weak*" (Escoffie 2019). The fact that activist lawyers plan on the relative dismissal of environmental rights, makes evident the low importance the Mexican legal system gives to the right to a safe environment, granted in the law since 2011 (J. Morales 2013). It is interesting to note that the right to a clean environment is weakly defended by the Mexican legal system, while it is one of the core foundations of alternatives to development like *Buen Vivir*.

On the other hand, there needs to be an emphasis on the positive influence of international law through the Agreement 169 of the International Labor Organization that enforces the right to an indigenous consultation in cases where mega-projects are installed in indigenous areas (ILO 1989). However, at a national level there are conditions of legal practices that turn the right of consultation into a matter of procedure rather than substantive justice.

5.2.3 Lobbying

While it is important to highlight that some activists, like those belonging to the NRRJ and MX, are against engaging in dialogue with executive and legislative officials, other activists

take that option to put forward policy proposals. However, they do so from different standpoints and with different outcomes. Because of the limitations of amparo trials to stop mega-projects, lobbying is seen by some activists as a promising pathway to influence government actions from a structural stance.

Activists employ different lobbying approaches that can result in either gaining traction outside the activist sector or, on the other hand, compromising activists alliances. In that sense, the cases where lobbying with government agencies has been conducted with previous consensus and a democratic approach to dialogue where everyone is given similar chances of participation, result in productive engagement where activists collaborate enthusiastically. This, for example, is the case of the Citizen Council for Water in the Yucatán Peninsula (CCWYP), which has engaged in the national citizen lobbying campaign to reform the National Water Law. Specifically, the CCWYP is pushing for the inclusion of the particularities of karst soil for water management in the peninsula, as well as supporting the proposal "Agua para Todos, Agua para la Vida" (Water for All, Water for Life).

Another possibility for lobbying in this context is the approach as a single organization that invites policymakers and officials to events where they present policy suggestions supported by scientific evidence. Such is the case of Articulación Yucatán, a group of scientists mapping renewable energy projects in the state and their consequences. While they collaborate with organizations who are against lobbying, like the Network of Resistance and Rebellion Jo', they have parallel, independently-organized events where they lobby for the adoption of the Strategic Environmental Assessment, an integrated, comprehensive evaluation of which projects can fit a given territory, considering cultural conditions and local land uses.

"We had been promoting the Strategic Environmental Assessment (SEA), so the State Ministry of Urban Development and Environment invited us to organize workshops about

the SEA. We signed an agreement and did the workshops. […] It turned out that they were scared by the results: it implies a lot of work, […] changes in legislation, defining bottom-up development models", says Rodrigo Patiño. In that regard, lobbying by activists is a fight against the government's traditional way of implementing infrastructure projects that usually rely on the private sector's work. Regardless of its success, this kind of lobbying is done by scholars-activists like Rodrigo Patiño and Jazmín, upon the basis of their scientific work, "knowledge, technical skill and professional credibility" (Frickel 2004, 465) as scientists. In that sense, the participation of such sector in activism strengthens the arguments of resistance against mega-projects, often justified with technical reasons, within public space.

On the other hand, lobbying with the government can be problematic in certain contexts where the negotiations with the government can interfere with processes of self-determination and local, collective decision-making. The case of Ixil, where Yansa, a development project trying to install community-owned wind parks, negotiated with the government through its representative, Sergio Oceransky, to organize a forum with federal and state authorities, is a good example of the latter.

By analyzing project concessions awarded by the government, Articulación found out the project of a wind park in Ixil. The organization requested a Public Information Consultation to the government, so that company representatives explained, in an open hearing, what the project was about. MX recorded the session and shared it with the community. In the process, activists found out the wind park was situated in land that had been stolen from the ejido, and started the paperwork to claim it back (Gayou 2019).

After the community recovered its land, Sergio negotiated with the agrarian attorney and other government officials to come to Ixil to, supposedly, listen to other communities which, like Ixil, suffer from land dispossession. NRRJ, MX and Articulación told Sergio he had made decisions without consulting them with the organizations nor the Ixil assembly.

However, the community decided to carry on with the idea. The forum was set to happen on October 12th, 2019. "*I wanted to cancel the forum in Ixil, but Sergio refused, since he had invited federal officials, but that was not the goal, the goal was for Ixil to share its struggle*", recalls Pedro Uc. As expected, rather than an event where authorities were questioned and people expressed their struggles, the event was hijacked. "*The Attorney appointed Sergio representative of the communities of Yucatán. And he accepted*". Sergio, a Spanish citizen, was unofficially put in charge of representing rural and indigenous communities in Yucatán.

Cases like this show the presence of a number of historical variables present in a single case where lobbying against mega-projects can become problematic: first, the top-down approach whereby the community would not even be informed about land acquisition to build a wind park, was it not for activists' work. Second, the acquisition of the land through dispossession dynamics, present in Yucatán since the 19th century. Third, the participation of activist organizations with a strong heritage from movements like the zapatismo, like NRRJ or Múuch Xíinbal, which promote autonomous governance strategies and disregard formal political institutions. These dynamics also show the colonial strain present in some development initiatives where power imbalances exist between the organizations implementing them and the communities supposed to benefit from them.

Along these lines, it is relevant to highlight that lobbying approaches can interfere with processes of self-determination and collective decision-making of communities, especially when done by organizations like Yansa, with clear development goals that, while well-intentioned, embed traditional notions of development where "the Global South is [...] portrayed as a place waiting for salvation from the Global North" (Bandyopadhyay 2019, 6). Even when advocating for socially just projects, the distortion and hijacking of traditional processes and voices, together with the savior complex in some NGO's is in direct contradiction of *Buen Vivir* and Degrowth principles (Dengler and Seebacher 2019).

5.3 Critique to development

Besides the knowledge of the negative effects brought by mega-projects and the different strategies they coordinate to raise awareness about them, suspend them or diminish their impacts, activists also formulate criticism to the development model they entail. In this section, those critiques focus on the implementation of mega-projects by government and private actors, how companies behave and the model of development that they are based on.

5.3.1 Implementation of megaprojects

Besides the socioenvironmental negative effects, activists also point at political issues in the implementation of mega-projects that are adopted during the awarding and construction of mega-projects. They refer mainly to the actions or omissions through which government agencies and officials validate mega-projects that communities know very little about. Thus, by defining the conditions of their implementation, authorities also play a role in how communities relate to massive infrastructure development. The top-down approach, lack of transparency and accountability are the issues that activists identify as most problematic in the implementation of mega-projects.

About the top-down approach, Rodrigo Llanes states renewable energy projects are planned only under technical considerations, without a specific location and no concern about local contexts. "*Authorities have a technical perspective, they do not care about opinions of communities about bees or the forest, it is only valid what biotechnology says*". The negation of local knowledge by authorities based on a top-down, technical approach, contributes to the processes of epistemic violence that mega-projects are part of.

The top-down approach, with little interest for the input of local context, also makes sense if the projects are planned to function at a global scale. Gabriela stresses that, in the case of pig farms: "*the whole argument of the state's Ministry of Economy is that we are exporting. And in macroeconomic terms, it looks like it works*". The scaled-up view of development

through macroeconomic indexes obscures and neglects local experiences and effects, especially when considered only in financial and economic terms.

Martha, Rodrigo Patiño, Jazmín Sánchez and Rodrigo Llanes all point to the lack of transparency with which mega-projects progress during their early stages: "*There's not a logic in how the information about the projects is communicated*", says Jazmín. Rodrigo Llanes says "*EIAs were hard to get, and many were not public*". From a community perspective, Martha says people usually find out about them once the companies have bought land and started building.

Related to transparency, the lack of accountability refers to the light controls that companies need to comply with from a bureaucratic point of view. Both Gabriela and Rodrigo Llanes point at how EIAs used to take 365 days and Governor Mauricio Vila took that down to 69 working days (Llanes 2020). Gustavo refers to how his research department was asked to define land uses in the northern coast of the state and later the government did changes to their conclusions to facilitate the installation of mega-projects close to natural reserves, like Tizimín and Dzilam. Martha highlights that authorities allow projects advance, even if an indigenous consultation has not been conducted and Pedro Uc complains about the government accepting documents manipulated by companies in order to reflect acceptance of the projects: "*Can't this government tell companies not to give people blank sheets of paper to sign and then turn them into proof of consent?*".

The features of mega-projects implementation that activists care about, show signs typical of neo-liberal contexts where globalized economic activity is said to work best as an unregulated market, where accountability is perceived as a restriction to wealth generation and information about top-down mega-projects also flows down slowly to activists and communities on the ground. "All initiatives of megaproject planning and construction constitute an urban response to the logic of development, competitiveness, neoliberalism

and globalization" (del Cerro, Megaprojects, Development and Competitiveness: Building the Infrastructure for Globalization and Neoliberalism 2019).

5.3.2 Influence and role of private companies

The actions of companies owning and developing mega-projects are described by activists in a way that highlights the methods through which they use their power to influence decisions against mega-projects. Lobbying, threatening and public opinion pressure are the main approaches against activist resistance. Regardless of the approach they adopt, the main goal perceived by activists is to exert pressure on specific people in order to lift suspensions, weaken resistance or spin media narratives in their favor.

In the case of lobbying, Rodrigo Patiño and Jazmín refer to a legislative attempt in 2015 to change land use in order to increase regulations for renewable energy projects. The private sector lobbied against it and it was cancelled. A similar situation is told by Rodrigo Llanes, during the judicial process to ban GMO soy: "*It was very clear that authorities prioritized Monsanto in the trial. [Whenever] they filed any legal resource, the answer was immediate, but if communities wanted to do something, they'd argue a lot of excuses*". However, while private lobbying is widely known to be key for the operation of companies in neoliberal contexts, it is a legal practice. Threatening, on the other hand, is not.

Pedro Uc, from MX, received a death threat due to, suspectedly, his opposition to the solar park Yucatán Solar, in Valladolid, owned by the Chinese company Jinkosolar, located near the communities of Ebtún, Cuncunul and Dzitnup, and justified by employing locals and promoting economic growth (Jinkosolar Investment 2016). Pedro and Múuch Xíinbal collected signatures in these three communities to file an amparo due to the lack of an indigenous consultation, which was granted by the judge and the project had to be suspended.

"On December 10th, 2019, there was a hearing during which the company thought the suspension was going to be lifted, but MX filed other resources and the suspension was kept in place. On December 16th I got the death threat".

The case had another threat: Goyo, a representative of the communities that filed the amparo, got threatened by "*the commander of the Gulf Cartel, who told him to stop doing activism*", says Pedro. While this research has not an actual method to prove the source of those threats, it is significant that resistance to mega-projects can become a threat to the life of the people who oppose them. In February, 2020, Pedro had special police protection and kept receiving calls from the representative of Jinkosolar in Latin America "to meet up for coffee".

Another approach through which companies exert pressure on suspended mega-projects is highlighted by Clemente May, member of the Kanan Ts'ono'ot cooperative: spinning media narratives through media corporations owned by the same businessmen. Clemente is fighting the installation of a pig farm that came to Homún "to boost economic growth and give jobs to locals", according to the Environmental Impact Assessment (PAPO 2017, 177). It has been suspended due to an amparo, filed by Indignación, arguing the violation of the right of local children to a safe environment. "The owners of grupo PAPO, the pig farm company, also have shares in grupo SIPSE, a local media group, so they publish information in favor of the farm and criticizing activists", he says. Digital media outlets like Novedades, owned by SIPSE, argue that activists misinform the public (Novedades Yucatán 2018) and the installation of the farm does not damage the environment, since it utilizes high-end technology to process waste (Hernández 2018).

By questioning the validity of people's claims and disregarding local alternatives to development, grupo PAPO ignores Homún's struggle and limits the participation of locals in the economy to a top-down model. It is worth here to remember that the unifying character of development -the notion that there is only one way towards a good life-

violently disacknowledges historically-shaped processes and situations lived by communities in the Global South.

These three approaches of companies have in common the exercise of power enabled by greater access of companies to economic, legal and political resources. While some of these approaches are legal, others are not, and that is meaningful in a context of a democratic country with an aspiration to have an established rule of law, like Mexico. Regardless of the source of death threats to activists, they create a social and political atmosphere where dissent and conflict about mega-projects can endanger people's lives. In a country like Mexico, where 499 attacks on environmental activists have been registered since 2012 (CEMDA 2019), the threats that come as a consequence of resistance are part of larger processes of systematic violence against people who challenge top-down mega-projects, part of the Growth Programme.

5.3.3 The model of development

Activists interviewed are aware of the connection between mega-projects as the start of the road to development, with economic growth as means to achieve it. They identify that mega-projects, regardless of the resource involved, are planned to promote a development model with which they do not agree. However, activists make distinctions between economic growth and development: the former is connected with immediate profits and environmental damage, whereas the latter is linked to whole lifestyle choices.

In terms if economic growth, Gustavo says "*current authorities […] think economic growth can continue indefinitely, but the resources of the peninsula are being depleted*". Carlos explains that "*people justify and normalize pollution in favor of economic profits*", and Rodrigo Patiño and Jazmín say renewable energy projects "*are now focused on economic growth, […] not environmental protection*". In that sense, they show support for degrowth of extractivism, and express a critique of technological optimism: "*We need to go back to a*

reduction in consumption. Reduction and efficiency, more than looking for a technology to save the planet".

As stated before, development critiques are expressed as a difference in values of what is deemed important for improving quality of life: "*The fundamental reason is we don't agree on the development model. For me, development is not having an Oxxo* [convenience store] *or a Walmart in front of my house. It isn't because there will be a ton of trash in front of my house in the future*", says Pedro Uc. "*Megaprojects are based on neoliberal development: accumulation of goods, to have money so you can be happy. […] It is a development that affects everyone: Maya and non-Maya*", states Aurelio. Father Raúl, in turn, expresses a complete rejection of the concept: "*For us, development is an obsolete word, because all forms of development imply degradation*".

The resistance against mega-projects, and the criticism towards concepts like growth and development is found in a context like Yucatán, where mega-projects have been present since the middle of the 19th century, structuring processes like institutionalized land-grabbing and labor and natural resources appropriation. As shown in previous chapters, these concepts are not new, but have been consistently present when social institutions like media of the government justify the need for such projects.

However, the development Yucatán saw from henequen and maquiladoras did not trickle-down as promised and instead remained almost exclusive for those sectors benefitting from appropriation and accumulation. In 2018, 40.8% (900,500 people) of the population in the state lived below the line of poverty, including 12.5% who lived in extreme poverty conditions (Coneval 2019). In 2014, Yucatán was the second state with the highest increase in inequality, going from 0.481 to 0.511 in the Gini Index, setting it as the fourth most unequal state in Mexico (Galindo and Ríos 2015).

By expressing their disagreement with these notions, activists engage in a process of conflict with the growth-based notion of development, its material consequences and their lifestyles portrayed as desirable. The rejection of those imaginaries creates a double-sided opposition: activist oppose the development of mega-projects because their effects are present and close to them. But they also oppose the very reason authorities and private companies argue as valid for installing them. On top of that, some of them create their own alternatives for improving their quality of life. The next section will address that topic.

6. Alternatives to development

Parallel to their rejection of mega-projects, growth and development, activists have also fostered their own projects, built from the bottom-up and encompassing lifestyles different to those proposed by development. Instead of romanticizing these alternatives, it should be noted that their emergence is complex, in a context of globalized resistance and with notions that resemble a pluriversal context, where "worlds that coexist today manifest historical influences of colonialism, capitalism, and associated sciences and institutions, while they simultaneously exercise visions, desires, and practices that move on different wavelengths" (Paulson 2018, 90-91). In developing them, some of these alternatives are part of a *Buen Vivir* process through which activists reconnect with indigenous philosophies and incorporate some of its principles to their collective lives.

6.1 Agroecology

Agroecology is embraced by priests Atilano Ceballos and Raúl Lugo, professors in the U Yits Ka'an agroecology school; by Minelia Xiu, Pedro León and Rudy Pérez, U Yits Ka'an students; by Cecilia Uh, former U Yits Ka'an student and founder of another agroecology school, U Neek Lu'um, and by Pedro Uc, who makes *milpa* according to traditional agroecological criteria.

Fathers Atilano Ceballos and Raúl Lugo became involved with agroecology through displaced people coming from Guatemala, who had been part of the base communities, a

key organizational figure of the Theology of Liberation, and initially taught agroecology to religious personnel in the parish of Tekit in 1994. After learning the essentials of agroecology, Atilano and Raúl were among the priests who started working with rural and indigenous communities to spread the agroecological method and later founded U Yits Ka'an. "*The school teaches three courses: plants and animals, agroforestry, and Maya culture, from the perspective of the defeated*", explains Atilano. Spirituality is also an important pedagogical axis: "*We call the winds, like we call a friend, so they come and help us alleviate the heat, but the base of spirituality is different for others, who might call the fire, or the water*".

During the first 10 years, the school received funding from German NGO Misereor, and later, they have had financial alliances with Heifer International and the Kellogg's Foundation, as well as academic agreements with the universities of Chapingo, Yucatán, Harvard, Turín, Tokyo. Such alliances have allowed them to launch projects like five integral farms in the state, where former students could harvest their own food and be part of the "Comerciando como hermanos" (Trading like siblings) fair trade network.
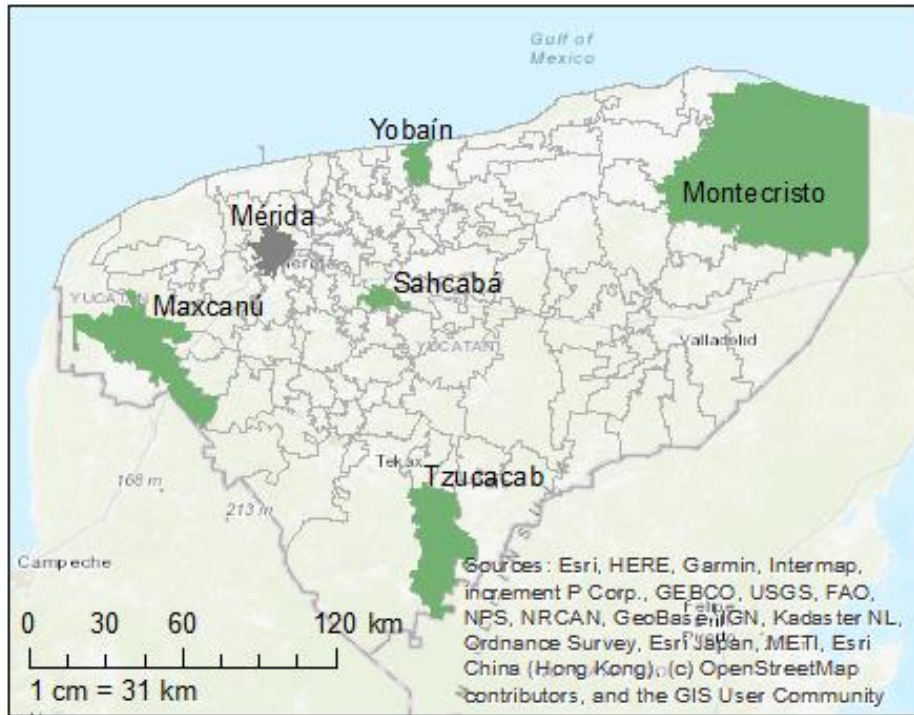
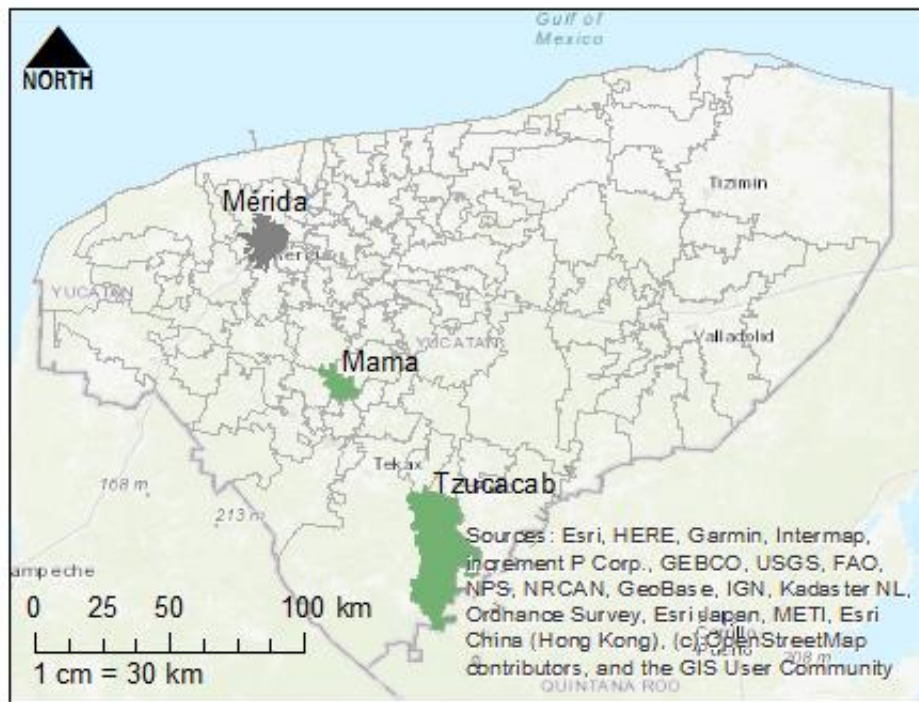*Figure 6.1. Original location of U Yits Ka'an integral farms*

Figure 6.2. Current location of the three U Yits Ka'an integral farms

The project was relatively unsuccessful: from five original farms, four disappeared (figure 5.1) and two more were created, in Tzucacab and Mama (figure 5.2), leaving a total of three, with only a few farmers in the network, it is still a source of income for Minelia Xiu, Rudy Pérez and Pedro León, who farm the land in Mama and Tzucacab. The surge of initiatives like U Yits Ka'an and its fair-trade network is influenced by larger social trends like the Theology of Liberation and agroecological principles, where farmers can "avoid living in a situation of social vulnerability as well as benefitting economically and socially" (Fernandes and Gotuzzo 2012, 1-2) from the application of such principles.

While these practices constitute an alternative against "the failure of top-down development" (Altieri and Nicholls 2008, 475), their success depends on more than sufficient yields: expectations of profit, collective dynamics between farmers, transportation mechanisms and customers' education and expectations are some of the issues faced by farmers participating in this scheme. Hence, small farmers like Minelia, Pedro and Rudy still need to bridge the geographical, temporal and cultural distances created by industrial production (Kremen, Iles and Bacon 2012) whereby consumers can remain relatively ignorant and passive about the growing conditions of their food.

Cecilia, however, remains critical of U Yits Ka'an approach:

> *Father Atilano thinks too much about the market and would like everyone to be on board with the idea, without looking at the conditions people have: many don't have land, so I have never asked for that requisite, only to put what you learn in practice*.

In U Neek Lu'um, Cecilia has organized the school so people with no ownership of big plots of land can have access to agroecological knowledge, in a school with a stronger emphasis on activism, given her engagement with local group Guardians of the Water in Hunucmá and the CCWYP in Mérida. Cecilia's approach can contribute to eliminating the

transportation need for some of the produce, educating customers on the labor needed behind growing certain products and thus promoting farmer-consumer stronger collaboration tactics. By operating outside of the market, Cecilia promotes the reproduction of socio-political and economic processes like the access and control over seeds, knowledge about growing processes and familiarity with agriculture, which spread the knowledge about agroecological practices.

From an indigenous perspective, Pedro Uc talks about the milpa as a pedagogical space: "*It is a school, because we learn the name of the flowers, […] we learn to distinguish different shades of green*". He shares how last year, he and his brother made three hectares of milpa: "*we keep harvesting squash […] only with the money of corn, that we sold in our town, we could eat for eight months, […] and we have beans, ibes, sweet potato, tomato, water melon. We call that Pach' Pakal, the garden of the milpa*". In such way, activists like Pedro attempt to rescue Maya knowledge that supported ecologies similar to the ones described in previous chapters through concepts like *K'ax* or *Ah Kinsa K'ax*, and that are at the core of *Buen Vivir* processes through which communities define what is important for their quality of life.

In that sense, Atilano and Raúl speak about the quest for *Buen Vivir* in Yucatán: "*We strive for Buen Vivir, although Maya didn't call it that way. Instead, Ma'alob Kuxtal is a way of standing up to an ecocidal, predatory society. Ma'alob Kuxtal means the good life, for a society where people can eat well and be together*". From their point of view, this is translated to strategies like strengthening the social fabric through the development of a community economy, where exchange of commons includes resources like seeds, and production is organized through peasant cooperatives.

While activists relate to agroecology from very different standpoints, they share the emphasis on the critical negotiation with epistemological frameworks: Cecilia emphasizes a decommodified approach that avoids the market as institution, Pedro stresses the links to

Maya knowledge, and Atilano and Raúl strive for *Buen Vivir*. In doing so, they highlight different part of their identities, and support the idea that no epistemology is disconnected from ontologies (Barad, Meeting the universe halfway: realism and social constructivism without contradiction 1996). In that sense, agroecology is for activists a space where onto-epistemological negotiations are registered.

Their actions are in line with research conducted in Latin America that shows that "the ability to reach, adapt, create, use and defend agroecological knowledge in their own terms is an exercise of autonomy" (Holt-Giménez 2008) for farmers. In doing so, activists form part of larger processes through which "cognitive practices of the classes, peoples, and social groups that have been historically victimized, exploited and oppressed" (De Sousa 2009, 12) are put to work and given visibility and credibility.

6.2 Cenote tourism

Cenote tourism is at the core of economic activities in the town of Homún (Figure 5.3). "*It is in the ring of cenotes, which are used by local people as means of subsistence […] people who go there also eats there and use transportation services*", says Gabriela. Doroteo and Clemente agree: "*there are about 250 guides, several family-owned restaurants, grocery stores and 200 mototaxis, 300 in high season*", all motivated by tourists coming to town.
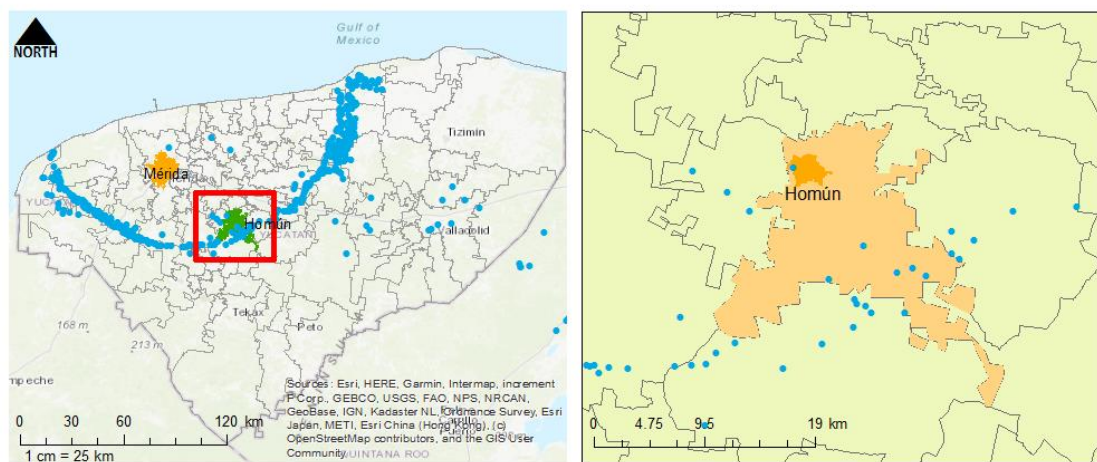

Figure 6.3. Location of the Homún county and town in relation to the ring of cenotes

For Homún, cenote tourism was the answer to a crisis. Homún benefitted from collective forests until the 1990's: "*When the forest was collective, there was enough for everyone, but then individual property rights were granted, under the administration of [Governor] Sauri Riancho, farming stopped being profitable and Homun was impoverished*", says Doroteo. He shares that conclusion with Gabriela, who speaks about land privatization bringing a steady decrease in harvests (Torres-Mazuera 2015). Cenotes were Homún's way out of poverty.

Thus, cenote tourism is the bottom-up alternative to a very specific top-down mega-project: a pig farm, owned by grupo PAPO, which in fact operated two months in the outskirts of town. A heavy user and polluter of water, the operation of the farm means a significant reduction in water purity and availability, needed to keep tourists coming. The town organized their resistance with the help of legal aid organization Equipo Indignación and created the cooperative of cenote owners *Kanan Ts'ono'ot*, The Guardians of Cenotes. They came up with guidelines all tourists must follow inside the cenotes: use floating vest and follow other safety rules that were shared with the tour guides, so they could inform tourists. They also started a programme to recover traditional practices in relation to cenotes: A *h'men* (shaman) is asked to conduct rituals and offerings inside of them, to ask for permission to enter it and they have a programme to share with tourists the importance of cenotes for Maya culture.

Doroteo Hau and Clemente May, members of Kanan Ts'ono'ot, occupy a privileged position in the local society: they were both Major of the county in the past and are private owners of land containing a cenote (Figure 5.4). Gabriela concedes "*they are a bit like local elites,* [cenotes] *are not community owned, but what option of development is better? This or a rich guy sitting who-knows-where?*".

As part of a former henequen region, Homún has depended on the other option of development: that which connects it, through the global economy, with other regions of

the world, which is an example of 'Globalization-from-above', that just as well left the town when henequen stopped being profitable. The pig farm is the Growth Programme's next try to connect it with other areas, namely those buying pork from the farms in the state. However, "disconnection [from the global economy] not infrequently presents attractive opportunities from poor people's perspectives" (Escobar 2012, 217). Such disconnection allows the community to decide for itself.

Figure 6.4. Inside of cenote Balmil, owned by Doroteo Hau

As an alternative to a mega-project, the case of Homún is complex because it portrays another pluriversal situation: a bottom-up alternative to development, created by a Maya community which, however, entails a relation where a local natural resource, cenotes, are commodified, in an industry like tourism, which has no ancestral roots. However, recognizing cenote tourism as a valid alternative also requires a realistic approach towards the 500 years of contact with the Western civilization that Maya communities have had: over time, it modifies what indigenous people do in relation to their environment. Traditional ways to relating to the environment are not to be found in untouched states, but negotiated to exist in the present modern, capitalist and globalized world.

Approaches in which indigenous peoples are thought to live within ideas that fit the concept of ancestral can become dangerous: Rodrigo Llanes points out that "*argumentation about indigenous rights bets a lot on ancestral traditions, but it's very problematic as well, because it doesn't consider practices like tourism*". Notions of how indigenous peoples behave also benefit mega-projects: "*companies sometimes refuse to organize indigenous consultation based on their own concepts of how indigenous people look like*", says Carlos. The traditional notion of the Indigenous category can prove harmful for people who, despite ascribing to it, have also been forced to negotiate their daily practices and identities with modern, non-indigenous cultures. It is important therefore not to view them as stuck in historical time, but as a product of struggles between traditional and modern encounters.

In terms of self-determination, the resistance of local people against the pig farm is largely based on the support for cenote tourism, a project built from the bottom-up, which depends on natural resource exploitation, but also on its availability and cleanliness. Cenote tourism, along those lines, is Homún's creative, more autonomous, practice - outside of the traditionally indigenous practices- through which people could renegotiate ethnic identities at local levels. With their own problems and challenges, both at socioecological and ecosystem levels, cenote tourism is a path for the achievement of autonomy and sovereignty for local people.

6.3 Community-owned mega-projects

Activists like Gustavo, Rodrigo Patiño, Jazmín, Martha and Pedro Uc have, at some point, backed the proposal of Yansa and Sergio Oceransky to install community-owned wind parks, which has not been successful so far.

The Yansa Group's main organizational structure is based on The Yansa Foundation, registered in the US, and the Yansa Community Interest Company, registered in the UK *(Oceransky 2010)*. The initiative is based on a mechanism through which the Yansa Foundation, in previous agreement with communities, would fund the infrastructure

development of the park, which, once finished, would be operated by the community, who would have freedom to decide its way of operation (Ibid). The electricity generated would be sold to the CFE's power grid. "By selling the energy to the national grid, Yansa's approach establishes a source of income for the community, creating opportunities for economic and social growth" *(The Yansa Group 2020)*.

The profits would be equally split between the community and the Yansa Community Interest Company (CIC):

> Half of the profits will be reinvested back into the [...] community via a Development
> Trust and other mechanisms which are completely under their control; the other half
> will go towards Yansa for financial security and supporting new community projects
> elsewhere (Hughes and Wragg 2015).

The proposal gained traction, at some point, with members of the NRRJ, MX and Articulación; they formed an alliance where Yansa provided financial resources used for legal aid and other expenses, and the organizations facilitated Yansa's access to the communities. Besides that, the project has been adopted by the Energía Sostenible collective, where Gustavo collaborates with Sergio Oceransky. Sergio Oceransky's first attempt to realize his project was in the Mexican state of Oaxaca, where Yansa unsuccessfully tried to install a community-owned wind park (Hoffman 2012). Yucatán represents his next try. For Pedro,

> *Sergio's project has two ways* [of becoming possible]: *to change the law* [so that
> it allows community energy cooperatives], *or do it as it is today by giving the
> power to the Federal Electricity Commission (CFE) and then have CFE resell it to
> the communities. The hope is to do the Strategic Environmental Assessment*
> [Articulación's contribution] *to use that as a basis to demand a change in the
> law*.

The alliance with NRRJ, MX and Articulación was broken due to Sergio's perceived interference with Ixil's decision-making process -a case which was described above-. However, the community of Ixil keeps working with Sergio, in a further attempt to realize the plan of a community-owned wind park. The conflict is a situation where an organization with global operations tries to cooperate with activist resistance in the Global South but, due to differences in approaches concerning self-determination, further collaboration is not possible. This case shows that not all self-determination attempts, benefitting from 'globalization-from-below', are fruitful, and that both global organizations, and activists in the Global South have their own agendas and interests.

However, the case is worth considering because it was an exploration of an alternative to top-down development, namely other renewable energy projects, that needed the use of economic, organizational and epistemic resources to be realized. The project is also a local example of the push by local communities around the world to foster an energy transition that includes renewable energies from a social justice perspective. Organizations and activists backing the project engaged in political actions through both community decision-making processes and interaction with government agencies in order to create an environment where the proposal was accepted. By making such efforts they manifest interest for a project that involves the use of the same technology used in top-down projects, but with a model of operation that is not based on harnessing renewable energy through private companies nor achieving development through the use of locals only as labor.

However, the project has not been successful, on the one side, because the legislation that would allow the wind park to operate has not been passed, and, on the other, because Yansa's alliances on the ground have failed to generate strong community support, partly due to its interference with community decision-making processes. The case of Yansa is not alone, in other parts of the world, community-owned projects aiming to harness renewable energy face challenges as expressed by Walker et al:

the realities of the fractures and disputes that can open up when people feel, legitimately or otherwise, that they have been misled, that projects have been misrepresented in some way and that some people in the locality are either benefiting or being harmed in some way more than others (Walker, et al. 2010, 2662)

The case is also useful to make the point that the search for alternatives to mega-projects and alternatives to traditional development does not guarantee that all options are fruitful or exempt of conflicts. Given the fact that Yansa's project is still on-going, it is worth documenting the obstacles that the project has had to deal with. In that sense, the process of conflict with mega-projects does not mean that the pathway of alternatives is free of failures and struggles. However, those obstacles surge from a more autonomous, collective way of decision-making, rather than from an imposed, undemocratic procedure.

The alternatives to development mentioned above are a relevant indicator of what activists and communities strive for, in their struggle to achieve Buen Vivir, or *Ma'alob Kuxtal*, away from the economistic versions of material abundance and along the lines of a degrowth process, where individuals and communities are allowed to enjoy of what Serge Latouche has called a frugal abundance (2009). The practices promoted by activists in Yucatán contribute to lifestyles away from the industrial agriculture complex, the private, renewable energy developments, and the massive tourism industry, and are closer to an approach where notions of wellbeing get to be discussed at a local level. Resistance is thus articulated not only through protests and demonstrations, but as other ways of doing and relating to others and to nature.

While activists in Yucatan do not identify with the degrowth movement at all times, I argue that they embrace degrowth values that, embedded in a geography of the Global South, speak not only about the coincidences with degrowth as a movement in the Global North, but also show the negative effects of the Growth Programme in the Global South, contrary

to the belief that the south needs to grow so that it can thrive, which has been embraced by 'underdeveloped' countries.

In the south, demands of activists concentrate in topics like the critique of mega-projects on themselves and together with a demand for basic needs infrastructures, the use of common resources, the development of local economies, the unequal power of corporations and the struggle for land rights (Rodríguez-Labajos, et al. 2019). All of these demands, shared with Degrowth activism, can promote further connection between activism of the Global South and the Global North -an example of 'globalization-from-below'-, strengthen alliances, and provide justification for their core reasonings and arguments.

Conversely, the assumption that "degrowth is not to be misunderstood as a proposal from the Global North imposed on the Global South, but rather a Northern supplement to Southern concepts, movements and lines of thought" (Dengler and Seebacher 2019, 247), the understanding of, and familiarity with, processes of resistance and *Buen Vivir* in the Global South can strengthen Degrowth's decoloniality in the north.

7. Conclusions

The activist resistance to mega-projects in Yucatán is part of an articulation process aiming to create alternatives to the Western hegemonic notion of development. Through their continued actions on several fronts, activists are politicizing relations to nature and creating spaces for *Buen Vivir,* or *Ma'alob Kuxtal,* and Degrowth to find traction and consolidate in the Global South. Given the complexity inherent in social and political processes, the influences of their activism do not happen in a straight line of events, but through slow and diffuse processes of structuration, just as the very resistance in Yucatán has taken lessons from long-term movements like the Zapatismo, the Theology of Liberation or other

networks of environmental activists throughout the country, like "*Agua para Todos, Agua para la Vida*" (Mora 2008, Leyva 2002, Aubry 2001).

Their experiences of resistance are situated in a broader context where they share similarities with other environmental struggles in the region. Their awareness of such embeddedness is manifested through their critique of the Western, modern capitalist system and the consequences it has for their individual and collective lives. Likewise, activists are well aware of the negative effects of mega-projects and frequently draw relations between environmental and social systems. In fact, their awareness of interdependence between society and nature is at the core of their activism.

The notion of 'defense of the territory' expresses the dialectical relationship that develops over time between societies and their environment: the environment shapes their practices, models traditions and affects knowledge systems; in turn, societies use natural resources and shape ecosystems. Through the awareness of these relations, activists problematize environmental struggles which are sometimes only seen in terms of sustainable development or individual, consumer-based actions by the mainstream model of development.

An important share of their activism is based on illuminating the way in which "others", people who are usually excluded from the discussion of debates of development and environmentalism, can politicize environmentalism too, and rise up to demand a clean and safe environment. Their outreach and communication and legal work is frequently aimed at creating empowered, solidary and community networks of people that can mobilize when mega-projects endanger specific ecologies, ecosystems or social relations they rely on.

By immersing in legal trials, they engage on political conflict through legal institutions. Despite the fact that these conflicts present a power imbalance where judges follow economistic, development-oriented criteria to issue their rulings, and companies have

financial, political and legal resources at their disposal, the Mexican legal system concedes a space where it is possible for activists to challenge and stop concrete mega-projects.

Through these conflicts, they make explicit not only their rejection of specific infrastructure development, but they also enforce their resistance against the development models that these mega-projects entail. In the process of expressing those concerns, they go as far as to put their lives in danger, due to the lack of protection for environmental activists in the country.

The diversity of places from where these activists come is an asset where valuable alliances provide criticism to the growth-based development from different standpoints: activists-scholars cooperate with indigenous activists, farmers foster alliances with people with religious backgrounds and many of them receive help from international organizations, in what is considered an example of 'globalization-from-below'. In that sense, activists make use of skills, resources and perspectives that allow them to fight mega-projects and development models on several fronts, each with different tactics and strategies.

These different knowledges are also put to work in the search for alternatives to development. The cases explained by activists, (agroecology, cenote tourism, and community-owned wind parks) manifest the complexity involved in finding, shaping and strengthening such alternatives. The examples have been developed based on heritage of the Theology of Liberation, supported by development NGO's and universities of the Global North.

They are very practical ways of resisting mega-projects even though they can commodify nature and profit from it. They are also complex attempts to reach different degrees of self-determination which, despite all resources mobilized, may not able to succeed due to differences in the approach used by the organizations, and the decision-making processes preferred by communities. In opposing mega-projects and building their own alternatives

to development, activists are already engaged in a process of *Buen Vivir*, or *Ma'alob Kuxtal*, where they understand the differences between the Western notion of development.

In questioning such notion, some activists openly express criticism against economic growth and their support for a degrowth approach. While the Degrowth movement has primarily developed as an alternative for societies in the Global North, this research shows that communities in the Global South identify the disadvantages that the growth-based economic model brings into their individual and collective lives. The local adaptations of Degrowth they tailor over time, represent important lessons for the Degrowth movement worldwide.

Through local constructions of *Buen Vivir*, like *Ma'alob Kuxtal*, activists engage in the process of creating local economies, valuing nature-human relationships, and questioning the mainstream economistic options for having material abundance. On the other hand, as mega-projects advance and their effects are to be found throughout the underground water networks that constitute the veins of the peninsula, as well as in the actual veins of people in Yucatán, activism against them, and for ways towards fostering *Ma'alob Kuxtal*, could be one of the most sustainable actions to engage with in coming years.

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