Farming Decline, Migration, and Forest Change in Yalálag, a Village in the Sierra Norte of Oaxaca: Rural Change at the Turn of the 21st Century

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Contents

Abstract

This thesis focuses on socioenvironmental change in contemporary rural Mexico as experienced in a Zapotec village located in the Northern Sierra of the Southern Mexican state of Oaxaca. Focusing on the specific case of Yalálag, this study explores two synergic processes that accelerated in rural communities in Mexico at the turn of the 21st century: a drastic increase of urban domestic and international emigration alongside a sharp reduction of small-scale farming. My findings indicate that despite shifting developmental projects, governmental socioeconomic policies in Mexico, at least since the mid-20th century, have allowed an unequal integration of rural indigenous communities into broader global markets. On the one hand, neoliberal structural reforms, an increased demand for flexible cheap labour in the United States, and the importation of subsidized grain from the United States catalysed mass emigration, the contraction of small-scale farming, and an increased local dependency on externally produced goods and money. On the other hand, the Yalaltecan landscape has become more heterogeneous: land uses range from private agave plantations to a communal nature reserve where the forest is recovering. Finally, there have been changes to local institutions, such as the formation of a water committee that strengthened the Communitarian Assembly in which decisions are made. My study proposes that institutional shifts reflect local reassessment of resource management and challenges in territorial governance.

Résumé

Cette thèse porte sur les changements socio-environnementaux dans le Mexique rural contemporain, tel qu'il est vécu dans un village zapotèque de la Sierra Norte de l'État d'Oaxaca, situé dans le sud du Mexique. En se concentrant sur le cas spécifique de Yalálag, cette étude explore deux processus en synergie dans les communautés rurales du Mexique qui se sont

accélérés au début du 21e siècle: une augmentation drastique de l'émigration urbaine nationale et de l'émigration internationale, et une forte diminution de l'agriculture à petite échelle. Malgré des projets de développement changeants, mes conclusions indiquent que les politiques socio-économiques modernes du gouvernement du Mexique ont permis une intégration inégale des communautés indigènes rurales aux marchés mondiaux. Parallèlement, les réformes structurelles néolibérales, la demande accrue de main-d'œuvre bon marché aux États-Unis et l'importation de céréales subventionnées en provenance des États-Unis ont catalysé l'émigration massive, la diminution de l'agriculture à petite échelle et la dépendance locale accrue à l'égard des biens et de l'argent produits à l'externe. D'autre part, le paysage est devenu plus hétérogène: l'utilisation des terres va des plantations privées d'agaves à une réserve naturelle communautaire où la forêt se rétablit. Enfin, des changements sont intervenus dans les institutions locales, comme la formation d'un comité de l'eau, qui a renforcé l'assemblée communautaire où les décisions sont prises. Mon étude avance que les changements institutionnels reflètent une réévaluation locale de la gestion des ressources et les défis en matière de gouvernance territoriale.

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1

Introduction: Rural Change in Yalálag at the Turn of the 21st Century

> *In those hills that we can see on that side, I still got to see how they worked [farmed] because it yielded. And well, times changed because those who worked the fields the most, they went abroad. And only a few remained working the fields. And slowly it waned. . . . When I used to farm, the maize did much more for us. There were maize and beans. Though often we lacked money, we had the basics to eat. That was before. Life today is different. For example, we do not have maize because we do not farm, and the little we buy does not yield.*[1] *Tomás,*[2] *Yalálag, January 31, 2012*

1.1 Introduction

Yalálag[3] is a municipality located amid the magnificent rugged highlands of the Sierra Norte of Oaxaca (see Image 1). Arriving from the Valley of Oaxaca via the winding road built in the 1950s, one can distinguish Yalálag from afar. Its *pueblo*[4] (main compact urban settlement) sits on the slope of the Mountain of Guadalupe, facing northwest. From the road, it is possible to see how the landscape surrounding the *pueblo* is mostly forested, except for the closest slopes, where fields of agave and other crops have been planted. That view, together with the poor maintenance of the road, can create the impression that the forested landscape is in its "natural" state. The fact that Yalálag's economic activity occurs primarily in the *pueblo*

[1] All quotations of interviews in this thesis are translated from their original in Spanish in most cases. Interviews in Zapotec and in Mixe were also conducted in a few cases with the help of local translators.

[2] All names used in this thesis are pseudonyms to avoid violating privacy.

[3] Official names of Yalálag have varied during its history in ways that show shifting power relations within different political regimes. In the colonial period, the town received the Catholic name of San Juan Yalálag. After Independence in 1877, it was renamed as Villa Hidalgo, acquiring the classification of villa. Currently, Villa Hidalgo is the name under which Yalálag is officially recognized as a *municipio* (municipality), the most basic unit of political and administrative jurisdiction (Hernández-Diaz 2007). Yalaltecans, however, know and name their town—understood as a whole entity—mostly simply as Yalálag, and I will respect that name in this thesis. It is important also to mention that unlike many other cases in Oaxaca, the municipality of Yalálag has no administrative of political subdivisions (often known as *agencias municipales*), but that the town does indeed belong to the municipality.

[4] In Spanish, the word *pueblo* has two main connotations, a place where people live (e.g. town), and the inhabitants or members of such place (the people). Yalaltecans use *pueblo* in Spanish in these two ways: to denote the main compact settlement and seat of the municipal government hall, Yalálag, as a town, andto refer to the people who live in Yalalag as a collective. In this thesis, I will use the word *pueblo* to refer to the former denotation, and most specifically to refer to the main settlement as *el pueblo.*

supports this impression. Indeed, after one arrives in Yalálag's *pueblo*, urban life is evident with its paved streets, cement houses, and public amenities, including electricity, running water, and public lights, for example. The main economic and cultural activities take place here, starting before dawn and continuing until late in the evening. Yalaltecans[5] have proudly earned a regional reputation as hard-working but good-humored people, who are skilled entrepreneurs but also love their parties. Not so long ago, Yalaltecans were also famous for being good farmers.

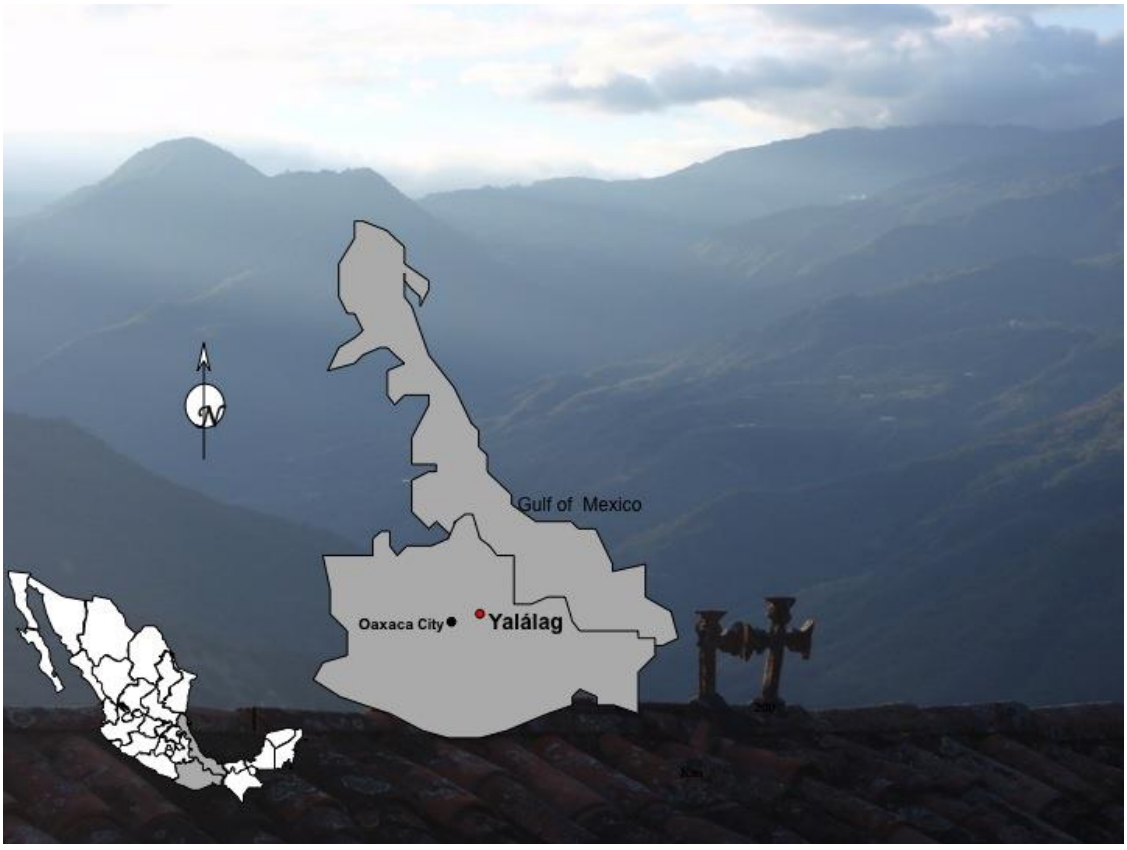

Image 1. *Location of Yalálag in the Sierra Norte of Oaxaca. The state of Veracruz is also shown. Map courtesy of Edith Ortiz Díaz. Photograph taken by Ivet Reyes Maturano.*[6]

[5] I use the term that is closest to how people from Yalálag refer to themselves in Spanish: Yalaltecos (male) or Yalaltecas (female). Yet, unlike the local use of the terms Yalalteco and Yalalteca, which Zapotec Yalaltecans use to refer primarily to Zapotec Yalaltecans, and less commonly to Mixe born and living in Yalálag, my use of the term includes both sorts of Yalaltecans. I will specify whether Yalaltecans are of Mixe descent only if necessary for analysis. It is important to note that Yalálag is predominantly Zapotec, but there has significant interregional demographic movement due to its proximity and economic activities with Mixe neighbours, as this dissertation demonstrates.

[6] All photographs were taken by Ivet Reyes Maturano, except as noted.

Historically, farming was considered the backbone of this busy town, and Yalaltecans enjoyed the distinction (De la Fuente 1949; Jopling 1973; Aguilar and Alatorre 2011). It might take a newcomer a moment to reckon that those fields that are now either forest covered or planted with agave were once a tapestry of small-scale farming plots. Nowadays, only a few Yalaltecans work in the fields. As in other rural areas in Mexico, small-scale farming has sharply declined in Yalálag (Carrasco 1999; Hewitt de Alcántara 2007; González and Macías 2007; Appendini and Torres-Mazuera 2008; Torres-Mazuera 2012; Concheiro y Robles 2014).

Well into the 1970s, most Yalaltecan households farmed, many combining it with trading. Yalálag hosted one of the most vibrant regional markets of the Sierra Norte of Oaxaca. Yalaltecan traders transported goods from different parts of the Sierra Norte along a route that traversed the region from the Isthmus of Tehuantepc to the lowlands of Veracruz. At the same time, beginning early in the 20th century, Yalaltecans migrated temporarily and permanently to other parts of Mexico, especially to the growing cities of Oaxaca and Mexico City. However, only few Yalaltecans migrated to the U.S during that period.

Things started changing rapidly in the 1980s, when international emigration of male and female, young and old Yalaltecans took on a new speed that peaked in the 1990s. According to anthropological accounts, in the 1990s, more Yalaltecans were living in Los Angeles than in Yalálag (Gutiérrez-Nájera 2007: 34; see also Aquino Moreschi 2010; Cruz-Manjarrez 2013). Along with a rapid increase in international emigration, Yalaltecans farmers faced growing burdens related to losing their agricultural workforce and increasing farming costs (e.g., purchasing fertilizers, paying workers). In addition, the infrastructure "improvements" that had been taking place since the 1950s in the Sierra Norte modified the

market network in ways that affected Yalaltecan traders. Altogether in the 1980s many Yalaltecans drastically reduced or even permanently abandoned their farming plots either to migrate or to increase their involvement in secondary and tertiary activities (e.g., craft manufacturing, construction, and small retail).

Although Yalálag did not depopulate (it is still a dynamic town with a population of more than 2,000 people) nor cease farming completely, life changed profoundly. The convergence of emigration and the decline in farming reshaped the mountains, the quality of the foods people eat, and the ways Yalaltecans use and manage natural resources. Tomás' childhood recollection, quoted in the epigraph above, is testimony to the profound transformation of Yalálag. Tomás was only twenty-seven when I interviewed him in 2012, which shows how rapid the changes in Yalalag took place. "Those hills" Tomás depicts are within view of most houses in the *pueblo,* now mostly covered in secondary forest and planted with agave fields. Those hills are a common point of reference for Yalaltecans when they describe how pervasive farming was and how quickly and vastly farming has diminished.

Most Yalaltecans no longer trek in those hills that feel ever more distant from the main town. Reaching those mountains can take hours, especially if one is unaccustomed to hiking. One needs first to descend a steep slope to the Arco River,[7] cross the water, and then hike up the mountain. I visited "those hills," and farther ones, in field-reconnaissance journeys. My trekking in farther once-farmed areas of Yalálag made me famous in town. My hiking amused Yalaltecans, who considered it unnecessarily arduous. At the same time, Yalaltecans often

[7] This is a perennial tributary of the Caxonos (*alt*: Cajones) River, which is the natural border between Yalalag and the adjacent municipalities of San Francisco Caxonos and Yatzachi el Bajo. During the rainy season, several additional water bodies appear at different elevations within Yalatecan territory. It is worth noting that streams are known and named locally in Zapotec. Also, the very same stream may be called different names at different points along its path, reflecting the fact that the ruggedness of the local topography divides streams into sections (see Alonso Ortiz 2014).

shared their concern about their increasing dependence on external, industrially produced foods. Like Tomás, other Yalaltecans often mentioned the low nutritional value of externally produced foods (such as the maize sold at CONASUPO), which contrasted with the quality of staples they used to farm (e.g., maize, beans, and squash). Those who still trekked to those hills shared with me their own accounts of jaguar, puma, and snake sightings in those places. Their encounters were regarded as features of a landscape that was new and untamed. In their amusing and frequently humorous accounts of this new landscape, most Yalaltecans who had seen the mountains change often interwove nostalgic recollections of a time when there were plenty of farming fields in those areas: Yalaltecans produced high-quality foods, farming fields were sites of work, and those mountains were areas of quotidian journeys (see Images 2 and 3). The forested landscape of Yalálag and its massive and swift transformation, as recounted by young adult Yalaltecans, inspired this thesis.

I wanted to understand why international emigration and the decline in farming had accelerated simultaneously. Seeking an answer spawned more questions. How had the local population changed as result of migration? How had Yalálag sustained its dynamic life despite migration and farming's decline? How had convergent productive and demographic changes reshaped the use and management of natural resources? To tackle these questions, I situated my thesis at the intersection of anthropology and environmental studies.

Image 2. *Yalálag's main town and the hills (right) on the opposite side (ca. 1970). By Bruce Larson in Macgill et al. 1970.*

Image 3. *Yalálag's main town; to the right, secondary forest and sparse farming in the hills, 2011.*

1.2 Theoretical frame: Approaching rural change in a Zapotec town of the Sierra Norte of Oaxaca

At first glance, the changes observed in Yalálag seemed to fit what some anthropologists and sociologists define as *new rurality*, a field that focuses on the displacement of small-scale farming as the main source of rural households' subsistence (Delgado Campos 1999; De Grammont 2004; Ávila Sánchez 2005; Arias 2005; Pérez et al. 2008; Rosas-Baños 2013; Hecht 2010). The apparent forest recovery observed in Yalálag conforms to the land use change pattern suggested by forest transition theory (FTT) (Mather et al. 1999). FTT argues that the expansion of industrial agriculture in the market economy displaces farmers and rural populations to urban areas, which allows land to regenerate naturally. Yet, as I will argue in this chapter, FTT and current rural contexts, which have been described as new, need to be understood within the historical context of the expansion of the market economy. This historical process is not new; nor does it reproduce equal effects. Hence, we need to understand how these wide socioeconomic adjustments reshape local rural areas.

For most of the 20th century and well into the 1970s, the Mexican countryside was recognized as predominantly agrarian (Hewitt de Alcántara 2007). An official census in 1963 calculated that a large majority of rural households in Mexico (72%) identified as *campesinos* (Bank of Mexico qtd. in Carton de Grammont 2009:14) or "peasants" in the English anthropological translation. The peasant was conceived as a producer who, according to anthropologists, had a different logic of production from the market economy. Rather than producing for profit, anthropologists argued, the peasant produced for self-sufficiency and to maintain local institutions and reciprocal relationships within his or her local community (Wolf 1967; 1972; Palerm and Wolf 1972; Netting 1976; Barkin 2002).

Recent studies note that small-scale farming is no longer the main source of subsistence for rural households in Mexico. Instead, a wide range of non-agrarian cash-generating economic activities, including migration, sustain the livelihoods of most rural households (Delgado Campos 1999; Cartón de Grammont 2004; Ávila Sánchez 2005; Arias 2005; Pérez et al. 2008; Appendini and Torres-Mazuera 2008; Rosas-Baños 2013; cf. Barkin 2002). Remittances—money migrants send home from elsewhere—provide an example of how non-agrarian activities have become relevant to the sustenance of rural areas. In fact, remittances are also a main source of national revenue in Mexico (Massey and Parrado 1994; CONAPO 2011).

Within Mexico, the state of Oaxaca exemplifies how the dynamics of migration have resulted in a shift from small-scale farming to cash dependency (e.g., remittances) as the basis for rural subsistence. Oaxaca is one of the highest recipients of remittances in Mexico (Cohen 2010; Gabbarot and Clarke 2010). Within the state, Yalalag's region, the Sierra Norte of Oaxaca (see image 4) experienced a significant increase in international emigration since the 1980s (Barabas 1999; Cruz Manjarrez 2013). The Sierra Norte is the source of the third-highest

number of migrants from Oaxaca to the U.S., after the Mixteca and the Central Valleys (Gabbarot and Clarke 2010).[8]

Image 4. *A view of the Sierra Norte of Oaxaca.*

Until the late 1970s, international outmigration occurred mostly in non-indigenous towns that were mostly located in the central-western region of the country (Fox and Bada 2008). Early migration from rural areas, including from some indigenous areas (e.g., Purépecha from Michoacán; Mixtecos from Oaxaca and Puebla; and Zapotecos from Yalalag's neighbour, Yatzachi El Alto) was promoted by a series of bilateral agreements, such as the Bracero Program (1942–1964), which sought to expand the agricultural workforce in California's booming Central Valley. Overall, however, before the 1980s, international migration from

[8] The other five regions into which the state of Oaxaca is administratively divided according to geographical differences are Cañada, Coast, Isthmus, Papaloapan, and Sierra Sur.

indigenous municipalities was still considerably low (Fox and Bada 2008).[9] By the late 1990s, migration and remittance reception in the Sierra Norte were already so extensive that anthropologists considered them structural parts of the region's communities (Barabas 1999; Gabbarot and Clarke 2010).

The speed that emigration acquired in the 1980s and 1990s was not an isolated phenomenon. Rather, in those decades, Mexico underwent significant economic adjustments and structural governmental changes in food and agricultural policies that exacerbated unequal productive and market conditions for small farmers like Yalaltecans (Appendini 2001, 2008; Hellman 1997; Fitting 2006; González and Macías 2007; Martínez Fernández 1990; Otero 2008; Concheiro y Robles 2014) and indirectly promoted migration (Durand and Massey 2010; Weaver et al. 2012). Starting in 1982, the country entered a deep economic crisis that cut public expenditures, jobs, and salaries (González Marin 2002; Cárdenas Sánchez 2010). It was the end of the so-called Mexican Miracle (1930s–1982), a period of national industrial and economic growth that the country experienced in the aftermath of the Mexican Revolution of 1910, roughly inspired by the import substitution industrialization (ISI) model. The Mexican state was shaped by the agrarian and workers' demands expressed during the revolution, which led an agrarian reform of land distribution. Under Article 27 of the Constitution of 1917, the Mexican state legally recognized communal property of indigenous localities as agrarian communities (*comunidades agrarias*) and granted land as social property called *ejidos*. Meanwhile, the state embarked on a protectionist economic policy with strong import tariffs that aimed to industrialize the country and lead to self-sufficient production (Cárdenas Sánchez 2010; cf. Monroy Gómez Franco 2015; González Marín 2002). Yet, in the aftermath of the

[9] For a brief comprehensive analysis of early studies on indigenous migration in Mexico, see Alcántara (2017).

economic crisis of 1982, the Mexican state shifted toward an open market economic model by reducing state intervention in market and welfare regulation, downsizing the public sector, lowering tariff barriers, and relaxing import quotas (Cárdenas 2010; Weaver et al. 2012; Durand and Massey 2010).

The economic changes that were designed to respond to the precariousness brought on by the economic crisis, and which followed the advice of the International Monetary Fund (IMF) and the World Bank, became even deeply entrenched in Mexican life after 1988. In 1992, President Carlos Salinas de Gortari instituted his new agrarian reform that ended land redistribution and created the possibility for private land ownership and commodification. In addition, during his presidential term, Salinas de Gortari massively privatized public enterprises, cut subsidies to small farmers, and actively engaged in international trade agreements that opened the national economy to global markets (Otero 1996, 2008; Dornbusch 1997; Bartra and Otero 2005; Cárdenas 2010; Weaver et al. 2012; Appendini 2001; Fitting 2006). The economic crisis affected domestic labour demand and structural economic and political reforms, and opened agricultural markets while cutting subsidies and institutional supports for small farmers. All these changes upended the economic activities of rural households.

Across Oaxaca, the economic reforms had negative effects. As Bautista Martínez (1999) demonstrates, food surpluses from farming drastically declined in the 1990s. The changes occurred despite a temporary overall increase in small-scale farming for self-consumption. Small farmers responded to the economic crisis with an immediate increase in subsistence farming (Bautista Martínez 1999). Yet, sustaining small-scale farming over the long run had become harder than before. In the coming years, different towns adapted with specific

strategies, although Bautista Martínez (1999) notes an increase in the dependency of households on external sources of foods.

The increase in subsistence farming that Bautista Martínez (1999) observed in Oaxaca in the 1990s was not the only adaptation of small farmers to Salinas' economic reforms. In that same decade, international emigration accelerated, especially in rural and often indigenous areas throughout Mexico (Barabás 1999; Cohen 2004, 2009; Cohen et al. 2008; Weaver et al. 2012). Meanwhile, local forms of consumption and social organisation in Oaxaca, and specifically in the Sierra Norte, also transformed due to demographic, economic, and productive changes (Van Wey et al. 2005; Gutiérrez Nájera 2007; Aquino Moreschi 2002, 2010; Robson and Berkes 2011). Ultimately, agriculture was displaced as the basis of local subsistence, which resulted in a new rural landscape. Dubbing the current context a *new rurality* does not yield a systematic theoretical method for analysing contemporary rural contexts (Ávila Sánchez 2005: 29). Moreover, it may be problematic to refer to the present situation as "new" rurality because that obscures the historical roots of the socioeconomic processes that have shaped current rural contexts.

In this sense, it is important to understand that small farmers, who were largely indigenous people, had sustained the so-called Mexican Miracle while being denied economic, social, and political agency. Even though Article 27 of the 1917 Constitution was meant to recognize land rights, the administrative paths that local communities had to walk to validate them were rather intricate. State agrarian institutions did not follow the same logic as local institutions of social organisation and did not necessarily allow communities to voice their actual political demands. For most of that period, with the exception of the six years of Lázaro

Cardenas' regime (1934–1940),[10] the Mexican State emphasized industrial and urban growth as economic drivers rather than agricultural production and land distribution (Spalding 1985; Hewitt de Alcántara 1999, 2007). As a result, the state controlled the prices of staples to make them affordable to the urban working class, and it channeled economic, institutional, and infrastructural support into large-scale, industrial agricultural production (Appendini 2001). Thus, in political terms, the peasant—and especially, indigenous peasants—were constantly regarded as a contradiction to modernity. They were denied their voice and recognition as key players in shaping modern Mexico. In the 21st century, the former image of the peasant and rural areas in Mexico has become blurry. Under current public policy and social programs, rural populations are no longer conceived as economically relevant peasants, but instead as impoverished (Spalding 1985; Hewitt de Alcántara 1999; Appendini 2001). Hence, rural and indigenous people are denied recognition of their main productive role and the capacity to decide their future. Increasing dependency on external flows of money and food is an example of how rural localities experience deep socioeconomic inequalities. Whereas in the early modern project of industrialization, based on internal growth and market regulation, small-scale farming of indigenous areas like Yalálag produced required foods and a workforce for internal industrial development, small farmers in an open market economy have been left with impossible competition, subject to a precarious international labour market, as well as to new legal conditions that favor market-driven demands in the era of global capitalism (Appendini and Rodrìguez 2012; Almeyra et al. 2014; Durand and Massey 2010). Although access to industrially produced foods in rural areas like Yalálag has increased, the quality of affordable

[10] As president, Lázaro Cárdenas considered agricultural and rural development the basis for economic growth. During his term, he promoted rural education that respected local indigenous languages (see Hewitt de Alcántara 1982). However, he continued a state policy that aimed at integrating indigenous and rural people on a modern, national homogenizing, developmental path.

and available foods has decreased, with most foods having little nutritional value, a small assortment of ingredients, and containing unhealthy amounts of fats and sugars (Mines and de Janvry 1982; Fletcher 1999; Weaver et al. 2012; Santos Baca 2014; Appendini and Quijada 2016). Most households, including those which continue to farm, have become increasingly dependent on external sources of money and foods.

It is important to mention that, in this thesis, I use to the descriptive terms "indigenous peasant" and "indigenous people" while recognizing the friction between the modern Mexican State and the wide diversity of autochthonous populations that have endured long-term processes of internal colonization and structural inequality (Stavenhagen 1966; González Casanova 2003). Still, it is necessary to underscore the intricate, contingent, historical, and positional character of concepts of indigeneity as deployed by the state, by Mexican anthropologists (Villoro 1987; Hewitt de Alcántara 1988; Portal 2013), and the recent political deployment of ethnicity within social movements that reclaim, redefine, and defend collective rights (Hernández Díaz 2007, 2013; Norget 2010; Robles Hernández and Cardoso Jiménez 2007; Maldonado 2010; Aquino Moreschi 2013). The case of Yalálag is a good example of both long-term structural inequality and recent local political movements that reclaim local cultural traits and collective rights.

1.2.1 The production of nature: Understanding uneven environmental changes

Julio de la Fuente was one of the first anthropologists to describe the landscape of the Sierra Norte. In his study of Yalálag, de la Fuente (1949) depicts the landscape as predominantly farmed, with eroded soils and a certain degree of deforestation. That environmental landscape contrasts with the landscape Gutiérrez Nájera describes, who years prior to my fieldwork noted how "much of the agricultural land, which was once cultivated, now lays fallow and some has even returned to forest as a result of outmigration" (2007: 82).

At first sight, the changes in forest cover on Yalálag's hills that Gutiérrez Nájera observes seem to support the FTT hypothesis that forest recovery results from the global expansion of industrial agriculture in a market economy (Mather et al. 1999; Klooster 2003; Rudel et al. 2005). An offshoot of political ecology (Mather et al. 1999: 86), FTT was born in Europe in the 1990s amid increasing concern about environmental problems and a Malthusian rationalization that considers population pressure at the root of natural resource scarcity and deterioration. Mather and his colleagues show that, during population and economic growth, a reversal from rapid deforestation to net reforestation took place in Europe in the 19th and 20th century. This trend, they argue, was due to the expansion of industrial agriculture, which was concentrated in optimal areas and displaced farmers and rural populations to urban areas. As a result, much land was left fallow and allowed to regenerate naturally. According to FTT, the expansion of global capitalism underlies forest transition, although other institutional and social changes (i.e., new fuel uses, forest codes and laws, new perceptions and paradigms regarding forests) also contribute.

Mexico embraced the processes that, according to FTT, are necessary for forest transition. First, the country underwent industrialization during the so-called Mexican Miracle. Then, beginning in the 1980s, an expansion of intensive industrial agriculture as part of a market-oriented economic vision favored opening the domestic economy to global markets (Dornbusch 1997; Delgado Campos 1999; De Grammont 2004; Ávila Sánchez 2005; Pérez et al. 2008; Rosas-Baños 2013; Cárdenas 2010; Weaver et al. 2012; Appendini 2001; Fitting 2004; Otero 2004). However, several studies that tested FTT as a hypothesis in the Global South have curbed environmentalist optimism about the expansion of the global economy. Although studies find a decrease in small-scale farms due to the rapid expansion of the global market economy, especially since the mid-1980s and into the 1990s (cf. Jokish 2002), they do

not reveal a clear trend of forest recovery. Rather than a uniform process of forest resurgence, studies that investigate FTT in Mexico and the tropics find complex land use dynamics, with forest recovery rates varying depending on the scale and contexts of analysis (Geist and Lambin 2002; Bray and Klepeis 2005; Lambin et al. 2001; Schmook and Radel 2008; Lambin and Meyfroidt 2010; cf. Jokish 2002). Indeed, as Geist and Lambin (2002) show, forest dynamics in different regions vary because they do not depend on a single driving force (e.g., population growth or industrialization). These scholars argue that, although the expansion of the market economy is a global trend, forest dynamics assume a different shape depending on regional synergic arrangements of underlying factors (i.e., demographic, economic, technological, policy, institutional, and cultural) and proximate causes (i.e., infrastructure extension, agricultural expansion, wood extraction, and other factors). In the case of Mexico, more specifically, Bray and Klepeis' analysis on forest change (2005) underscore that forest recovery in southern areas of Mexico (i.e., central Quintana Roo, Southen Yucatán peninsular region, and eastern Chiapas) contradicts the predominant narrative of forest loss and underscores the relevance of local community management, alternative labour markets that may differ in different regions, and specific social and political contexts.

Similarly, unlike FTT's presupposition of a clear demographic decline in rural areas, migrant theorists show complex demographic patterns in rural Mexico, whereby the difference in population size between urban and rural parts of Mexico has narrowed due to a recent shift from permanent to temporary emigration (De Gramont 2009). Similarly, the effects of migration in one town can have rippling effects in neighbouring towns, which causes intraregional movement and population redistribution rather than population loss (Wilson 2012; Massey 1990, 1990b; Fussel and Massey 2004; Cohen 2009). In Yalálag, for example,

the number of residents coming from neighbouring Mixe towns increased in the 1990s at the moment that international outmigration intensified.

Although FTT has rightly questions the environmental outcomes of demographic, productive, and institutional adjustments due to the integration of rural areas into global markets, it fails to recognize that the expansion of the market economy produces socioeconomic inequality. Unequal economic development precludes FTT's optimistic hypothesis of forest recovery as a global trend (García Barrios 2009). In sum, the question FTT proposes of understanding converging social adjustments for the study of environmental rural change is still relevant, but we need to recontextualize the problem within the political economy of the expansion of the global market. To do so, this thesis draws on the notion of the production of nature (sensu Smith 2008; see also Hecht 2010).

The notion of the production of nature advances the idea that the landscape embodies the values that society places on nature. Thus, nature can be conceptualized as a product of society (Smith 2008). Yet, because the market economy requires the exploitation of nature as a resource that generates surpluses, there is a perpetuation of unbalanced reciprocity. More concretely, the expansion of industrial society in the Global South, in countries like Mexico, has required the exploitation and subtraction of local natural resources and workforces from rural areas to generate surpluses that concentrate mostly in the hands of economic and political powerful elites in remote urban financial and industrial centers (Wolf 1967, 1972; Palerm and Wolf 1972; Polanyi 2001; Wallerstein 2004, 2011; Smith 2008). Hence, rather than the linear path of economic growth that FTT hypothesizes as the basis of forest recovery, the market economy has created an uneven socioeconomic landscape. Consequently, a forest recovery is arguably an impossible trend under a capitalist economic model. Rather, we need to ask what

kind of old and new local socioeconomic strategies of use and management of environmental resources emerge in rural indigenous contexts.

The notion of uneven development, inspired by Marxist theory, recognizes the structurally imbalanced social relationships that emerged from the expansion of capitalism (Wolf 1967; Palerm and Wolf 1972; Aguirre Beltrán 1967; Stavenhagen 1966, 2003). However, it is only recently that the question of uneven environmental outcomes has gained relevance amid increasing global concerns regarding ecological deterioration.

To place environmental change, including forest dynamics, in historical context helps us to understand how forests are embedded in institutional and political relationships (Hecht 2014; Mathews 2008, 2009, 2012). The question of forest change as a historical process is of specific pertinence to Yalálag because studies have reported forest regeneration elsewhere in the Sierra Norte of Oaxaca (Matthews 2012; Van Vleet 2013). The trend of forest recovery in the Sierra Norte contradicts the overall trend of forest loss occurring nationally in Mexico (Gutiérrez Barrios et al. 2009; Klooster 2003, 2005). We need to understand the kind of production of nature that has taken place in this region and ask whether local processes can help us to understand how and whether forest recovery can take place in other rural areas in Mexico.

Similar to my question regarding which underlying historical and cultural processes produce forest recovery, scholars who ask about where richest biodiversity is best preserved in Mexico find that indigenous territories overlap with areas where biological diversity is best maintained. Hence, they argue that cultural diversity is the underlying cause of the environmental preservation (Boege 2008; Toledo et al. 2003; Toledo 2013; Toledo and Ordoñez 1993). They base their argument on this geographical overlap, adding that indigenous people have a long history of productive practices and a body of knowledge that has helped cultivate, manage, and sustain a large variety of species (Boege 2010; Toledo et al. 2003; Toledo 2013; Toledo and

Ortiz 2014; Conabio et al. 2007; see also: Giménez 2003). This argument underscores the relevance of small agricultural practices and local and traditional systems of resource management within indigenous territories (Lyver et al. 2019). Hence, biocultural proponents underscore the need to preserve bio- and cultural diversity *in situ*—hence the term *biocultural*—and point to the socioeconomic imbalance that industrialisation has created among indigenous and local populations (Boege 2009).[11]

Proponents of the notion of biocultural regions pointed out the Sierra Norte as example of an area where cultural and environmental diversity overlap (Arriaga 2000; Merino 2008; Boege 2008). The Sierra Norte has the best-preserved tropical cloud forest in Mexico (Arriaga et al. 2000:504; Bray et al. 2003), and 70% of its land is forest covered (Merino 2008). Most of the forest is communally owned and managed (Merino 2008; Bray et al. 2005; Gasca Zamora et al. 2014). However, researchers have not fully analysed the dynamics of rural change related to the economic displacement of small-scale farming in Mexico from a biocultural perspective, or the historical processes related to the integration of indigenous rural areas into global markets, which may challenge the local practices that sustain found biodiversity.

Studies of forest transitions in Mexico raise a relevant question about current rural contexts that neither new rurality or biocultural studies ask: that is, how international emigration and changes in subsistence activities due to general processes of agricultural industrialisation reshape land use, nature appropriation, and forest cover. Studies of forest transitions in Oaxaca find that emergent resource uses (Aguilar Stoen 2011), innovative adjustments in local institutions related to resource management (Van Vleet 2016), and new pressures on local institutions of resource management (possibly due to migration) (Bray and Klepeis 2003;

[11] Biocultural proponents often refer, too, to international instruments and treaties to advocate for indigenous populations' territorial rights because they consider indigenous people as key biodiversity protectors.

Klooster and Robson 2020) are key determinants of forest dynamics. As Bray and Klepeis notes for other regions of Mexico, land use changes depend on a myriad of arrangements, including alternative labour markets, forest uses, and the inclusion of forest as protected areas (Bray and Klepeis 2005:198). Aguilar Stoen (2011) further supports their findings, showing how emergent economic dependence on forest services and products may favor income diversification and forest recovery. By contrast, Klooster (2003), García Barrios et al. (2009), and Klooster and Robson (2020) point out how outmigration in Mexico can negatively affect traditional practices and local organisation of resource management when workforce loss and changes in values erode local institutions (Klooster 2003; Klooster and Robson 2020), or when remittance receptions precipitate a shift from subsistence farming to cash-crop production (Klooster 2003; Garcia-Barrios et al. 2009). With these questions in mind, my analysis of socioenvironmental change in Yalálag asks how demographic adjustments have taken place, and what productive activities emerge as small-scale farming loses its economic relevance; whether Yalaltecans have revalued forest uses and forest services; and how productive adjustments affect local organisation and current institutions of resource management.

1.3 Customary systems of social organisation in the region of the Sierra Norte of Oaxaca: Local, communal institutions and environmental politics

As biocultural scholars note, Mexico is one of the world's most *megadiverse* countries, meaning that its territory hosts an extraordinary variety of flora and fauna representing almost 70% of world total diversity (Ceballos and García 2013). Moreover, indigenous territories have maintained the highest biodiversity, including the largest forest areas and important water sources (Bray et al. 2005; Boege 2008; Concheiro and Robles 2014). More than one-half of Mexican territory is held as social property (InterAmerican Institute for Cooperation on Agriculture 2012), which is to say, under legal and institutional frames that recognise collective

ownership, which frames include indigenous communities that are largely managed under traditional systems of organisation.

Nationally, the state of Oaxaca is home to the largest number of officially recognised indigenous groups (INEGI 2010; CDI 2008).[12] In this state, 70% of land was reported to be held as collective property in 2017 (Torres Mazuera 2021), and 50% of forested land was reportedly held by indigenous people as collective property and within traditional communitarian systems of authority based on obligatory participation (Bray et al. 2005; Mutersbaugh 2002; Boege 2008; Klooster and Robson 2020). Likewise, 417 of Oaxaca's 570 municipalities have opted to officially elect local authorities using customary systems (*Usos y Costumbres*) (Recondo 2007; Gasca Zamora 2014; Merino 2004). Yet, one should not consider this general property arrangement and the local customary elected government in Oaxaca as a harmonious institutional array of agrarian law, state government institutions, and local systems of authority. Current state legal frames and local land tenure and institutional arrangements are the result of historical processes that reveal loopholes and frictions.

The wide distribution of social property in Mexico, and in Oaxaca specifically, is a result of the post-revolutionary agrarian reform established in Article 27 of the Mexican Constitution of 1917. However, gaps and contradictions exist both within and among agrarian governmental legal frames and also between these and local normative arrangements. In theory, the agrarian reform of 1917 envisioned returning land to indigenous people (*comunidades*) and allocating land to landless peasants (*ejidos*). However, the process was complex. To begin, in order to claim land restitution, people had to prove legitimate historical

[12] The National Institute of Statistics and Geography (*Instituto Nacional de Estadística y Geografía*, INEGI) estimate is based on the number of indigenous language speakers. The largest recognized indigenous groups in the state are Zapotecs and Mixtecs. Other groups are the Triquis, Chinantecs, Chontales, Mixes, Chatinos, Mazatecs, Chochos, Cuicatecs, Huaves, Zoques ot Tacuates, Ixcatecs, Amuzgos, and Nahuas.

land tenure (e.g., by showing documents from the colonial period). This legal requirement ignored historical processes of forced displacement, demographic movement, land-related disputes between towns prior to the colonial period, and a lack of historical documents (i.e., due to robbery or destruction). Such historical neglect at the core of the agrarian reform, together with other institutional deficiencies (see Robles Berlanga 2000), led to lengthy procedures and often exacerbated land-related conflicts in Oaxaca (Barabas and Bartolomé 1999; Cruz Rueda 2014; Romero-Frizzi 2011).

Agrarian authorities instead often chose to file land claims for indigenous communities that lacked historical land certificates under the land allotment procedure, and such communities became *ejidos*. In many other cases, communities never attained official land titles (Barabas and Bartolomé 1999; Romero-Frizzi 2011). Yalálag falls into the latter group. Despite historical occupation, Yalálag has not yet attained formal recognition of land entitlement because Yalaltecans lost the colonial documents that proved it. However, Yalaltecans have kept records of their town limits and maintained physical demarcation of the municipal territorial borders. In addition, Yalaltecan authorities have also made verbal agreements with neighbouring towns regarding territorial limits. Further, Yalaltecans have held land mostly as small private properties, keeping a registry of land parcels, maintaining specific local norms to access property including that of being recognised as part of the community that is tied to participating in the communal system of social organisation. Likewise, Yalaltecans have also preserved communal plots that are considered "of the *pueblo*" (of the whole town) because they are communally owned and managed. Private landholding in Yalálag could be regarded as an exception to the predominant trend of communal property in the region of the Sierra Norte of Oaxaca (Merino 2008; Boege 2008). Yet, this town keeps the similar strong bond between agrarian and communal norms regarding social organisation with neighbouring

towns of the Sierra Norte. Also, the fact that Yalálag does not fall into any formally recognised form of social property regime, but instead ties land access to the communal system of social organisation, provides an interesting case for analysing the relevance of local communal norms regarding land access, shifts in land tenure, and land use change.

In the Sierra Norte of Oaxaca, each town shapes its own rules and defines its own organisational structure. However, these systems rely most frequently on the obligatory participation of community members (Barabas and Bartolomé 1999). Given that the nuclear family is considered the most basic unit of social organisation (De la Fuente 1949; Jopling 1973; Aquino Moreschi 2002), it is at this level that duty and rights are most often considered. Still, it is often the case that males between the ages of 16 and 60 perform community duties on behalf of their households.

Most frequently, participation in social organisation is not economically motivated: Community members do not receive any financial compensation. Instead, the system is based on reciprocity between households and the collective, and between the collective and the sacred (De la Fuente 1998; Barabas 1999; Gutiérrez Nájera 2007). Although culturally and linguistic diverse, the people of the Sierra Norte of Oaxaca conceive of the territory as a supernatural entity and regard specific natural sites, where people engage in relationships of expected reciprocity with the supernatural, as sacred (e.g., caves, hilltops, and trees) (Barabas 1999; see also De la Fuente 1949). The reciprocal relationship with supernatural entities, anchored in the territory, implies collective and individual duties that are mostly materialised in rituals and festivities (De la Fuente 1949; Cruz-Manjarrez 2013). Hence, local systems of organisation entwine religious and civic duties, including those that manage access to and use of natural resources.

Taking part in collective work ensures community membership and collective rights such as access to land. Participants in local institutions also benefit from the services that such organisations provide (e.g., public health, potable water, and public education) and gain social status. According to some anthropologists, this system of reciprocity is one of the pillars of the community because it defines membership within it (e.g., De la Fuente 1998; Gutiérrez Nájera 2007). Various scholars (Barabas and Bartolomé 1999; Chance and Taylor 1985; Dewalt 1975; Friedlander 1981; Guardino 2005; Korsbaek 1996, 2007; Medina 1995; Millán 2005; Portal 2013) refer to such systems of social organisation as a *cargo model system*. This anthropological concept underscores the historical persistence of a normative pyramidal hierarchical system in which religious and political responsibilities are combined and participants progressively advance in both obligations and prestige. Yet, these and other scholars who have studied the conceptualisation of the cargo model system in anthropology, such as Medina (2003, 2007), likewise warn against the conceptual limitations of this model. They have called instead for an ethnographic and historical revision of the current situation of local organisational systems and how these undergo significant transformations due to economic and demographic changes, including migration. Additionally, it is important to consider how local communal systems of social organisation have been politically revised and conceptually redefined by local intellectuals and activists, including people from the Sierra Norte and Yalaltecans (Aquino Moreschi 2002; Vásquez Vásquez 2011; Rendón Monzón 2003; Robles Hernández y Cardoso Jiménez 2007; Maldonado Alvarado; Martínez Luna 2013).

Since the late 1970s, intellectuals from the Sierra Norte of Oaxaca, including returning migrants, have assessed their forms of organisation, culture, and history. While examining their worldviews, languages, and cultures, regional intellectuals have questioned the inequality of their towns compared with urban areas, the historical undervaluation of their culture and

institutions, which were often ignored as spaces of collective decision-making (Díaz Gómez 1994; Aquino Moreschi 2002, 2010; 2013; Vásquez Vásquez 2011; Rendón Monzón 2003; Robles Hernández y Cardoso Jiménez 2007; Maldonado Alvarado; Martínez Luna 2013). These intellectuals from the Sierra Norte also note a lack of understanding of the reality of their local communities within social theory, as well as in social movements with which they had engaged in universities, factories, and the cities in which they had lived (e.g., Marxist theory, workers, and student movements as Aquino Moreschi (2002, 2010) notes.

Although young intellectuals from the Sierra Norte of Oaxaca agree with anthropologists that local systems of organisation were based in reciprocity and anchored in their territory, they also see the political strength of their culture (Robles Hernández y Cardoso Jiménez 2007; Maldonado Alvarado 2010). Instead of a concept that focuses on a hierarchical model, they coined the term *comunalidad* to emphasise that their institutions are embedded in the living culture, in the festive religious cycle, and its resulting conviviality.[13] Their culture was political. Their systems of organisation, they state, needed to be reclaimed and revalued as spaces for collective, communal decision-making. Further, they aim to underscore how local, communal, intercommunal, and even intermunicipal institutions operate in fact as spaces of collective decision-making but were not valued as such (Robles Hernández y Cardoso Jiménez 2007). They specifically note how state political structures had disassociated communal decision-making from institutions of state authority—namely, the municipality—and agrarian authority. They argue that the state promoted the concentration of power in the hands of a local elite that most often monopolised the control of state institutions. The state required and

[13] Today, religious festivities are spaces of intense commercial exchange and conviviality during their preparation and development. There is music (*bailes*) (Cruz-Manjarrez 2008, 2013), conversations, gossips, and lots of jokes while working. The notion of *comunalidad* as a political position emerges from these and other lively social spaces, engendering a reassessment of the vitality of local cultures, contesting how local cultures have been systematically confined and belittled under national hegemonic norms and institutional structures.

fomented such local political elites (*caciques*), who worked as intermediaries with private companies, and with state agencies, for their own benefit.

These political and intellectual reflections were at the core of political movements that flourished in different towns and areas of the Sierra Norte in the 1970s and 1980s (Hernández Díaz 2007; Recondo 2007; Mathews 2012; Merino 2004). Broadly, regional movements sought to reinstate communal political decision-making and reclaim their cultural practices. Yet, there were different specific demands and goals in specific localities. In Yalálag, for example, the political struggle focused on reclaiming the municipal authority from local elites (Gutiérrez Nájera 2007; Aquino Moreschi 2002, 2010, 2013; Aguilar and Alatorre 2011). In towns in the central part of the Sierra, local movements sought to recover control of agrarian authority to allow autonomous management of their forest resources (Matthews 2012; Merino 2004; Merino 2008). Shared among the different political movements in the Sierra was the idea of reclaiming communal traditional institutions and positioning those institutions as capable of sustainably managing the future of their territories. These movements echoed and were in dialogue with the claims and political demands of diverse indigenous movements in Mexico, including the most well-known movement, the Ejercito Zapatista de Liberación Nacional (EZLN), which emerged publicly in Chiapas in 1994 (see Aquino Moreschi 2013; Robles Hernández and Cardoso Jiménez 2007).

The EZLN and other indigenous movements continued into the 1990s, opening spaces for public debate about the right for self-determination and criticising the federal government's political discourse promoting market liberalisation and the North American Free Trade Agreement (NAFTA) (Cárdenas 2010; Harvey 2007; Orgambides 1992; Otero 1996).[14] In spite

[14] Paradigmatic of such contradictions between the ideological promises of neoliberalism and the actual turbulence the country experienced was the severe crisis at the end of 1994 and the uprising of the Zapatista

of systematic government repression, indigenous movements were able to position themselves as important political and intellectual interlocutors in debates about their political aims, territorial rights, and cultures that, until that time, had systematically been denied. The civic discontent that echoed and sympathised with indigenous movements had important roots in the failed socioeconomic outcomes of the so-called Mexican Miracle. Indigenous movements gained public support among urban populations and participants in other social movements.

It was in this context that, in 1995, the state government of Oaxaca officially recognised traditional customary systems of authority (*Usos y Costumbres*) in all its municipalities. In 1999, the federal government adopted the same recognition. Since then, most municipalities of Oaxaca have opted to officially elect local authorities under customary systems (Recondo 2007; Gasca Zamora 2014; Merino 2004). However, legal recognition has fallen short of the demands of regional movements in the Sierra Norte, or of the EZLN, for self-determination. For example, local elections under traditional customary systems still require state validation to be official. Furthermore, the town must still be organised under a state governance structure (e.g., town president, vice president) whose authority supersedes that of the Communitarian Assembly. Even indigenous towns that hold their land as social property often have to navigate the intricate and often-inefficient bureaucracies and gaps between the agrarian structure and their local institutions (Torres Mazuera et al. 2018).

The municipal and the agrarian authorities remain the main institutions that hold official power and are the link between towns and the state (Recondo 2007; Hernández-Díaz 2007). Agrarian and government institutions may conflict with historical territorial customs. For example, the territorial division of the *municipio* (municipality), which is considered the most

Movement on January 1, 1994—on the date that NAFTA came into effect—in Chiapas, the state just south of Oaxaca.

basic unit of political and administrative jurisdiction, may encompass one or more communities. Or, a community may be divided into several municipalities, as is the case, for example, with *Mixistlán de la Reforma* that borders Yalálag (see Cruz Rueda 2014) and many other cases in Oaxaca reported in Romero-Frizzi (2011). In addition to these ambiguities, recent demographic changes related to international and regional migration can reshape the historical boundaries of towns and agrarian communities.

Although specific towns and communities may create their own territorial arrangements according to local uses, these local arrangements may not follow legal norms and may be susceptible to internal conflicts. Hence, they can be vulnerable to external political or market interests (Torres-Mazuera 2016). At the same time, in the 1990s, the federal government passed resource management responsibilities on to local governments and the private sector, which allowed rural towns to acquire increased responsibilities for managing their own natural resources. The government's decision seemed to respond to broad national and global awareness of environmental deterioration that questioned the responsibility of states in the environmental crisis. Critical voices sought other ways to manage resources and turned to local-level and common institutions as alternatives to state and private regulation.

1.3.1 The commons

Although study of local institutions is not new (Wolf 1957; Aguirre Beltrán and Pozas Arciniega 1991; Nader 1998), a focus on local institutions of resource management and on common resource ownership has become ever more relevant amid increasing global environmental concerns and global environmental politics (sensu Peet et al. 2011). In particular, the study of common property institutions (Ostrom 1990; see also Dietz et al. 2003; Cole and Ostrom 2012) emerged in the 1990s in direct response to Hardin's (1968) "tragedy of the commons." As Dietz et al. (2003) has noted, Hardin's work highlights how human demand and institutional

arrangements of resource management were key social factors that affect environmental conservation. However, Hardin considered human demand only as emerging from population growth and disregarded the role of global markets in fostering it (see García Barrios et al. 2009; Hecht 2010). Ignoring market inequalities—and the fact that within global markets, external and often international demand for goods puts pressures on the resources of specific localities—Hardin (1968) argues that private ownership and state management were ways of effectively regulating use and access to natural resources to protect them from the actions of intrinsically selfish individuals. Echoes of Hardin's argument are found in contemporary environmental policies in Mexico that assert strongly centralised resource management, but often have relied on private companies to exploit resources most "efficiently" (see Matthews 2012). The case of Mexico is no exception. In fact, until the 1980s, markets and states were regarded as the only and almost unavoidably appropriate institutional arrangements "to address externalities stemming from the public good nature of resources" (Agrawal 2002: 43).

Responding to such a narrow focus and questioning the capacity of the state and market to manage resources sustainably, Elinor Ostrom demonstrates that communal ownership and local management have more often been successful in preventing resource degradation than have the state and the market (Dietz et al. 2003: 1907; see also Ostrom 1990, 2002; Agrawal 2001, 2003). Theories of the commons first conceptually differentiated property as a social relationship that involves different kinds of property regimes (e.g., public, private, collective, common, open source), different property rights (of use or control), rules, and duties with regard to resources (Merino 2018). Property thus is regarded as a social relation that involves a stream of rights, rules, rights holders, and rights bearers, which refers also to a subset of institutions that include local arrangements (Bromley 1992). This refined conceptual differentiation of property allows us to debunk Hardin's notion of a "tragedy of the commons,"

noting the wide variety of possible social arrangements that emerge around resources. Likewise, scholars of the commons demonstrate how local user groups (and not necessarily a central government or state, nor individual property regimes) have been able to efficiently govern resources with institutional arrangements of monitoring and management that help allocate resources equitably over periods of time (Dietz et al. 2003:1907; see also Ostrom 1990, 2002; Agrawal 2001, 2003; Merino 2018).

Understanding property regimes as institutional arrangements raises the question as to what level of authority local systems of organisation in rural indigenous localities have over resource governing in the face of centralised governments, the state, and/or private actors, and the competence of local system of organisation allocating and preserving resources. Since its development, the theory of the commons has been applied to different countries; and in Mexico, it has become an important analytical tool for environmental scholars with specific relevance to areas where local communities have communally owned and/or managed primary natural resources, such as land and forests. At the same time, and given that theory of the commons has helped understandings of property as sets of social relationships and rules, it has also informed public policies in different countries, including Mexico. However, this interpretation occurred with serious gaps and limitations, as I will discuss below.

1.3.2 Local environmental governance: Unbalanced power, new responsibilities, and challenges

As Agrawal (2003) notes, by the end of the 1990s, more than fifty countries had taken legal and policy steps toward local involvement in processes of environmental management and environmental protection. As the Food and Agriculture Organisation reported (FAO 1999), local forest management had received "a great deal of attention" in legal reforms. The Mexican federal government followed this pattern but experienced serious limitations, gaps, and

contradictions. Beginning in the 1990s, the Mexican government embarked on a series of structural political reforms related to land property and resource regulation that responded to structural adjustments to state deregulation and market liberation and also to political demands by agrarian organisations and indigenous territorial movements, including those of the Sierra Norte and other regions of Oaxaca (Hernandez Diaz 2001; Norget 2011) and the Zapatista Movement for territorial self-determination (Aquino Moreschi 2013). The result was a combination of unbalanced resource commodification and transferring management responsibilities to both local governments and to the private sector.

The constitutional reform of Article 27 Salinas de Gortari's government instigated in 1992, also known as the Mexican Land Reform (*reforma agraria*), was paradigmatic of this shift and of its intrinsic contradictions. The reform put an end to land distribution and set up conditions for the privatisation and commodification of land. The government argued that land reform would help secure communal and land property rights. Indeed, it removed references to the state as the original land holder (Van Vleet et al. 2006; Bray 2013) and transferred more authority to the local agrarian assembly formed by communal landholders (Bray et al. 2005; Bray 2013; see also Torres Mazuera et al. 2018). However, it also allowed the segmentation, privatisation, and commodification of land, without strengthening local capacities or institutional support for the defense of agrarian rights (Barkin 2002; Appendini and Torres-Mazuera 2008; Torres Mazuera et al. 2018). Additionally, the agrarian reform also specifically regulated forested lands "forbidding the dividing up or parceling of forests (Article 59)" (Bray et al. 2005: 476), which was a legal watershed for the development of community forest management (Merino 2003, 2004, 2011, 2018; Bray et al. 2005; Bray 2013; Mathews 2012).

Simultaneously, the Water Law of 1992 enabled the private sector and local authorities to conduct water management (Aboites 2010; Castro et al. 2004). However, in decentralising

the governance of water, the federal government transferred management costs and responsibilities to local authorities, without strengthening their management and decision-making capacities. In doing so, the federal government regarded local institutions and private enterprises as equal actors which are supposed to compete to increase efficiency (Liverman and Vilas 2006). In reality, what the reform yielded is a broad inequality of competences that may affect the capacities and institutional arrangements of resource governing at the local level.

Although the Mexican State could claim to have devolved some control over resources to local users (Agrawal 2002), its environmental policies have strongly promoted privatisation, commodification, and market-led imbalance in the management of environmental resources. Although the agrarian reform of 1992 did not remove collective land holders (*ejidos*, or agrarian communities) from water ownership, the Water Law only contemplates the rights to water extraction, use, and storage of water in communal land and for human use. However, any other use of rights must be granted under state concessions, and thus local private owners (e.g., former collective owners that privatised their land) and new private actors should apply and may compete to acquire and secure water concessions (Torres-Mazuera et al. 2018). Thus, even though not all potable water has been commodified, the expansion of its industrial uses, the delegation of water management to private actors, and the pricing of its use enhance the surplus value of water (i.e., its use for profit) over its use value (e.g., directly extracting it for consumption) without, for example, considering conflicting demands among different economic and social sectors (Liverman and Vilas 2006: 342).

This shift in environmental governance came during the abovementioned structural socioeconomic changes in rural indigenous localities, according to which the core productive and economic activities transformed due to the expansion of industrial agriculture, and had significant implications with regard to the use and value of resources. Productive, economic,

and demographic changes due to an increase in emigration also had important implications for local uses of resources; resource governance, including local rules regarding resources, and also the relationships between right holders and local institutions engaged in resource management (rights bearers). Thus, we need to understand how demographic and productive changes in rural areas affect local governance of environmental resources and resource management.

1.3.3. Traveling theories and studying local governance of natural resources in the Sierra Norte of Oaxaca

Scholars of the commons have studied the Sierra Norte of Oaxaca but mostly focus on local communities that were able to legally establish forest logging in co-management with the state. This sort of management was possible after the Forest Law of 1986 allowed it, and most importantly, as a result of the struggles of local towns and organisations since the late 1970s for their rights to exploit and manage their forest resources. Until then, only the state and then private companies were allowed to extract forest resources in spite of local ownership rights, resulting in extensive deforestation and leaving few income sources for the local populations (see Bray and Wexler 1999; Klooster and Masera 2000; Merino 2004; Aquino Moreschi 2010; 2012b). Studies of the forest commons in the Sierra Norte of Oaxaca took place at a moment when other structural reforms over natural resources, including the Forest Law of 1992, were encouraging and enabling forest plantations and market-led management (Bray et al. 2005).

The relevance of studies of the commons in the Sierra Norte is twofold. On the one hand, they show how experiences of community forest management and community forestry in the Sierra Norte are sustainable economically and environmentally (Bray et al. 2005; Merino 2004, 2008, 2018; Mathews 2002, 2009, 2012; Robson 2007, 2011; Robson and Berkes 2011; Van Vleet et al. 2016; Robson et al. 2018; Robson et al. 2019). Also, these studies promote

reassessment of local and communal customary institutions, like those existing in towns of the Sierra Norte of Oaxaca, based on a system of organisation that relies on obligatory communal work and the Communitarian Assembly, and found them capable of monitoring forests, sustaining forest management, and distributing more equally gains and profits than under private or state management. Further, studies of the commons in the Sierra Norte of Oaxaca indicate the uneven socioeconomic conditions that community forestry faced amid market-led reforms and free-trade agreements (Bray and Wexler 1999), increasing responsibilities without strengthening the power of customary institutions (Bray et al. 2005, Bray 2013) and new challenges related to demographic and economic changes (Robson and Berkes 2011; Robson et al. 2018; Robson et al. 2019). These studies further helped assess forest recovery and thus forest transition as consequence of local forest management (Mathews 2012).

On the other hand, however, these studies of environmental change, emphasising the role of local and communal management of environmental resources and analysing shifting market and political conditions, mostly focus on forest management and on experiences of community forestry. Hence, they mostly focus on towns located in the Sierra Norte of Oaxaca with economically valuable forests (e.g., cloud forest). In contrast, Yalálag does not have a cloud forest, and forestry has not been a local industry. However, the variety of forests that exist in Yalálag, including evergreen pine and oak forests in elevated areas and tropical dry forests in lower areas, represents a vegetation mosaic that is also common to many other rural areas of the country.

Another difference between Yalálag and towns in the Sierra studied using a commons approach is that land there is predominantly held as small privately owned parcels, even though the *municipio* has also preserved plots that are commonly owned and managed. The land tenure situation in Yalálag, once again, is not an exception in Oaxaca or Mexico, but rather

exemplary of many indigenous towns that, despite living, cultivating, and managing local resources under corporate structures for centuries, have faced historical changes and bureaucratic challenges to provide pre-colonial land titles. However, as mentioned above, despite private ownership, environmental governance in Yalálag is still tightly bound to local and communal organisation. The right to own or settle on local land in Yalálag, for example, is tied to participation in the local system of social organisation. Similarly, Yalálag has preserved large areas as communal property that belong to *el pueblo*: meaning, the local people and the whole town at once. Furthermore, as I will show below, since the 1990s, Yalaltecans organised under communal institutions have been reforesting these areas and have extended the area of communal land. This shift occurred within the context of government deregulation and the transference of resource management responsibilities to local institutions.

The case of Yalálag is relevant because it allows us to understand how communal social organisation shapes management of forest that has been economically undervalued. Forest in Yalálag is of significant environmental relevance because of the local microclimate diversity that the rugged terrain provides. Likewise, forest changes in Yalálag, I will show, are tied to local management of water and shifts in land rights. They also help us understand that local communitarian institutions that manage natural resources are interrelated and can emerge as means to defend territorial rights. The case of Yalálag, where communal land tenure and communal institutions are likewise resurging amid demographic adjustments related to international migration, forces us to examine external causes for institutional adjustments, which are often overlooked in the study of the commons.

Yalálag can help us understand the sorts of dynamics that take place in many other rural and indigenous areas of Mexico, where deciduous forests exist and where local land

tenure arrangements, including private property, coexist with communal and customary social organisations.

1.4 Methods

In this work, I aim to understand how and why international emigration and the decline in farming converged in Yalálag in the late 20th century by exploring how processes of industrialisation influenced this convergence. I describe the effects that these converging processes had on local productive activities, land use, and local resource management. In order to take on these questions, this thesis contextualises the problem within the expansion of the market economy and takes a diachronic analytical approach. My analysis of socioenvironmental change in Yalálag occurs between the late 1950s, which was a moment when Yalálag was predominantly farmed, and 2011, the year I conducted fieldwork for this thesis.

My thesis pays attention to processes of integration of local goods, labor, and natural resources into broader markets between the 1950s and 2011. A main difficulty in my research has been to isolate, analyse, and correlate the indicators that allow for a discussion of rural change in Yalálag. Using quantitative and qualitative methods, I connect demographic adjustments (Conway and Cohen 1998; Cohen 2005 and 2009; Cohen et al. 2008) with shifts in local productive strategies and dependence on externally produced foods (Mines and de Janvry 1982; Fletcher 1999; Appendini 2001; Gutiérrez Nájera 2012; cf. Jokisch 2002; Appendini and Torres-Mazuera 2008), land use changes, including the dwindling of agriculture and potential forest recovery in fallow areas (Mather et al. 1999; Rudel et al. 2005, Hecht and Saatchi 2007; Meyfroidt et al. 2008; Meyfroidt et al. 2010; Aguilar Støen 2011; Robson and Berkes 2011), and adjustments in the social organisation and local management of natural

resources (Dietz et al. 2003; Klooster 2003, 2005; Agrawal 2003; Aquino Moreschi 2002, 2010; Vanwey et al. 2005; Cohen 2005; Robson 2011; Robson et al. 2018).

I arrived at the Sierra Norte for the first time in the summer of 2009 on field reconnaissance journeys through the region and then returned to Yalálag for a year of fieldwork between January 2011 and February 2012. Upon my return, I was fortunate to have been granted permission by local authorities to develop my research. During my fieldwork, I lived with a Yalaltecan family, which helped me become acquainted with everyday life and social events, and they also guided me in my first field recognition journeys in the hills of Yalálag. Despite all those privileges, I was also well aware that Yalaltecans have long-standing ideological and political divisions and that closeness to my host family could prevent me from becoming acquainted with and interviewing Yalaltecans who did not sympathise with my host family's political faction. Later, as my fieldwork evolved, that fear vanished. Most Yalaltecans were open to sharing their memories about Yalálag, their own experiences regarding migration, and their current economic challenges, regardless of their ideology. My engagement in social events and everyday life in Yalálag helped me to diffuse any idea of exclusion of one political point of view. Moreover, as more Yalaltecans began to know me and learned about my research, those who did not sympathise with the ideology and political group of my host family became even more eager to talk to me so that I could learn their side of the story.

Those conversations nourished my knowledge about Yalálag, its landscape, and its recent historical changes. During my fieldwork, I devoted a good amount of time to (individual and collective) interviews, hearing life stories, and learning from casual conversations with Yalaltecans. Those oral accounts—sometimes held during field journeys to different areas in the countryside—helped me refine my picture of how Yalálag has changed. They also showed me the remarkable good sense of humor of Yalaltecans. However, my insight into the local

oral history was limited due to my inability to speak and understand Zapotec or Mixe. The fact that most Yalaltecans are bilingual and speak fluent Spanish helped me conducting interviews. I also hired local students to help me translate interviews held in Zapotec and Mixe.

My interest in analysing local demographic changes brought me to meet the doctor and medical assistant at the local clinic, who best kept track of local population changes. This proved to be a fundamental relationship for my fieldwork. Their insights and interest in increasing rates of disease due to diet changes led to a collaboration. Together, and with the support of a group of local youth, we updated the local census and surveyed local households about migration and diet changes. Our surveys reached a total of 440 households, which corresponds to 77% of the total number of households reportedly existing in the whole municipality around that time (INEGI 2010). Preliminary results of those surveys regarding diet change were presented in Yalálag during a festival of traditional gastronomy that the doctor and medical assistant organised together with the support of many Yalaltecan women.

For this research, the *Asamblea Comunitaria* (Communitarian Assembly)—the highest authority in Yalálag—granted me permission to consult the local municipal archive. Documents in the archive helped me gain insight into shifts in productive activities, land tenure adjustments, local conflicts regarding political and land disputes, and conflicts with bordering towns, as well as general information about regional, national, and international migration patterns. Meanwhile, my visits to the municipal palace to review documents helped me obtain an intimate view of the work of the local authorities. I could observe how they organised, what sort of tasks they developed, what challenges they faced, and how they carried out quotidian responsibilities.

Living in Yalálag for more than one year, I learned to love the uneven territory of the hills and the magnificent views of the Sierra and the horizon. My stay enabled me to learn and

get used to daily life, while also observing the changing seasons and the local civic and religious festive cycle. I joined collective and individual religious celebrations, including weddings, funerals, and *quinceañeras*. Likewise, I enjoyed participating in the multiple collective festivities, from the modest festivity of San Juan (the patron saint of Yalálag) to the monumental festivity of San Antonio de Padua (the most popular present-day saint) and also several *barrio fiestas*. In collective and individual festivities, I was not a mere observer but a guest, and from such a standpoint, I learned that guests are required to take part in preparing for and running the festivities, dances, conviviality, and conversations. Attending these celebratory fiestas helped me grasp the intimate sense of communality that Yalaltecan activists and intellectuals have conceptualised. It was during those festivities that I made acquaintances and learned about work and gender divisions and the power of the musical brass bands. Women occupy rather different spaces and tasks in local festivities from men, which allows also for intimate conversations and juicy gossip. At the same time, there is no way to understand the emotional strength of festivities if one omits the energy of the brass bands. There is indeed a unique power in their music that is most tangible when one is dancing or at least listening to the famous *sones* and *jarabes serranos*[15] in the Sierra.

With the help of various Yalaltecan friends and collaborators, I undertook several field-reconnaissance journeys to different areas in the countryside. During those journeys, I took notes and pictures and georeferenced main sites (*parajes*) and plots with different uses. Those journeys taught me to appreciate the Yalaltecan *huaraches* as the most comfortable and suitable footwear for such uneven terrain. As I trekked Yalálag's hills, I fell ever deeper in love with its landscape. Those journeys were another great source of information and pleasure.

[15] As *sones and jarabes*, people of the Sierra Norte of Oaxaca recognize the festive music brass bands play, and most Yalaltecans enjoy dancing and listening to such music. There are tunes from this region and a certain way of playing that create a recognizable *serrano* (from the Sierra Norte of Oaxaca) sound.

The geographically referenced coordinates I took along those journeys served later as a basis for satellite image analysis, which helped me quantify land use change in the region. The analysis was possible thanks to the help of Raul Ponce-Hernandez of Trent University and his postdoctoral researchers Tetsuji Ota and Oumer Ahmed.

The time frame for this thesis closes just at the moment when international migration from Mexico to the U.S. slowed and then declined sharply (Passel et al. 2012; Pederzini et al. 2015). It also closes before the enactment of new structural reforms in Mexico that smoothed and opened new markets that amplified the commodification of natural resources (e.g., energy, mineral extraction), adding extra pressure on vast rural and indigenous territories. At the local level, this thesis ends at a moment when Yalaltecans continue to reassess communal institutions, and most specifically communal land tenure as means of solving long-term border disputes, and recent land conflicts with Mixe households settled in Yalálag—a relative recent conflict resulting from converging demographic and productive changes.

Despite the unique geographical situation of Yalálag and the particular characteristics of the Sierra Norte of Oaxaca, this case study can help illustrate the inequalities that surround the integration of Mexican rural indigenous towns into the ever-expanding market economy.

In its quest to understand socioenvironmental change as result of modern economic developments in dialogue with environmental disciplines, this thesis aims to find responses to urgent questions related to the future of rural areas, and the heterogeneous, unequal, and complex challenges that specific localities and regions face to preserve natural resources.

Giving our present context, in which rural areas are, perhaps more than ever, critical sites of environmental politics (Hecht et al. 2014) and climate change demands a critical reflection of modern and contemporary development, the contribution of this thesis is twofold. On the one hand, it reflects on rural change as a process of uneven modern economic

development (Smith 2008 [1984]). On the other, it helps us understand the potential and the challenges that local people and their institutions of management for natural resources face in order to maintain their territory and their livelihoods.

1.5 Organisation of the thesis

This thesis is organised in six chapters. After this theoretical discussion, Chapter 2 analyses recent demographic changes in Yalalag since the 1950s, including migration patterns linked to the integration of local subsistence activities into the global market economy. In Chapter 3, I develop a historical analysis of market integration in Yalálag. I analyse adjustments of local productive strategies, as well as increasing dependency on external influxes of money and food. In Chapter 4, I investigate processes of land use change and question whether forest recovery is taking place as result of the decline in farming. I describe recent trends in land use and land appropriation that have resulted from the abandonment of farming. Chapter 5 analyses adjustments in local social organisation and takes water management as a primary example of local governance of natural resources. This chapter underscores the process of reassessment of local communal institutions, and of preservation of natural resources. Chapter 6 provides the overall conclusions of my research.

2

Demography

Synopsis: Until the1980s, farming was dominant and emigration a normal practice in Yalálag. However, during the 1980s, international emigration accelerated, and this shift caused drastic population loss. Given that many studies have argued that emigration and consequent demographic decline are main drivers of a decline in farming, in this chapter, I examine emigration and demographic dynamics in Yalálag before and after migration accelerated in this unprecedented way. I show that even though emigration had been historically a normal practice for Yalaltecans, its acceleration in the 1980s caused other unexpected demographic changes, such as the arrival of some Mixe families. That population influx, albeit relatively small, engendered significant social adjustments related to accessing and preserving natural resources: namely, land, forest, and water sources.

> *The preoccupation of [we] the native people of this town is that the number of inhabitants as reported by INEGI in 2000 is higher than the figure for 2005. The concern is even greater because our current population comes from other places. Therefore, the outflow of native people from Yalálag to other destinations is undetectable.*
>
> Consejo de Desarrollo Rural Sustentable de Villa Hidalgo Yalálag, Distrito de Villa Alta Oaxaca, 2008.
>
> *People recount that there used to be more people than today. No, now we are all mixed up! There are more Mixes here. And that is a little bit sad, they say. A lot of people migrated and only a few remained.*
>
> Eutimio, Yalálag, Yalálag, February 7, 2012.

2.1 Introduction

The municipality of Yalálag is located on the border of the Zapotec District of Villa Alta and the Mixe District. Its main town (*pueblo*), which is also the seat of the municipal government, sits on the slope of the Mountain of Guadalupe, facing the neighbouring towns in the cascade of mountains that expands across the region. Yalálag became connected by road with the Valley of Oaxaca only in the 1950s, and this road has been poorly maintained since.

According to the national census of 2010, Yalálag had 2112 inhabitants, the large majority of whom were recorded in the national census as indigenous language speakers (INEGI 2010). A closer look at the specifics of the demography of the Yalalág municipality (*municipio*), however, shows that mobility has been a historical trait that accelerated in the late 20th century. To begin, a great number of Yalaltecans are bilingual: 76% of Yalálag inhabitants

are speakers of an indigenous language, as well as of Spanish.[16] Zapotec is the predominant language used to communicate, but there are also local Mixe speakers. Further, a fair number of inhabitants are migrant returnees or the offspring of Yalaltecan migrants, who were born at temporary migrant destinations either in Mexico or the U.S., and consequently do not speak Zapotec or Spanish. These facts demonstrate the complex demographic undercurrents integrated into broad contexts of state policies, economic shifts, and movement.

This chapter examines Yalálag's current demography and demonstrates how local migratory trends have reshaped access, uses, and social organisation in terms of the regulation of natural resources. It presents a historical demographic overview of before and after national and international migration accelerated, in 1940 and 2011, respectively, and briefly describes current demography. The historical background allows for an understanding of the relations between pervasive emigration, regional immigration, and the formation of recent Mixe settlements in Yalálag. This is important because the recent settlements have become a source of disputes and local institutional adjustments regarding access to and preservation of land, water, and forest.

2.2 Migration dynamics between 1940 and 2011

Zapotecs from the Sierra Norte have historically migrated. In the 17th century, several Zapotec migrants from the Sierra were reported living in the city of Antequera, now Oaxaca (Chance 1989: 87).[17] Yalaltecans have been traveling as regional traders since before colonisation (Ortiz 2002c), in search of farming, land, and jobs in neighbouring regions. Yet, regional and national

[16] The number refers to inhabitants aged three years and older (INEGI 2010).
[17] This assertion, Chance (1989: 87) argues, is based on comparing results from a survey he conducted in 1969 in a suburb of Oaxaca and population data from 1661 within the city limits of Antequera where "28 percent were Sierra Zapotecs, primarily from the Villa Alta district, while Mixes, Bixanos Zapotecs, and eastern Chinantecs were barely represented at all." It is worth noting that Chance approached not Yalálag specifically, but the region of the Sierra Norte. He noted migration of Zapotec groups from the Caxonos areas, as well as Ixtlán, and Teococuilco in the District of Ixtlán, to Oaxaca and other cities.

socioeconomic shifts in the 20th century, local infrastructural developments, along with border policy adjustments in the U.S. accelerated Yalaltecans' mobility and reshaped their migration. Beginning in the 1970s, migration from Yalálag became predominantly urban, and after the mid-1980s, it was mostly international. By the 1990s, international emigration had reached a tipping point as mentioned in Chapter 1.[18]

Despite this accelerated migration, Yalálag's demographic volume has not shrunk as strikingly as in other neighbouring Zapotec towns, all of which experienced intense international migratory flows, especially in the 1980s and 1990s, and which have smaller populations than Yalálag. Yalálag, instead, has maintained a population more than 2,000 inhabitants, closer to the population of Mixe neighbouring municipalities, which are more densely populated (see Table 1).[19]

Yet, emigration continues to reshape life in Yalálag in terms of low population growth and unbalanced gender distribution, with a slightly larger female population among people over thirty. Further, and as expressed in the epigraphs at the beginning of this chapter, outmigration opened space for the arrival of Mixe newcomers from neighbouring towns. Below, I review historical migratory trends in Yalálag.

[18] The 3,000 Yalaltecans estimated to be living in the city of Los Angeles in the United States in 1999 (Gutiérrez-Nájera 2007: 34), which outnumbered the 2,132 inhabitants of Yalálag in 2000 (INEGI 2000).
[19] The table reflects only close neighbouring towns. However, other cases of dramatic population decline are to be found in Zapotec towns in the District of Ixtlán de Juárez. For those examples, see Robson and Berkes (2011).

Table 1
Comparative Population in 2010: Yalálag and Neighbouring Towns

Municipality	*Total Population*
Totontepec Villa de Morelos (Mixe District)	5,598
Mixistlan de la Reforma (Mixe District)*	2,770
Villa Hidalgo (Yalalag)	**2,112**
San Juan Tabaa	1,331
Sto Domingo Xagacia	1,213
San Pedro Caxonos	1,172
San Pablo Yaganiza*	1,108
San Melchor Betaza*	1,091
San Baltazar Yatzachi el Bajo*	677
Sn Mateo Caxonos*	620
San Andres Yaa	497
San Francisco Caxonos	460
Santiago Zoochila	374
San Bartolome Zoogocho	368

*Note: Most of the towns indicated belong to the Zapotec side of the Sierra in the Caxonos Region except when indicated in parenthesis. * indicates a bordering town. Source: elaborated with data from INEGI 2010.*

2.2.1 The urban shift: 1940–1970s

At the beginning of the 20th century, Yalálag's population was over 3,000 (see Figure 1). The demographic composition of Yalálag was predominantly Zapotec, but also included Mixe, Chinantec, and a few Yalaltecans of Spanish descent. Likewise, the town hosted a small floating population from the Valley of Oaxaca (De la Fuente 1998: 23). Yalálag was then a regional market hub. The population was mostly peasant, and specialised in some manufacturing and trade, (De la Fuente 1949), traveling to a wide range of destinations in Oaxaca and neighbouring states.

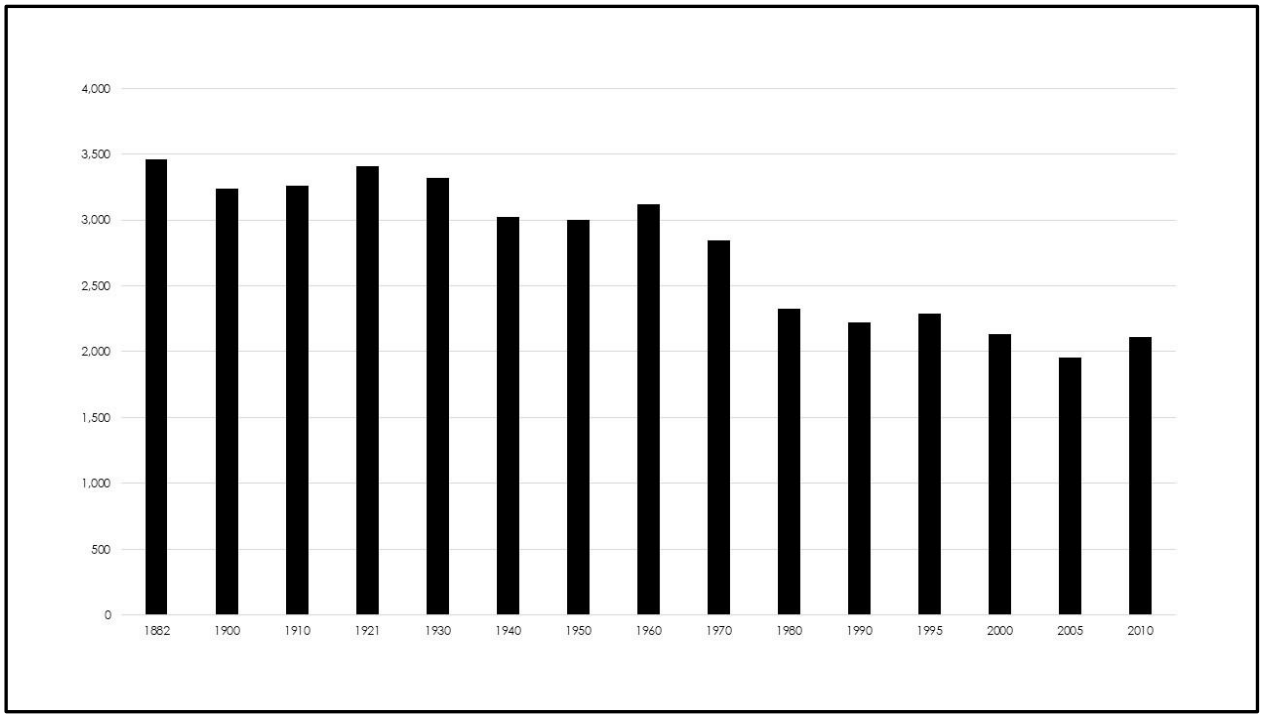

Figure 1. *Population dynamics in Yalálag 1882–2010. Based on data from Chance (2003); De la Fuente (1949); INEGI (general population census 1950–2010).*

Migration at that time was not rare. Rather, in the first half of the 20th century, Yalaltecans already experienced population loss.[20] Reasons for migrating varied greatly, ranging from the need to cover subsistence costs to fleeing political conflicts[21] to the desire to acquire a fortune (De la Fuente 1949: 34, 129; see also Aquino 2010). From 1940 until the 1970s, emigration was mostly regional and national. Most popular destinations were located on the northern side of the Sierra Norte of Oaxaca or on the coastal plain of Veracruz (e.g.,

[20] Julio de la Fuente described that population decline as follows:
"Yalálag is, since the last century, the most populated *municipio* of the Sierra Norte. There are Yalaltecans who avow the town once exceeded 5,000 inhabitants. It could have reached about 3,500 inhabitants. Yet, it has experienced a progressive population decline due to political and economic reasons in recent years. In spite of this, it is a pueblo that has grown." (De la Fuente 1949: 31.) [Original text in Spanish, translated by the author.]

[21] For most of the 20th century, up until the mid-1980s, local authority was violently exercised and disputed in Yalálag, and political persecution was not rare. This situation pushed Yalaltecans to leave their town, as Don Ernesto recalls: "Several left; uncles, cousins. . . because the leader at that time was very bloodthirsty, and very strict with them. If someone did not accomplish their communitarian service, they received death threats. That is why they left." It is also worth noting in Don Ernesto's testimony that communitarian obligations were strictly and vertically appointed at that time. Social duties that local authorities back then imposed in Yalálag entailed economic burdens, especially for poor households. Those circumstances caused also migration.

Chinantequilla, Comaltepec, Choapan, Loma Bonita, San Juan Jaltepec, and Playa Vicente).[22] Meanwhile, rapidly growing cities such as Oaxaca, Puebla, and Mexico City were also gaining popularity as they offered new economic opportunities, as well as access to education (De la Fuente 1949; Aquino Moreschi 2010). Until the 1970s, only a few Yalaltecans had joined the Bracero Program (1942–1964)[23] in the U.S.

Farming was then the predominant activity in Yalálag, and less-fortunate Yalaltecans were more susceptible to adversities arising from unequal land distribution, land shortages, and droughts, which became common reasons to migrate either in search of more fertile soil[24] or temporary agricultural jobs working cash crops (e.g., coffee, cotton, or cacao).[25]

During the first half of the 20th century, the country experienced economic, urban, and industrial growth during a period best known as the Mexican Miracle (1932–1981).[26] Some

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[22] For example, some Yalaltecans established along a historical commercial route between the Isthmus of Oaxaca and the coastal plain of Veracruz (Bevan and Witlaner, cit. by Ortiz 2002c: 29–30), becoming main regional traders.

[23] The labour shortage in the United States during World War II triggered the signing of the bilateral Bracero Program which exported temporary Mexican labour across the border. Durand (2007), however, argues that migration of Mexicans to the United States took place in previously, first under a bilateral agreement signed in 1909, and later during World War II. In this first period, the author asserts, the migrant flow was constrained and selected, shaping it as temporary and directed towards the farming sector. This selection was strongly enforced during the periods of a mass deportation in 1921, 1929–1933, and 1939 (op cit: 28).

[24] An account of Don José about his father best illustrates this:
He traveled to the Bajos [coastal plain of Veracruz] walking. He reached Playa Vicente, which is toward the side of Veracruz. He was working in different places. Later on, he settled in the town called Chinantequilla Mixe. . . . He very much liked that place because of the land. It was a very fertile soil there; anything would grow there! He could plant anything!" [Don José, February 3, 2012].

[25] Such was the case of Don Rosendo: "In that time, around the years 1962, 1963, there was a drought here. It did not rain a lot, and our crops did not grow, and we had very poor crops. We didn't have enough to eat. Therefore, we left here. A lot of people from here went there!"
Author: "Why didn't you go to Oaxaca or elsewhere?"
"No! Because in Oaxaca there is no work in the fields. In contrast, in Chiapas, it is only work in the fields: in the coffee crops, in the cotton fields, in the cacao fields. . . . There was a lot of work in the fields! That's why we liked it. What happened was that some fellows from here went there first—only two or three. They went to know the place, and to see how the work was. They were the ones that got us hooked, and that's how we went there." [Don Rosendo, Yalálag, February 19, 2011]

[26] By this expression, most scholars recognise a period of national, industrial, and economic growth between 1932 and 1981 (Cárdenas Sánchez 2010; cf. Monroy Gómez Franco 2015). The economic model at that time was loosely based on the import substitution industrialisation model (ISI) that the Mexican government formally adopted in 1946 (González Marín 2002). In broad terms, the ISI model proposed a protectionist policy that implemented importation tariffs while industrialising the country as the way to achieve broad economic development and self-sufficient production.

Yalaltecans moved to growing urban centers. Oaxaca and Mexico City became preferred urban destinations. Relatively affluent Yalaltecans could afford to send their children to cities to learn Spanish and pursue work and/or education opportunities[27] (Aquino Moreschi 2010). Meanwhile, less-fortunate Yalalatecans who sought work opportunities in urban destinations were somewhat deterred because of insufficient funds for journeys and the need to acquire new working skills (i.e., for manufacturing, factory work,[28] domestic service, and retail).

That situation started changing in late the 1950s due to new local and regional infrastructural developments that enhanced mobility to urban destinations and access to other jobs. Most Yalaltecan children received access to basic primary and secondary education around 1956,[29] as part of which they acquired basic skills and inspiration to pursue higher education[30] and/or other economic opportunities available in urban destinations. Further, in the 1960s, Yalálag became connected by road with the Valley of Oaxaca (see Chapter 4), which eased mobility and reduced travel costs somewhat. This all accelerated rural-to-urban migration, which then became a predominant trend in the 1970s, especially among youth:[31]

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[27] "There were many rich people here. And they sent their children to those places, to Oaxaca [and Mexico] to get educated. The rest of us who were not rich, we were dedicated to farming; we were devoted to the farming fields." [Don Samuel, October 6, 2011]

[28] De la Fuente (1949: 35) asserts that economic activities diversified much more, yet he states, "Yalaltecans avoid becoming factory or mining workers. Rather they choose independent work. However, we found some cases of Yalaltecans who worked in factories in Mexico City around that time." [original in Spanish, translation by the author]

[29] Local authorities at that time were instrumental in boosting education. They implemented the logistics and human resources to build a first (secondary) school finished in 1956 and further introduced compulsory education (see also Aquino Moreschi 2002: 32–34).

[30] It is worth noting that the first schools in town also inspired those who later became local intellectuals and activists. As Don José recalls, the first schools brought remarkably committed teachers: "Teachers who arrived here, they were lecturers. They taught everything and they were committed to children. They gave it all they had; they taught. And that is why we learned a lot." [Yalálag, February 3, 2012]. Those teachers, mostly Zapotecan graduates of the recently founded *Escuelas Normales Rurales* (Rural Teachers' Schools), incorporated critical Marxist perspectives into their programs and likewise served as inspiration to some of the students, who after further education and militant experiences, led a critical political indigenous movement in Yalálag (Aquino Moreschi 2002, 2010).

[31] As Don José describes: "Besides the bruises and bumps, we used to leave at six in the morning from Oaxaca to get here at six or seven at night. [The journey used to take] all day long because the road was really ugly" [Yalálag, February 3, 2012]. Also, the local authority in 1971 stated: "It is not a good service due to the bad conditions of the dirt road. . . the journey from Villa Hidalgo to Oaxaca of 138 kilometers takes ten and eleven

> *Beginning in the 70s, many people left because, at that time, there was school already. We had a secondary school then. It was private but it existed. Hence, many people finished their studies and, what to do? Well, they were in search of new horizons. In my specific case, that is what happened. I finished my secondary* [school] *and I said, "What do I do?" Since I had studied a bit, I told myself "I will go to the city." . . . . In the 1960s, I started learning my first letters here at the primary, the secondary. And in 1972, I left my town for the city* [i.e., Oaxaca]. *I was about to turn sixteen. I became 17 in the city* [Don Enrique, Yalálag, February 3, 2012].

As Don Enrique recalls, acquiring urban manners and an urban lifestyle was attractive and attainable for young Yalaltecans. Yet, it would be wrong to consider the desire to benefit from economic and urban infrastructural developments as being exclusive to Yalaltecan migrants. Rather, the wish to improve local infrastructure and economy was common among Yacaltecans[32] (De la Fuente 1949) and had inspired, for example, the construction of the first local schools and the road connecting the sierra with the valley. Also, Yalaltecans were aware of the unequal distribution of economic and infrastructural development in the country.[33]

As emigration to Mexico and Oaxaca City gained popularity, Yalaltecan migrants in those destinations became instrumental to continuing to improve public infrastructure in Yalálag.[34] Despite the physical distance, Yalaltecan migrants kept close ties with their

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hours" [Extract from official letter to the Department of Tourism, April 14, 1971. Historial Municipal Archive, Yalálag].

[32] Such appeal went beyond contrasting perspectives about traditions and change (see De la Fuente 1949: 24).

[33] The demand for infrastructural and social improvement was further echoed in other towns and regions in the country. More broadly, social pressure regarding unequal distribution of wealth and services intensified in the country, ultimately pushing the Mexican state to expand public services and infrastructure in the 1960s and 1970s. As Servín (2010) notes, social unrest and various urban and rural political movements responded to the unequal distribution of wealth and social justice. Further, although the Mexican government gave lip service to democratisation, it supported old forms of local and institutional power that contributed to preserving a vertical (authoritarian) structure. Also, the government violently repressed social movements that demanded better economic, social, and political conditions (farmers, workers, and students). Yalálag was not an exception to this. Alejandra Aquino's work (2002) sheds light on how Yalaltecans responded to such actions. The political movement that took place in Yalálag, as Aquino's work shows, created new forms of politics that incorporated a reinterpretation of traditional practices and novel ways of appropriating indigenous identity.

[34] The Papaloapan Commission (1946–1984) was another actor in infrastructural development in the Sierra Norte in the 1960s and 1970s. The Papaloapan Commission was a vast public organism created as head of a large state developmental project, inspired by the work of the Tennessee Valley Authority (Fox 1972:149), and

hometown, forming organised networks to support their *paisanos* (literally, countrymen, but a commonly used term used to refer to fellow Yacaltecans).[35] Several groups of organised Yalaltecan migrants formed, and although only a few of them endured (e.g., Asociación Yalalteca), those organisations provided support for new migrants and served likewise as basis for maintaining close ties among Yalaltecan migrants living in rapidly growing cities. More importantly, their organisation kept close communication with Yalálag and helped to sustain ties between migrants and their hometown.

2.2.2 International migratory turn: 1970s–1990s

Until the 1970s, the rate of migration to the U.S. was low. That journey was costly, and Yalaltecan migrants treasured maintaining physical ties to their hometown (Jopling 1973: 71). Yet, migrant stories and physical evidence of their economic improvement in Yalálag (some had been able to build or refurbish houses) had created awareness of the profitable character of international emigration among Yalaltecans (Cruz Manjarréz 2006, 2013).

After the end of the Bracero Program (1964), a few Yalaltecan migrants had remained in the U.S. and started moving to cities (mainly to Los Angeles) and encouraged their families

covered the region of the Papaloapan Basin Area. The project, in theory, aimed to enhance food production (as a way of improving the local economy but also to supply food to a growing population), build a dam to generate hydroelectric power, and improve infrastructure and the population's welfare (e.g., health campaigns, construction of potable water pipes, schools, roads) in the whole basin region. Implementation of this project proved, however, rather problematic. For an early critical analysis of it, see Fox (1964).

[35] This testimony best illustrates this. "Yes, they used to organise. They said we should work for the improvement of Yalálag. Some youth met to plan every week or every other week. I am not sure. There was also another group, an Asociación Yalalteca de México, as it was called. I have heard that they worked really hard. They worked for the electrification of Yalálag. They worked much earlier [than that] to get the secondary school. It was a private school. They also worked to get a road. They did several things. There were small groups. I think that there was not a link, nor coordination to collaborate with each other. They did not share the same ideas but each one worked. They were groups that came together and likewise vanished when they did not agree. They organised assemblies where they agreed about what to do; I barely went to two or three assemblies. At the same time, they were looking for a way to get a big plot of land (in Mexico City) so that Yalaltecans could live there, but that was not achieved. It was only an idea. And since we were so many who left, I think that is how the life of the Yalaltecan improved because when I arrived to Mexico City, many were renting but as time passed, they were buying land plots around Ciudad Nezahualcoyotl, Cuautepec, and other places such as in San Felipe, and Ecatepec" [Don Ernesto, January 22, 2012].

to join them (Equipo Pueblo 1988 op. cit. in Gutiérrez Nájera 2007: 34; Aquino Moreschi 2010; Cruz-Manjarrez 2013). Such was Don Samuel's case, who in 1977 at age twenty-eight, recently married to María, left for Los Angeles. Don Samuel did not leave Yalálag by himself; he left with a brother and attempted to join his older brother, Enrique, who had been a Bracero migrant:

> ***María:*** *We lived [together] one year only.*
> ***Samuel:*** *And I had just had my little girl. And that girl only was seven or eight months [old] when I left. Because as I said, we had that necessity. . . . Ah, and as my brother Enrique was already in the north, he sent a letter in which he said, "Come immediately. The job is ready."*
> ***María:*** *And he thought, "I'd rather go to work so that we can build a house." We had adobe, but we needed money to build the house; we only needed the money for the materials. And so that is why he reckoned, "I am going to go to work there, to see if I can earn some money and build the house". . . . Afterwards, when he earned money he said, "I am going to start building the house." And he sent money to build the house. That is what we did.*
> ***Samuel:*** *By then, I did not have [animals] because I had sold them. I had spent [the money] when I married her. And one animal that remained I sold it to [afford] going north. Me and my brother Alberto left. And we went to look for someone who could take us. And we went to Xochixtepec, where I found a good friend. I did not know him, but he was a nice person. And that guy told me, "I am going to make the deal, but I cannot pay the 'coyote'[36] to pass there because I do not have the money." But I explained that my brother was there and that he was calling us. "Ah, ok, yes I take you". And that guy had his passport. . . . He had been there already for a long time. . . . And that is how we went up to Tijuana, and in Tijuana, they looked for a "coyote" to take us from Tijuana to Los Angeles walking . . . to San Diego, where they switch—sometimes they take a bus, and sometimes it is walking, and we got there walking. Yes, it was hard. . . . But when we arrived, we [thought] we arrived to work. But it is not true!! [What my brother had written]; he had said that there was a job so to make us come, to encourage us! But the day after I got there, we met Enrique's brother-in-law, and he told us, "There is a gardener who says he needs a*

[36] This term refers to professional human smugglers.

worker" and he took us. "I am going to explain and he is going to hire you" But he did not! And on the way back from there, we met another guy who was from El Salvador and he asked, "What are you looking for?" I am furious, [so I responded] "Why do you ask? "I am asking what kind of job you are looking for." But I am really angry, and I do not want to respond to him. "But I am going to help you. Here lives a guy who needs a worker" Let's go, then! [Don Samuel and María, Yalálag, October 6, 2011].

As Don Samuel explains, the journey to Los Angeles represented a significant economic and emotional investment, as his frustration after figuring out his brother's encouraging--rather than literal---message. The promise of a job, and thus the possibility of improving his new family's living situation had encouraged him to undertake such a costly venture. He had to sell his last remaining livestock to pay for the journey. Further, his testimony shows the relevance of migrant networks during the journey and also with regard to finding jobs and providing general assistance in Los Angeles.[37] Such help, as Don Samuel notes, was then to be found among their Zapotec neighbours of Yatzachi El Bajo, pioneer Bracero migrants from the Sierra Norte.

In the 1970s, the number of Yalaltecan migrants in Los Angeles started growing, slowly at first. Los Angeles' bustling economy (Soja 1983) relied on the flexible labour of migrant Yalaltecans, who found jobs in factories, restaurants, and domestic service (Jopling 1973; Gutiérrez Nájera 2007; Aquino 2010). Their arrival enabled the building of social migratory networks in that city, and their reports back home further nourished an idealised perception about such migration, setting up conditions for additional emigration (Massey 1990).[38] Still, it

[37] Aguilar and Alatorre (2011: 126) assert that Protestant religious groups arrived in the Zapotec Sierra around the 1920s but were rather few in Yalálag. In other interviews, people mentioned that early Yalaltecan international migrants joined the Protestant church in Yatzachi El Bajo to build migratory networks.

[38] It is worth pointing out that Yalaltecan migrants in the United States came together organically. More interesting, though, was their ability to self-organise at such destinations. As early as the 1970s, they made use of traditional, religious-based barrio structures to celebrate local festivities in Los Angeles, and to support collective projects and religious festivities of Yalaltecans residing back home (see Chapter 5; see also Cruz Manjarrez

was not until well into the 1980s that international emigration from Yalálag actually gained speed.

Back in Yalálag, 1980s started with little precipitation. Local drought was not abnormal, but it then coincided with a major economic downturn in the country. In 1982,[39] Mexico entered an economic recession that put an end to the so-called Mexican Miracle. As an immediate consequence of the economic crisis, government support to small-scale farmers, jobs, and economic opportunities were ended (see Chapter 4). This happened just at the moment when the Yalaltecan migrant network started acquiring strength in Los Angeles, and thus emigration to that city sped up:

> *After I left in 1978, I was already there in 1979. In 1980, people from here started leaving! And so I started hearing that people said, "This guy arrived! And then another, and another one." Once I asked my aunt, I wrote a letter and asked, "How many people have left?" "Whoa, a lot of people have left from here!" she replied.* [Don Samuel, Yalálag, October 6, 2011]

During the 1980s, Yalaltecans left for Los Angeles from Yalálag and from domestic migrant destinations, such as Mexico City.[40] Blood kin and social relationships were at this point

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2013: 47–49), as well as other collective projects in Yalálag that were related to infrastructural works and political issues.

[39] The Mexican peso devaluated three times in 1982, and public expenditures, which further increased debt in the first part of that year, also had to be cut back as the government faced a moratorium on foreign loans (Cárdenas 2010).

[40] Even though we cannot assess whether Yalaltecans who were living in cities emigrated less frequently to the United States from those locations, it is possible that, as Fussel and Massey (2004) suggest, job alternatives, a relatively restricted international migrant network, and the lesser grade of feedback effect of migration in those areas caused a slower acceleration of international migration from Mexican cities. Eufemia recalls, "After I left [for Oaxaca City] to study in high school, the secondary students started leaving as soon as they finished their school. I remember that those who were just in the following cohort [after me] in the secondary, those were the ones who left for Los Angeles. And afterwards, when the dollar was already famous, I asked myself. 'So where was I when everyone left to Los Angeles? Why didn't I get interested in going there?' I asked this to my self! Hahahahaha! And so I recalled, and realised that it was because I was studying [in Oaxaca]! So it was as if it [mass international migration] skipped me. Everyone left from here [Yalálag] for Los Angeles" [Yalálag, February 11, 2012].

fundamental to the boom of outmigration.[41] Both young Yalaltecan men and women were leaving up to go north, some of whom subsequently started creating families in more permanent migration (see Cruz Manjarrez 2013).

As international emigration was gaining unprecedented speed and becoming more permanent, the U.S. government enacted an enforcement immigration reform in 1986: the Immigration Reform and Control Act (IRCA).[42] The reform offered amnesty to undocumented migrants already residing in the U.S. Several migrant Yalaltecans applied for amnesty, thereby attaining legal status that made it easier for them to stay permanently and to bring their relatives (Aquino Moreschi 2010; Cruz-Manjarrez 2013). Meanwhile, border enforcement continued increasing after passage of the IRCA.

In the 1990s, the U.S. government undertook several border enforcement operations[43] based on a political discourse of deterrence of illegal entries that focused on border areas regarded as main gates (Andreas 2000; Cornelius 2001; Cornelius and Salehyan 2007, Sarabia 2012). Policing operations increased the difficulties and costs of international

[41] The individual decision to migrate was normally realised with the support of other family members, and particularly with the support of the parents and/or siblings. I came across many cases of children and siblings who failed to gain family support to fulfill their desire to migrate. I also found that the opposite was common, and, in some cases, it was siblings and/or parents who encouraged people to migrate. Further, I also found several accounts of people who were pressured to return from their migratory stays by family members.

[42] The Immigration Reform and Control Act (IRCA) introduced stringent immigration enforcement. It included the offer of amnesty to undocumented migrants already resident in the United States, instituted sanctions against employer for hiring undocumented migrants, and the verification of the legal status of workers. Yet, the burden that IRCA was supposed to place on employers was instead endured by undocumented workers, who continued being hired but with lower wages and higher levels of exploitation (Donato and Massey 1993; Sarabia 2012). After the IRCA, undocumented migrants became more vulnerable than they had been previously.

[43] In the early 1990s, the United States government redefined policies with regard to its southern border so that they acquired high political status. Since 1993, the budget of the Immigration and Naturalization Service (INS) has significantly increased. A series of enforcement operations followed: the first Operation Hold the Line (originally Operation Blockade) started in November 1993 in El Paso, followed by Operation Gatekeeper (1994), developed in three phases in San Diego. Then came Operation Safeguard (1994) in Arizona and Operation Rio Grande (1997) in the Rio Grande Valley of Texas (Andreas 2000; Corneliuus 2001; Cornelius and Salehyan 2007).

migration, as Don Augusto recalls when contrasting his first time crossing the border in 1989 with his second time after 1993:

> *When I crossed the first time it was a bit hard, but only a bit, because they sent us back. But we tried again, and the second time, we passed. First, we crossed the border by land, just at the border in Tijuana, but when we were in San Diego, they got us and sent us back. But then the second time we tried they didn't.*
> *. . . After four years I came back [to Yalálag], and then I left again for one more year. So the first time [I had gone], we crossed just through the thicket: that's how we passed. But later, that was impossible. There were lots of lights, and there was much more. . . how you say it? . . .border patrol, yes! So we had to cross in a different way.* [Augusto, Yalálag, February 2, 2012]

However, migration from Yalálag to Los Angeles did not stop (see Figure 2). Although human and economic costs were higher, Yalaltecans relied on a solid migrant network. According to national censuses, Yalálag lost 525 inhabitants in 1980 and another 103 people in 1990 (see Figure 1). According to those official accounts, the Yalálag population of 2,220, in 1990, had not been so small since the 18th century.

Non-official calculations present a more striking demographic landscape; locals considered that the number of Yalaltecans living in Los Angeles outnumbered those residing in Yalálag at that time (Gutiérrez Nájera 2007: 34). Border enforcement had not prevented Yalaltecans from undertaking the path north. Instead, their migration had become permanent and several brought also their families (Cornelius 2001; Aquino 2010). Migration to Los Angeles continued at a rapid pace in that decade.

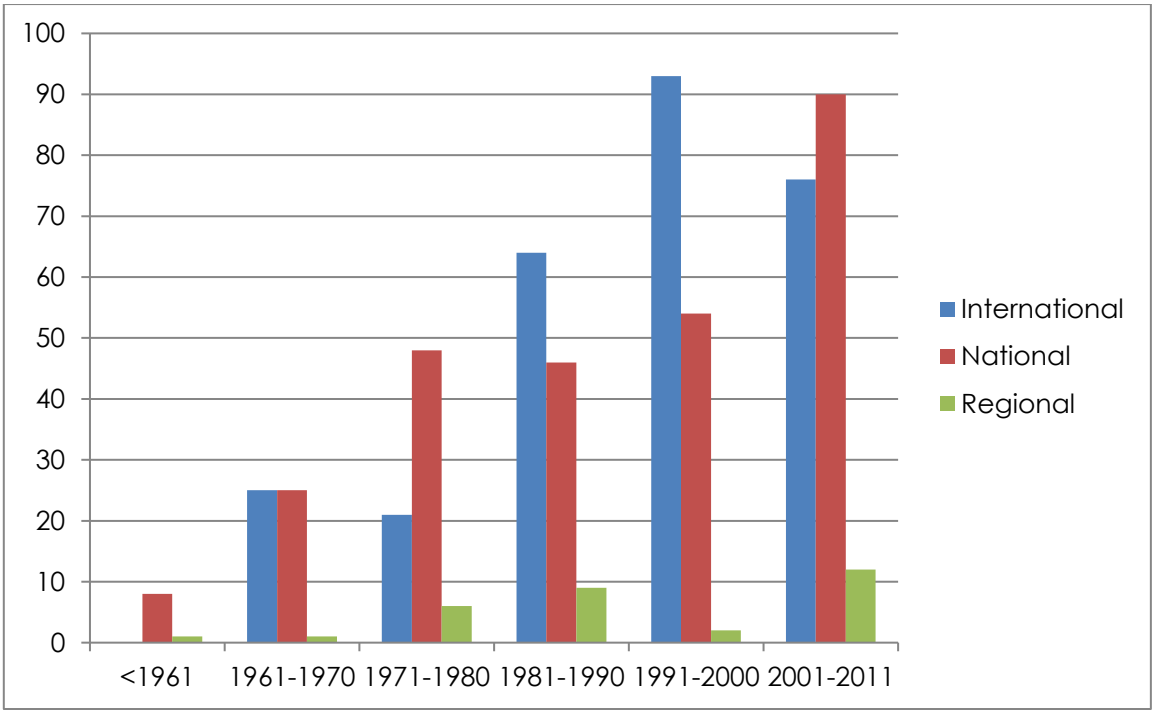

Figure 2. *Reported cases of migrant destinations in surveys conducted in Yalálag, summer 2011.*

2.2.3 International migrant contraction: 2000–2011

Border enforcement operations carried out at the U.S.-Mexico border had purposely increased the risk of death and the economic costs for those who had crossed it beginning in the 1990s.[44] Things further worsened at the turn of the century, and especially after the attacks on September 11, 2001. After 9/11, the U.S. government considered immigration a homeland security issue[45] (Leiken 2003), hardening policies and influencing emergent notions about undocumented migrants as criminals in the public perception.[46] The hardships and costs for

[44] I make the assertion that this was the clear purpose following Cornelius (2001:667), who states, "Indeed, the theory underlying the strategy was that raising the cost, the physical risk, and the probability of apprehension on each entry attempt would eventually discourage the migrant and cause him (or her) to return to the location of origin. Better yet, the prospective unauthorized US-bound migrant would be deterred from leaving his home community in the first place." Beyond this, Leiken (2003: 94) states, "The 'success' of new U.S. methods is thus exacting a substantial toll in Mexican lives, yet it also points the way to a solution."

[45] As part of this shift, the INS was moved from the U.S. Department of Justice and became the U.S. Immigration and Customs Enforcement (ICE) under the U.S. Department of Homeland Security (DHS).

[46] Leiken (2003: 87) boldly states, "[After September 11] to many Americans, immigration, which had seemed only to dish out gentle and inexpensive gardeners and nannies, suddenly appeared dangerous. Immigration was now viewed through the somber lens of homeland security, as vulnerability stared at us from every airport, bridge, chemical and nuclear plant, water system, computer terminal, salad bar and unopened envelope."

professional smugglers[47] (*coyotes*) increased, while their use became ever more necessary to those who aimed to cross the northern border[48] as migration continued (Cornelius 2001; Aquino Moreschi 2010, 2012, Robson et al. 2018, 2019).

During our conversations, most Yalaltecans stated that 9/11 had been a watershed moment; it instigated an ever-more difficult situation for their *paisanos* in Los Angeles. Border enforcement operations after 9/11 made undocumented migrants even more vulnerable to criminalisation, not only at the border, but also within the United States, increasing the difficulty of their everyday lives.[49] On top of risks due to border enforcement, undocumented migrants have also faced major threats and increasing violence in different regions of the country and especially along the U.S.-Mexican border since 2006, after then-President Felipe Calderón Hinojosa inaugurated the so-called war on drugs, a strategy focused on direct military confrontations with organised crime groups. As these confrontations started, organised crime and often-corrupt authorities have fought for territorial control, and, as a result, undocumented migrants have encountered a hyperviolent situation upon deportation, as well as along on the

[47] As Tomas, a returning migrant who crossed the border after that period, recounted to me, the journey to cross started in the dessert. Then they had to hike up a hill and later through a narrow tunnel with fetid smells and animals, including bats. They also had to be very careful and quick all the time. If someone stayed behind, they couldn't wait for him or her, or they would be obliged to separate from the group. Later, when they had arrived on the other side of the border and were walking on good roads, they had to find cover from the border patrol in gullies beside the road, and run as fast as possible to get into the vehicle that would take them to the final destination when they reached it. As Tomás explained, the whole journey was a chain of professional smugglers (*coyotes*): someone guided them in the border crossing, someone else waited for them on the other side of the border, and so on.

[48] Because border enforcement has made undocumented crossers more vulnerable, while making professional people-smugglers more necessary, abuses by the latter of the former have also increased. During my fieldwork, I heard the story of a migrant from a neighbouring town who had made a religious promise to a saint and returned to the town to accomplish it. When trying to return to the United States, he hired a *coyote*. The *coyote* kidnapped the migrant and demanded a lot of money that he did not have due to the expenses made to keep his religious promise; the *coyote* let the person go in the end but only after cutting off his arm.

[49] After 2002, for example, undocumented workers' statutory protections were ended by federal immigration policy (Cimini 2008; see also Hall et al. 2010). In 2005, other legal actions and operations took place. The REAL ID Act of 2005 banned states issuing driver licenses to undocumented immigrants. Also in that year, after the Border Protection and also the Antiterrorism and Illegal Immigration Control Act of 2005, "unlawful presence" in the United States became a federal crime (Cimini 2008). Finally, Operation Streamline required federal prosecution and imprisonment of undocumented border crossers (Sarabia 2012).

journey, in their attempts to cross the border (Slack 2019). Still, border enforcement and related risks did not deter Yalaltecans, nor many other Mexicans, from entering the U.S.[50] (Cornelius 2001; De Genova 2005 Cornelius and Salehyan 2007; Cornelius and Lewis 2007).

Paradoxically, the effects of border enforcement were more vividly experienced in Yalálag itself when Yalaltecans migrants in the U.S. stopped returning. By then, many Yalaltecan migrants residing in the U.S. had not had a chance to return to their natal home even once since their departure. Such is the case of Martín's daughter, who has lived in Los Angeles for more than thirty years. She left for Los Angeles when things were "not as bad as they are now," as Don Martin put it; yet, she has not been able to legalise her status, nor has she been able to return to Yalálag to see her parents.

During interviews and informal conversations in Yalálag, Yalaltecans stated that the number of migrants who returned to Yalálag to celebrate local religious festivities has drastically declined due to the increasing risks and costs of crossing the border. Most of migrant Yalaltecans who return to their hometown during main local festivities are those who live in Oaxaca, Mexico City, Puebla, and other places in Mexico. Meanwhile, the few of their *paisanos* who temporarily return from the U.S. are those who have become legal residents of that country.

With border enforcement, migrants' exposure to employers' abuses and to wage disparity also increased (Donato and Massey 1993; Cimini 2008; Hall et al. 2010). The U.S. entered the Great Recession in 2008, and the migrants' conditions further worsened. Job opportunities became scarce, and wages were abusively lower. Back in Yalálag, most everyone knew well that difficult situation. Yalaltecans recounted how jobs became scarce and how many

[50] For an analysis of how migrant Yalaltecans experienced the changes of crossing the border right after the transformation of the state policies in border control, see Aquino (2012).

paisanos in Los Angeles became unemployed at that time. It was at this point, in 2009, that international outmigration from Yalálag slowed (see Figure 3). National emigration, on the other hand, has maintained itself with slight shifts. Although most Yalaltecans kept moving mainly to Oaxaca and Mexico City, some kept flowing to other destinations in the Sierra Norte.

In short, even though international migration contracted in 2009, total migration did not stop but only shifted and slowed. Despite awareness of the high risks and costs of migrating to the U.S., that move still offers a dream and an economic alternative for young Yalaltecan adults (Cimini 2008; Sarabia 2012). Los Angeles is still main international destination, but Yalaltecans have also started migrating to other U.S. cities in recent years. These new migrant destinations include urban parts of North Carolina, as well as Indianapolis, Las Vegas, Houston, Columbus, and Kansas City.

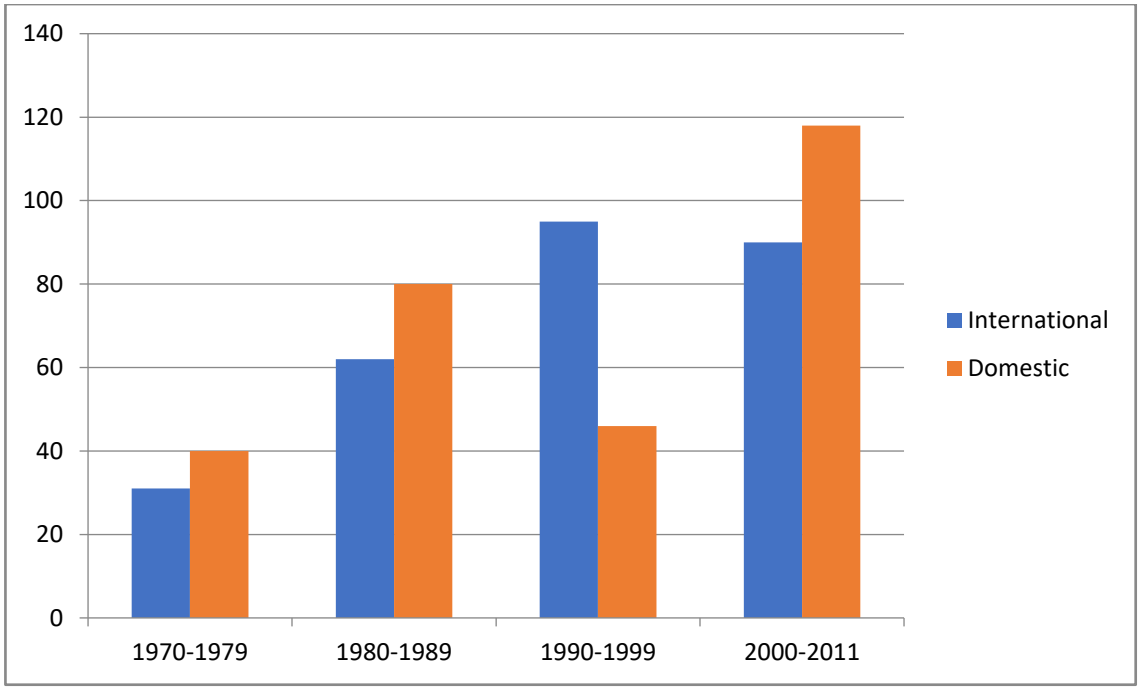

Figure 3. *Overview of international and domestic migration.* Source: surveys conducted in Yalálag, summer 2011.

2.3 Migrant return

Migrant dynamics are not unidirectional. Despite Yalálag having a long history of outmigration, the town constantly received temporary and permanent returning migrants. Household survey data showed that 5% of the surveyed population were migrant returnees (see Figure 4).

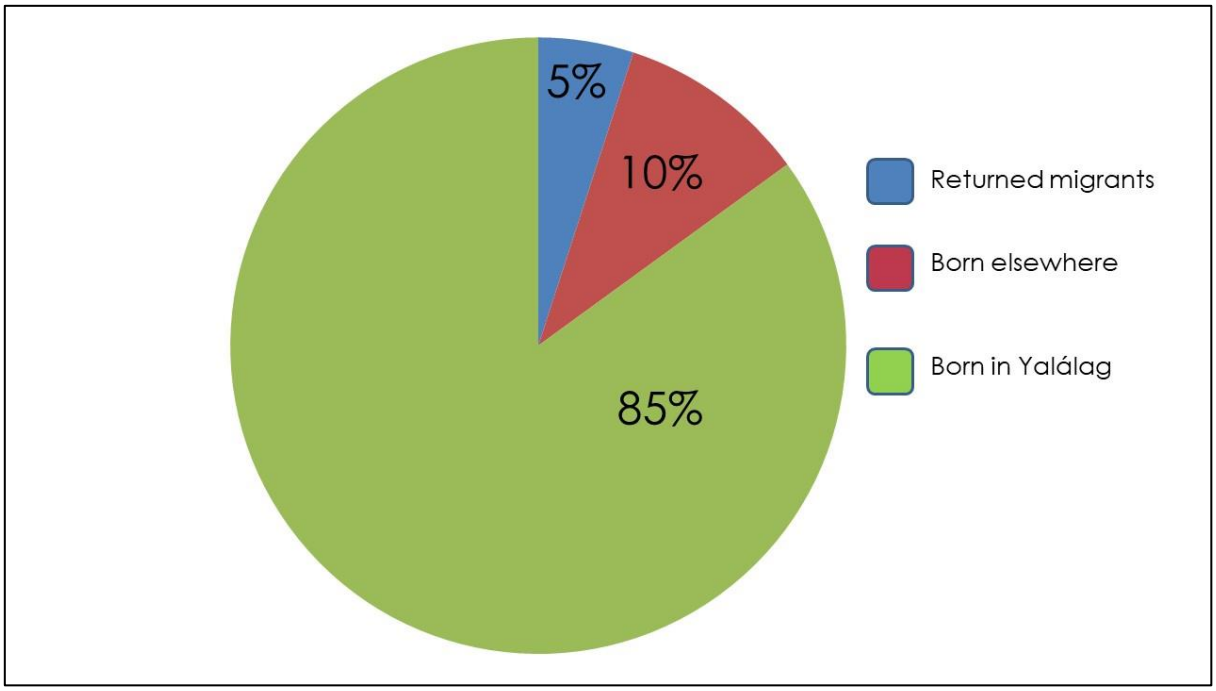

Figure 4. *Population composition according to place of origin.* Based on data from surveys conducted in Yalálag, 2011.

Most Yalaltecans who reported being returning migrants had arrived in Yalálag between 2000 and 2011 (see Figure 5), and 50% of them came from the U.S. That number was approximately one-third of the number of Yalaltecans who had been reported as moved to the U.S. in the same period (see Figure 6). Further, several returned migrants stayed in Yalálag only temporary before moving again, either back to the U.S., or to other urban destinations in Mexico.

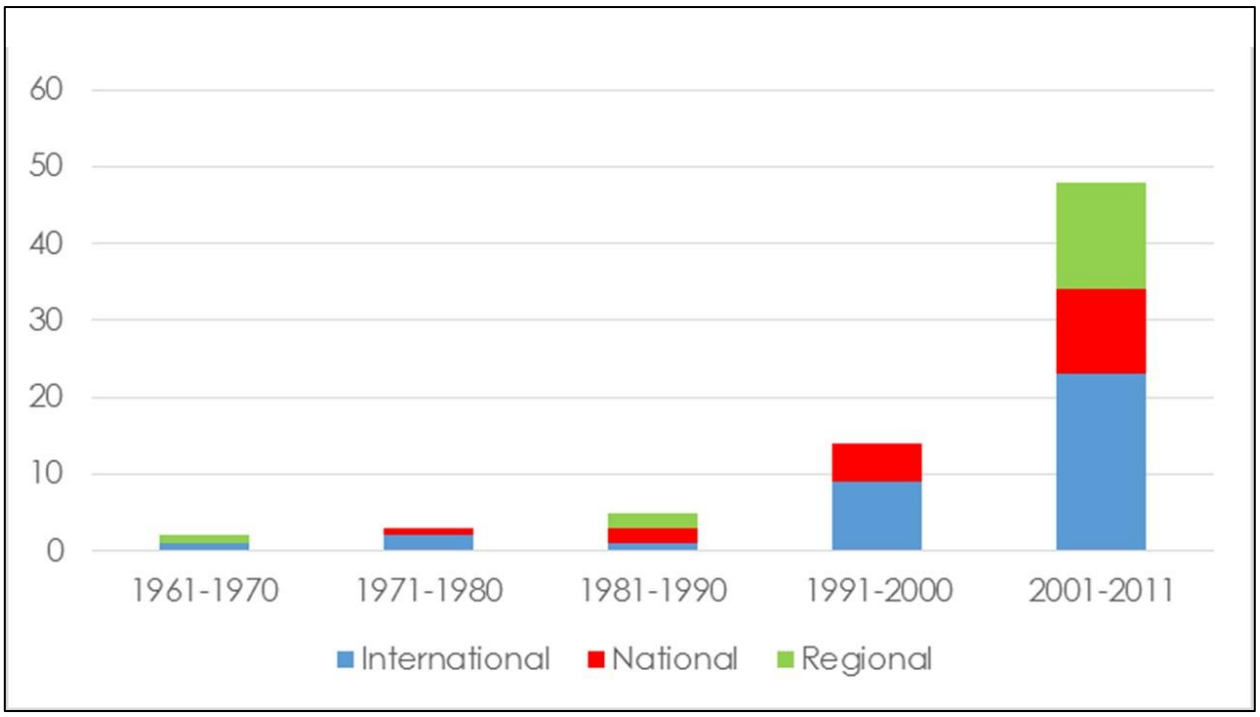

Figure 5. *Returning migration flows to Yalálag, by different migratory destinations, 1920–2011.* Source: surveys conducted in Yalálag, summer, 2011.

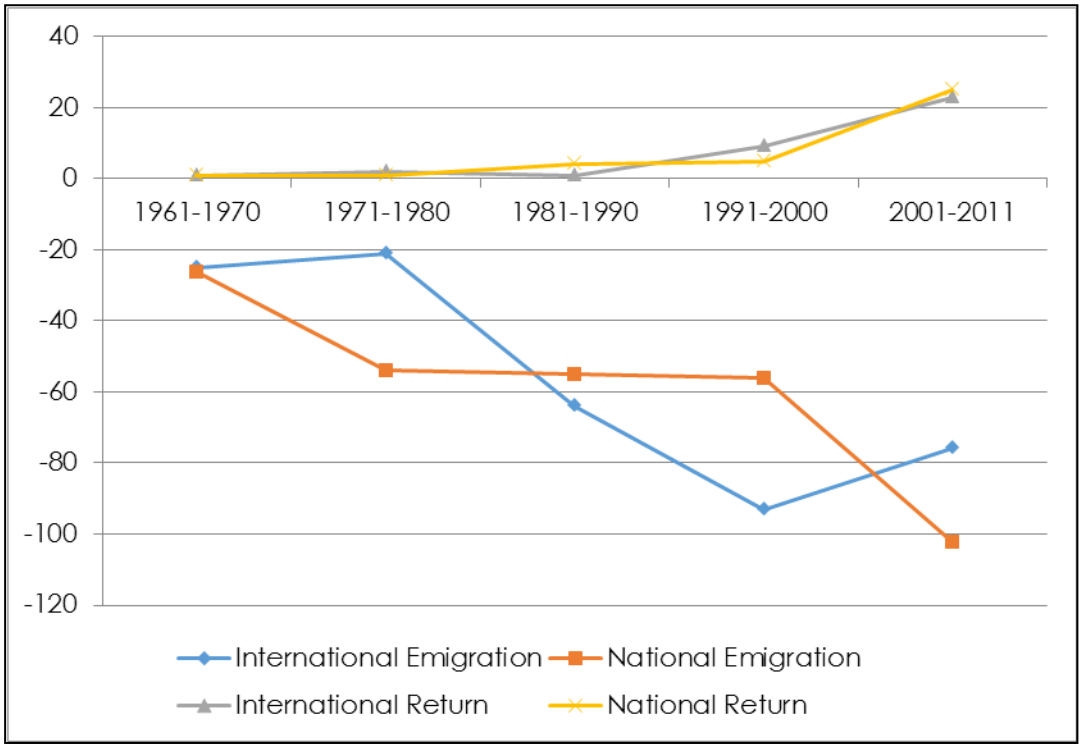

Figure 6. *Comparative overview of population gains and losses to migration dynamics.* Source: surveys conducted in Yalálag, summer, 2011.

My surveys also show that until 2011, Yalaltecan returning migrants preferred "returning" to Oaxaca City, while others established themselves in Mexico City. Interviews and informal conversations with Yalaltecans reveal that, although most early migrants invested in buying or refurbishing a house in Yalálag, some invested in property in Oaxaca City, and several migrants had moved there upon their return to Mexico. In 2010, however, heavy rains caused landslides in Yalálag damaged several properties and discouraged migrants from continuing to buy property in their hometown as an investment. Younger migrants have instead invested in buying property in Oaxaca City rather than in Yalálag. That situation might contribute to further deterring returning migrants from resettling in Yalálag. Moreover, Oaxaca City can be more appealing to Yalaltecan migrants as a return destination because it offers a variety of job niches, urban amenities (e.g., public hospitals, schools, cultural and recreation centers), social networks, and at the same time, closeness to Yalálag.

Among migrant returnees in Yalálag, several considered migrating again, but other returnees have settled more permanently. Their ages vary and reflect shifting return patterns. Returnees over age fifty had come back either after a temporary stay (in the U.S., most commonly) to reunite with their families who had stayed behind in Yalálag (and did not want to or could not move to the U.S.) or after retirement (either in Mexico or in the U.S.). In such cases, returnees had planned to return to Yalálag and had consequently used their savings to acquire or refurbish houses, had maintained their family and other social obligations (e.g., to fulfill community services),[51] and were investing their economic resources in new ventures in town (e.g., retail, craft production, professional services).

[51] There were also instances in which the return had occurred promptly due to economic downturns, such as the economic recession in 2009. Some of these returnee migrants had received unemployment compensation and sometimes even a pension they put toward their move back to Yalálag. What was prevalent in these cases, I

Another prevalent pattern of return was the need to fulfill the perceived moral duty[52] of taking care of elder parents.[53] This pattern included Yalaltecans ranging from age twenty to forty. In most cases, these young adults were the youngest children in their families, who could count on the economic and moral support of other migrant siblings, and had had access to education (some had completed professional studies) thanks to the economic support of their parents and migrant siblings.

Somewhat contrasting with the return circumstances described above, some Yalaltecans had rather unwillingly returned after job losses, health problems,[54] work accidents, or other

found, was that these returnees had previously contemplated the idea of returning to their hometown, and they were mostly content with their decision.

[52] Nuclear family is the most basic unit of organisation in Yalálag (De la Fuente 1949: 162; Jopling 1973: 33) and taking care of elderly parents is perceived as a fundamental moral obligation of birth or adopted children. Such duty is formally insured in inheritance distribution. Inheritance is normally distributed at different stages. As De la Fuente (1949: 159) notes, parents normally distribute only a part of their goods to their children when they start a new family keep most of their wealth not only as an emergency fund for their own needs, but also to ensure that their children maintain the obligation of caring for them. This is best illustrated in contemporary wills signed in front of the *alcalde* (a legal representative of the judiciary), children, and witnesses. I examined several wills dated with different years between 1898 and 2011. In most cases, legatees include their children (and in several cases, also grandchildren and/or nephews and nieces), acknowledging precisely how each has (or not) provided care for him/her, and distributing properties accordingly, and even acknowledging specific reasons why inheritance is not possible (e.g., using property as funds to ensure care for a disabled child). Wills likewise include specific distributions of further obligations related to the care (and funeral) of elders, and may further specify what penalties should be imposed in case of noncompliance. In this sense, it is worth noting that at least a few wills superseded former wills and redistributed properties to sanction one or several legatees who had failed to comply with parental obligations.

[53] Elders can appeal to the authorities to oblige their children to take care of them. In extreme cases, legal agreements are then issued specifying obligations and monetary sanctions in case of noncompliance. Violeta's testimony illustrates such a situation: "When we had problems with my dad four years ago, when he was sick in bed then, we went to the municipality with my husband. And when we went, they really scolded us, and they soon issued a paper [agreement] about how we must take care of my dad each week; each of us must take turns each week. And so we did that. Like, for instance, another time we had troubles with my mother again, and she said she was going to take care of my father alone: "Oh, well, now you go tell that to the *síndico*," I told her. Because my husband had already told me, "You are not playing. Each of you have sealed and signed that paper when you made it, so that you comply. And so what does your mom think now, that you are playing? You are not playing'." He said, "Ask your mom why, if she had considered taking care of her husband alone, why she then called you to the municipality?" And yes, he showed me the paper. My husband then told me, "It is your mom who has that agreement, and if she gets tired again of her husband, she is going again to the municipality and accuse you of failing to comply with your turn. All of you [Violeta and her siblings] are going to go to jail.' And it is true. And in the same way, my mom had to go back, and yes, we still keep demanding her to take turns." [Extract from interview, Yalálag, January 23, 2012]. Local authorities, however, lack of legal power or economic resources to punish migrant children in the same way; but in certain instances, the authorities may be able to contact migrants.

[54] I found two testimonies about migrants from Los Angeles who had returned to Yalálag as HIV positive. One of them had migrated in the early years of migration from Yalálag. He returned to Yalálag and passed away

issues (e.g., substance abuse, gang involvement). The age of those returnees varied, but most of them had returned when still relatively young (sixteen to thirty years old) as a result of their families' encouragement and on the condition that Yalálag provide family-community networks used to support a person in trouble and/or work duties to discipline the troubled young person. Young Yalaltecans who returned under such circumstances had close relatives in town (i.e., parents, grandparents, siblings).

There were also a very few cases of young adults, children of Yalaltecans, who were born outside Yalálag (Oaxaca or Mexico City, most commonly) but had married someone living more permanently in Yalálag and consequently moved here.[55] Finally, there was a small, yet significant, number of migrants' offspring born outside Yalálag (in Mexico and in the U.S.), who arrived in Yalálag. In most of these cases, young children came with their returning parents, while other children have remained under the care of their grandparents after their parents left.

2.4 The other migration: Regional migration to Yalálag

For most of the 20th century, Yalálag's strategic geographical and economic position attracted poor neighbours who moved to Yalálag, mostly temporary, to work for wealthy Yalaltecans:

> *All the Mixes would come* [to work here]*; people from Mixistlán, Xochistepec, from Chichicaxtepec. . . . Since my father loved farming, sometimes he hired forty or thirty day labourers. . . . He loved farming, and he was very happy in the fields. . . besides he also had cattle . . . only that he did not raise the cattle himself, but in that time the Mixes did. They*

there without making his disease public knowledge. The other case was more recent: The person moved back to Oaxaca where he was receiving treatment.

[55] Marriage does not appear to be a strong reason to return to Yalálag, but there were a few cases of returning migrants who had saved some money, had been supported by other family members, and had returned to Yalálag to get married. This kind of motivation was important especially among international returning migrants. Yet, not everyone who came back to Yalálag to get married planned to settle permanently. Instead, border enforcement and their new family members who refused to cross the border deterred them from migrating again. In these small number of cases, a combination of the abovementioned reasons (i.e., taking care of elders, accomplishing an economic goal) had also influenced their decision to return and to stay.

would come and ask for it! "Give me some cattle to work!" And he would give [cattle] to them, so that they raise it. He provided ropes, salt, and they would raise the cattle. And that's how it was, as if it was their cattle! [Cuauhtémoc, Yalálag, February 2, 2012]

Regional temporary workers in Yalálag came from Zapotec and Mixe municipalities (see also Nahmad 1965)[56] Yet, Mixe immigration stood out due to the strikingly different way Yalaltecos related to them, considering them as foreigners and treating them with disdain. Historical territorial disputes[57] and uneven economic relationships between Mixe and Zapotec nourished such conflictive interethnic relations (De la Fuente 1949; Chance 1989; Münch Galindo 1996; Burgoa cit. in Lemoine 1998; Nahmad Sittón 2003).

Migrant Mixe workers arrived only temporarily in Yalálag and settled mostly in rudimentary dwellings in areas outside the main town, either alone or with their families. A few Mixe workers remained permanently, but they tended to be single young workers and children who were "adopted" by Yalaltecan households; they were treated as unpaid helpers performing various agricultural tasks.[58]

Then, in the late 1970s, as urban migration from Yalálag increased, but farming still was widespread, some Mixe families started remaining longer in Yalálag. Those families settled in

[56] Most commonly, people refer to Mixe immigration as from Mixistlán. The municipality of Mixistlán de la Reforma is located to the east, bordering Yalálag. Therefore, a large migratory flow to Yalálag had its origin in this municipality and in its *agencia*, Santa Maria Mixistlan. However, Mixe immigration to Yalálag was not exclusively from that municipality. I found cases of people who moved to Yalálag from small localities around the municipalities of Tlahuitoltepec, Tepuxtepec, Totontepec, and Santiago Zacatepec. It is worth noting that Chichicastepec together with Tiltepec and Yacochi were among the poorest Mixes localities (Nahmad 1965: 65).

[57] Relationships between Mixe and Zapotec towns had an antagonistic historical background. The context was especially hostile in pre-Hispanic times (see Chance 1989:14 and Lache Bolaños 2000: 47), particularly at the borders between Mixes and Zapotecs, such as Yalálag. Hostilities endured at least until the 19th century; Julio de la Fuente (1949: 20) asserts that in 1810, Yalaltecans attacked Mixistlán.

[58] I knew of cases of Mixe children of ages ranging one to four who were taken into and raised by Yalaltecan families. Yet, these children were not necessarily considered as family but as "helpers." "They feed him, so that he takes care of their cattle. That's how they grew up, and that's how they [Yalaltecans] could raise their cattle and sell them, because there is someone taking care of it" [Don Samuel, Yalálag, October 6, 2011].

huts (*ranchos*) also in areas outside the main town. Such was the case for Don Vicente's family, who arrived in the 1970s in Yalálag, as he narrates:

> *I was ten when I arrived here . . .. We came with my dad, and my siblings, we all came. I don't know* [how] *but I came here with my father. He came, and I was ten years. And then my younger siblings were born here, in that place that I told you about, Lachibee. . . . We rented land. It all was rented. We had no land. When I lived there, there were about eight ranchos* [*huts*] *at that time where people farmed, they also built their huts. And we were about eight huts there.* [Don Vicente, Yalálag, June 19, 2011]

Mixe families were filling in for the absent workforce, mainly in the countryside. As economic pressures in the 1980s added to the demographic loss (see Chapter 3), Yalaltecans reduced and restricted their farming areas to locations close to the main town (see Chapter 4). Farming land areas then became more accessible for Mixe households to farm and settle permanently. By then, international emigration was on the rise, and many Yalaltecan migrants built and/or refurbished their houses and public spaces. In this context, Mixe families were also a vital workforce in private and public construction.

At the same time, Yalaltecans worried about the growth of Mixe settlements. Mixe scattered settlements contrasted with the compact Zapotec settlement pattern (De la Fuente 1949). [59] That difference added to cultural discrepancies between Yalaltecans and Mixes. Moreover, a sense of losing fellow Yalaltecans to emigration and the decline in farming further nourished a sense of loss and unease amongst Yalaltecans:

> *All the* [Yalaltecan] *children were already in the north. And elders left too,* [people] *of thirty or forty years, they left too. . . . Many stopped farming. . . . And in that time there had arrived many from Mixistlán! My* paisanos *had all left for Mexico, to the north, to Oaxaca. . . . I*

[59] An exception to this Zapotec ideal is to be found in the Zapotec Bixano area of the Sierra Norte, and mainly in the district of Choapan where, according to Ortiz Diaz (2002c: 12), settlements are more dispersed than in the Caxonos or Nexitzo regions.

don't even know where they went. Those from Mixistlán were already many here in that time. [Don Samuel, Yalálag, December 6, 2011]

There is no official estimate of the number of newcomers who arrived in Yalálag in the last century or at the peak of migration in the 1980s and 1990s, nor systematic information about their places of origin. Only between 1970 and until 1990 did the national census included a count of population of those aged five and older who spoke indigenous languages specifying what languages they spoke. Those data show an increase in the number of inhabitants who were Mixe speakers in that period (see Figure 7). Aguilar and Alatorre (2011) calculate that, in 1987, 300 Mixe incomers settled on plots that they often borrowed or rented[60] in outlying areas. Based on their calculation, Mixe incomers represented 14% of the Yalálag population in 1990. The significance of the arriving Mixe population is further underscored in official communications dating from the 1990s between Yalaltecan and Mixe municipal authorities (mainly from Mixistlán de la Reforma, and Santa María Mixistlán) related to the recurrence of people moving to Yalálag.[61]

[60] It is worth mentioning that rental agreements used a barter system rather than money. Items exchanged included shares of crops, collected wood and fruit, or labour.

[61] The following text appears in a letter dated November 25, 1983 and signed by the municipal president of Mixistlán de la Reforma, sent to the municipal president of Yalálag: ". . . some neighbours of this community of Mixistlán de la Reforma, aim to avoid their obligatory tequios, and they flee—as it is become common, to that town. Therefore, I request your support, so that we find no inconvenience when our local police from this municipality search and follow into that municipality those unreliable people . . .."

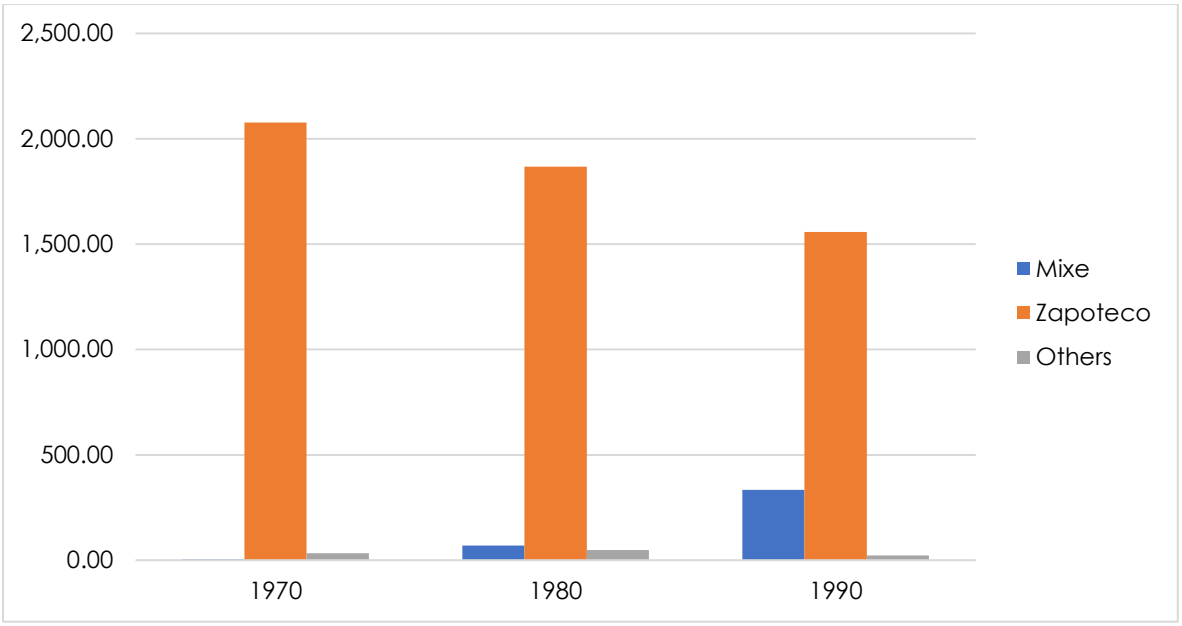

Figure 7. *Distribution of indigenous language speakers (>5 years).* Source: INEGI

In the late 1990s,[62] a growing number of Mixe households resided in areas located between crucial water sources and the *pueblo*. Yalaltecans became increasingly distressed about these Mixe settlements, fearing that if they expanded, conflicts regarding resource use and access could emerge (see Chapters 4 and 5). Consequently, local authorities decided that Mixe newcomers should move to the main town and put pressure on them to do so.[63] However, some Mixe households refused. Those households that remained have since formed a more or less compact settlement around the site, Pozo Conejo. Meanwhile, a few Mixe households remained dispersed (sites such as Tras del Cerro, Las Minas, and Lachibee; see Image 5), but slowly started moving to the main town of Yalálag as a way to avoid further conflicts and/or gain access to urban amenities such as electricity, schools, and the local health clinic. However, the boom in transnational emigration and the consequent arrival of remittances increased the cost of houses and of urban land in Yalalag. Mixe newcomers could thus not afford to buy

[62] In 1997, according to documents I reviewed in the local authority historical archive.
[63] The logic behind that decision was based on two related issues: first, an interest of preserving the forest as water reserves; and second, avoiding potential territorial divisions after the growth of Mixe settlements (see Chapter 4).

property. Consequently, most Mixe lived in "borrowed" vacant migrant houses until they could acquire plots, mostly on the outskirts of the main town (e.g., Loma de Oriente and Loma del Panteón), now recognised as part of existing barrios (see Image 5).[64]

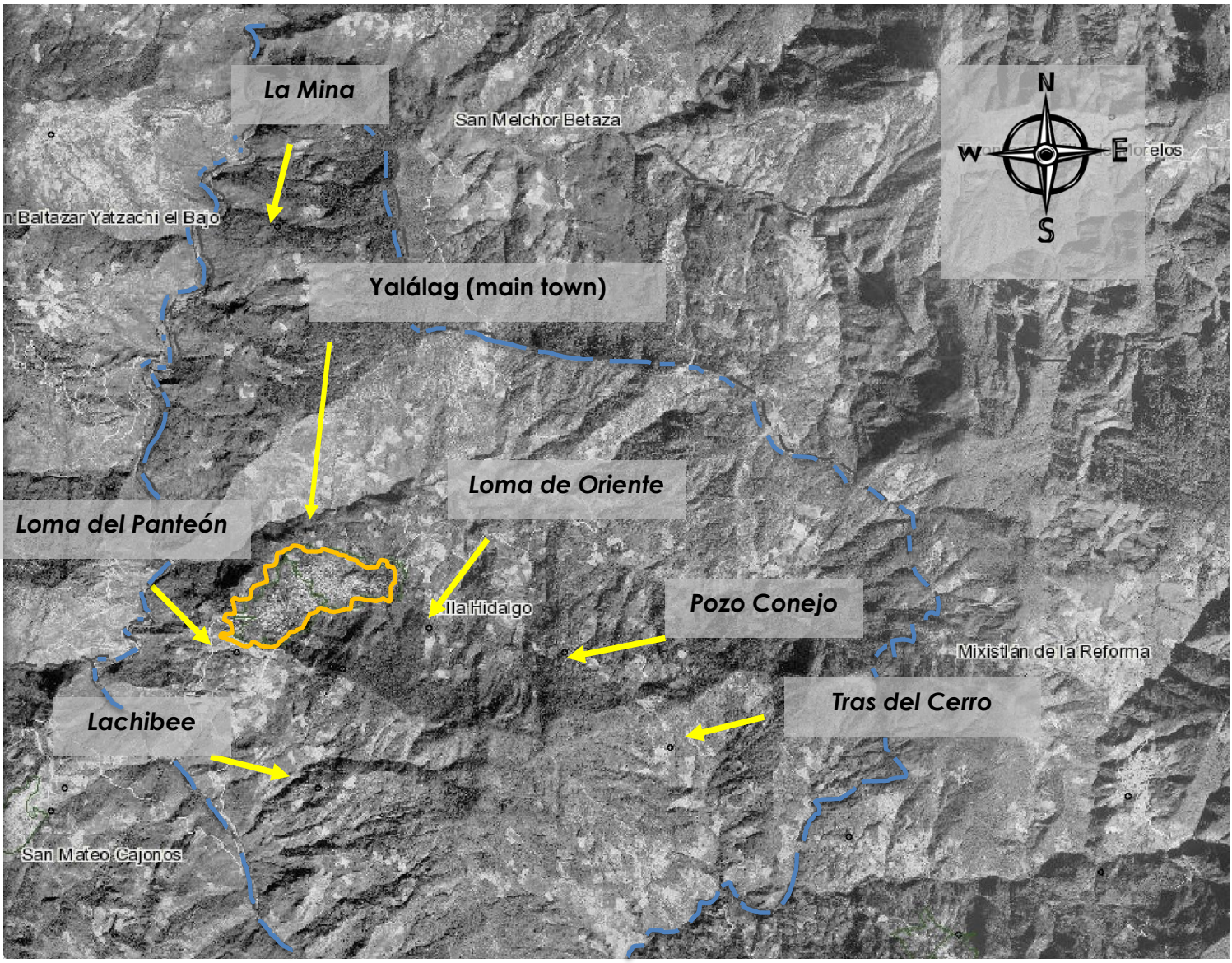

Image 5. Yalálag's town and settlements, orthographic projection. Source: INEGI

[64] "It is worth mentioning that, according to the General Assembly on February 23 of the current year [2008], [settlements in] Loma del Panteón and the site Lachibe form part of the barrio Santa Catalina; and the [settlement in] the paraje Loma Oriente we agree will no longer [be considered] Loma de Oriente but rather the inhabitants of this site will be [considered] as [residents of] Barrio Santiago. Hence the term 'inhabitants of Loma de Oriente' has been removed from our census." [Extract of official letter signed by the municipal president of Villa Hidalgo, Yalálag, addressed to 'Whom it may concern', dated March 28, 2008. Original in Spanish].

The move of Mixe population formerly settled in dispersed settlements to the *pueblo* notably increased in the 1990s, especially after 1997,[65] as data from household surveys showed (see Table 2 and Figure 8).

Table 2
Population Overview

Year:	1990	2000	2010
El pueblo			
Yalálag	1,935	1,799	1,844
Loma del Panteon		13	20
El Oriente		80	44
Total *pueblo*:	1,935	1,892	1,908
Further settlements			
Tras del Cerro	119	120	21
Pozo Conejo	82	76	179
La Mina	53	31	2
Lachibee	31	13	2
Total settlements:	285	240	204
Total Population	2,220	2,132	2,112

Source: INEGI

[65] It is worth noting that we did not have access to survey data on Mixe households settled in areas far away from the *pueblo* (i.e., Pozo Conejo).

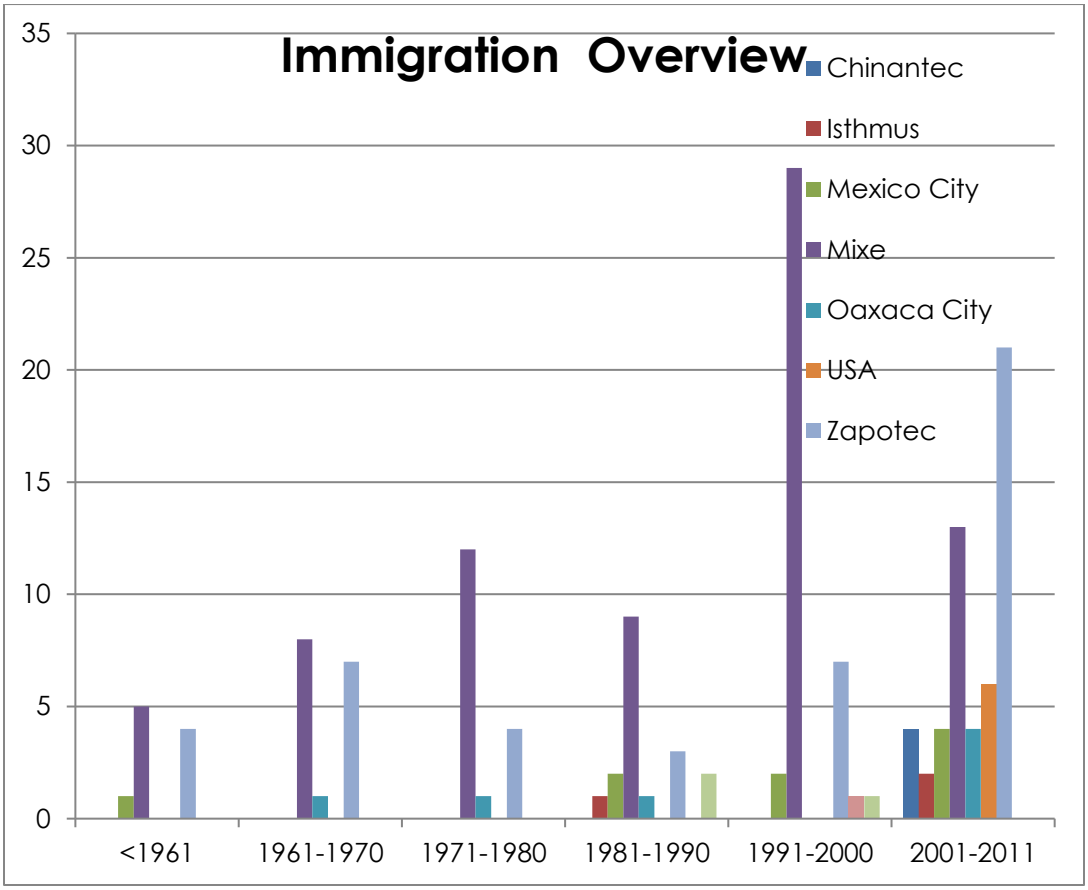

Figure 8. *Reported cases of immigration by places of origin 1961–2011.* Source: Surveys conducted in Yalálag, summer, 2011.

Meanwhile, an unknown number of Mixe descendants, born and raised in Yalálag, also temporarily and permanently emigrated. Some of these Yalaltecan Mixe offspring, whom I refer to as Mixe Yalaltecans, joined Zapotec Yalaltecans in their migratory routes. However, Mixe Yalaltecans have also moved to cities besides Los Angeles, such as Houston and Columbus, Ohio. Meanwhile, back in Yalálag, Mixe newcomers and Mixe Yalaltecans continued to be a vital source of labour.

2.5 Population overview: Yalálag's current demography

According to the 2010 Mexican national census, Yalálag has a total of 2,112 inhabitants (575 households), of whom 53% were female and 47% male. Data from our household surveys from 2011 showed that Yalálag has little population growth, despite having had, until recently, a high

birth rate (see Figure 9). Survey data also indicate a sharp decline in population over the age of twenty, particularly among males.[66] There are more women than men between ages thirty-one and eighty (14% more women than women in the age group between thirty-one and forty; 12% more women than men ages fifty-one to sixty, and 31% more women than men among ages seventy-one to eighty) with the only exception being the age group forty-one to fifty.

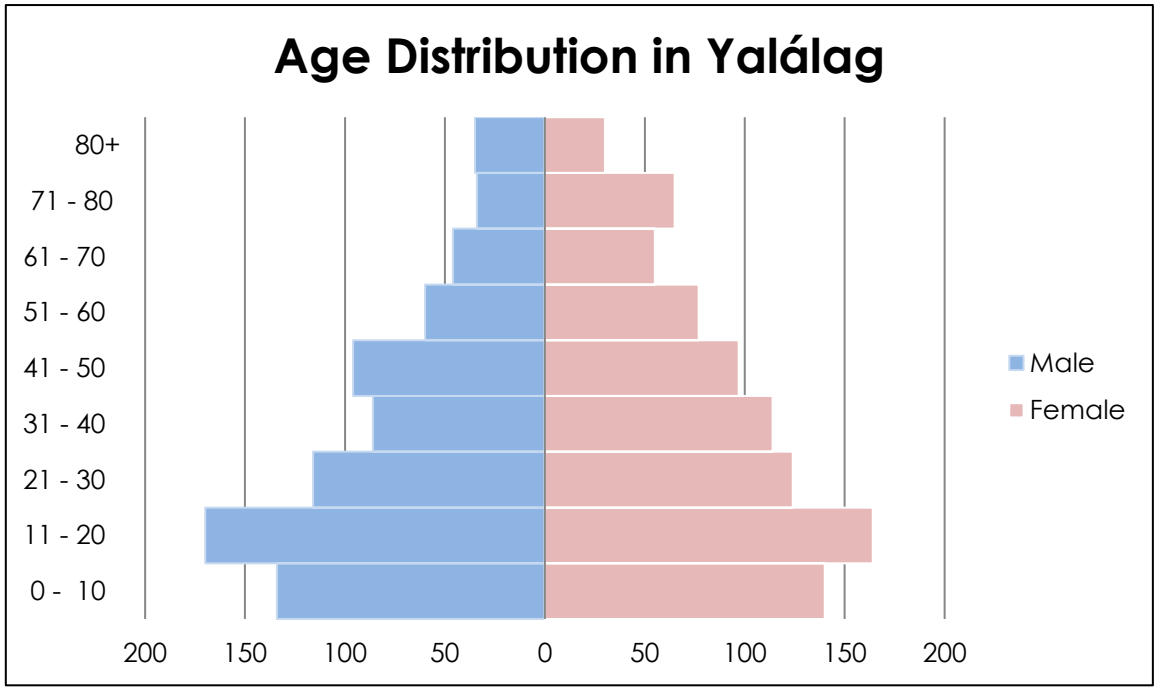

Figure 9. *Population distribution. Based on data from surveys conducted in Yalálag, 2011.*

Gender disparity and small population growth in Yalálag are both consequences of past and continuing migration. Yalálag's demographic dynamics are closely linked to shifting socioeconomic circumstances at migrant destinations. For example, border enforcement policies in the U.S. since the late 1980s, and particularly after 2001 (Andreas 2000; Cornelius 2001; Cornelius and Salehyan 2007, Sarabia 2012) have increased the risks and costs to

[66] It is also worth noting that we did not get specific data but perceived a significant number of single-parent households, as well as grandparents undertaking total or partial responsibility for raising their grandchildren

migrants, who have faced a dramatic increase in violence, especially along the border, as result of the so-called war on drugs inaugurated in 2006 (Slack 2019).

Further, economic recession and border enforcement has caused a deceleration in international emigration from Yalálag since 2009. Yet, those socioeconomic shifts have not halted emigration, but created instead a temporary shift in preferences of national destinations. Additionally, I found that, although Yalálag is not a main destination for migrant returnees, it has constantly received a wide diversity of returned migrants who stay either temporarily or permanently.

Most of the population in Yalálag currently resides in the main town and its adjacent settlements of Loma del Panteón and Loma el Oriente, while only 3% of the population lives at sites farther away (see Table 2).[67] The *pueblo* expanded with the arrival and gradual influx of Mixe households into the main town. The number of households comprised of intermarriages between Mixe and Zapotec has increased, especially among young generations.[68] These two processes have further created closer and more intimate interethnic relationships that challenge old discriminatory preconceptions.

I witnessed in 2011 that Mixe and mixed households raising children of Mixe and of Zapotec-Mixe descent born and/or raised in Yalálag, were forming a Mixe Yalaltecan generation. Among the Mixe population and Mixe-Zapotec offspring in Yalálag, some are

[67] Yalaltecans and settlers at Pozo Conejo are undergoing a legal process regarding disputed views regarding land appropriation (see Chapter 4). At the time of my research, there was tense peace around that issue. Given the sensitivity of the topic, and following the advice of several informants who recommended avoiding conducting household survey at such sites, I did not include those areas in household surveys. At the same time, during my fieldwork, I had plenty of opportunities to meet and talk to former and current inhabitants of those sites, whose experiences and viewpoints I include in this analysis.

[68] This recent shift highly contrasts with Julio de la Fuente findings in the 1940s. De la Fuente (1949: 199) asserts that Yalaltecans censor marriages with people outside Yalálag. He found only informal marriages, between Zapotec males and Mixe or Zapotec from Choapan females, and only "tolerated" cases of marriages between Zapotec females and Mixe males. He further reports (and I heard accounts of this) that it was common for Zapotec males to hold extra-marital affairs with Mixe women (outside town).

bilingual (speaking mainly Mixe and Spanish) and even trilingual (speaking Mixe, Zapotec, and Spanish). Religious diversity has likewise increased slowly but steadily in Yalálag since the 1980s (see Figure 10). Protestantism[69] in Yalálag is most prevalent among Mixe inhabitants.[70]

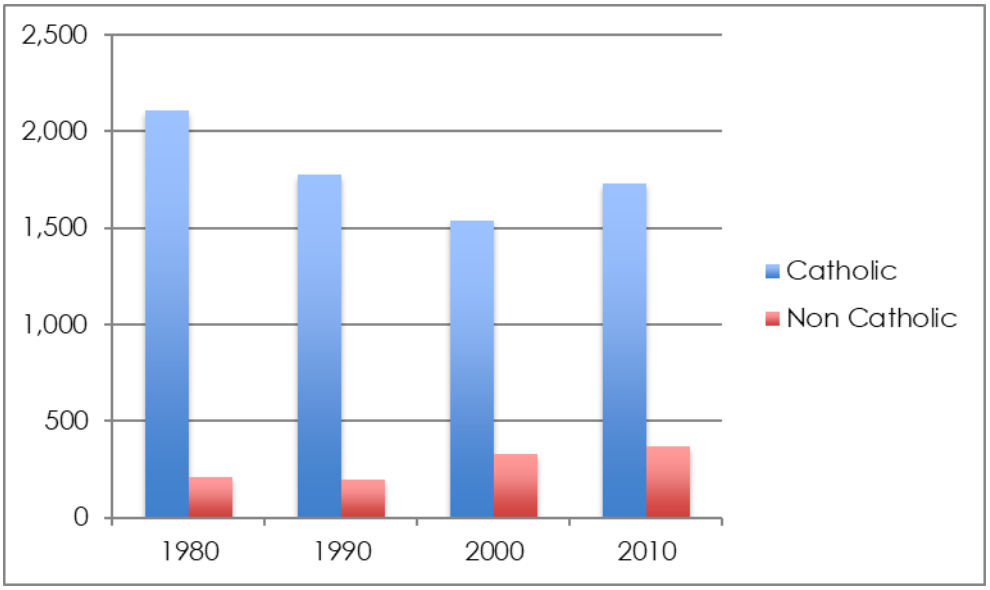

Figure 10. *Overview of religious ascription in Yalálag.* Source: INEGI

Yalálag's population is nowadays multiethnic and multilingual. Beyond this, most Yalaltecans have been migrants themselves. These forces shape the population, its cultural richness, and conviviality. Nowadays, for example, Zapotecs feel nostalgic about a past in which

[69] Yalaltecans identify non-Catholic religions under the umbrella term of Protestantism, and in this work, I use the term the same way. Mixistlan de la Reforma is a municipality where non-Catholic religions have gained major acceptance. In 2000, a 46% Pentecostal population there outnumbered a 28% Catholic population, with a smaller percentage of Adventist, Evangelic, and nonreligious people (De la Torre and Gutiérrez Zúñiga 2007: 47). Yet, it is important to note that religious conversion is a recurrent issue not only in Yalálag and neighbouring Mixe towns, but also in all of the Sierra Norte of Oaxaca. Gross (2003) has identified cases in Zapotec communities. Also, in my interviews, I found that people constantly referenced the links that earlier Yalaltecan international migrants made with Protestants in the Zapotec neighbouring town of Yatzachi El Bajo to obtain access to aid and migratory networks. To fully comprehend religious conversion in Yalálag and the whole region, it would be necessary to trace a historical analysis of the arrival and growth of the Protestantism in the Sierra Norte.

[70] Religious difference may cause unease among Zapotec Yalaltecans. Yalálag has remained largely Catholic but primarily because local sociopolitical organisation is based on a religious and civic system of services (see Chapter 5). That same system has been sustained by Mixe newcomers and their offspring.

they occupied a dominant position in the region; yet, they also recognise the important role of Mixe people in their population.

In sum, Yalálag has gone through significant processes of demographic reconfiguration, especially in the past thirty years, due to the dynamics of emigration and immigration. Although emigration and migration as historical trends can be traced to at least the 17th century, they have undergone major transformations in the past three decades.

In that time period, the main demographic changes are due mostly to the increase of emigration to the U.S., which reached an unprecedented peak between the 1980s and the beginning of the 21st century and then dropped drastically, especially after 2009. Emigration to the U.S. has transformed the life of Yalálag inhabitants in that short time due to its volume, its speed, and shifting legal and economic relevance.

At the same time, it is important to note two main precedents to that drastic increase in international emigration: (1) an increase of urban domestic emigration in 1970s and (2) Yalaltecans' efforts to acquire access to public services and to improve their economic conditions. These two characteristics are closely related to a process of uneven economic (and political) development, evident to Yalaltecans from an early stage, and especially to Yalaltecan migrants who moved between their hometown and growing urban areas in Mexico, facing growing socioeconomic disparities and differentiated access to amenities and economic opportunities in these different places during the country's period of industrialisation known as the Mexican Miracle.

The next chapter explores in greater depth the uneven context of economic conditions in which Yalálag was immersed regionally, nationally, and internationally. Analysis in this and the following chapter will provide the background for a grasp of the dynamics of land use change discussed in Chapter 4 and related social organisation strategies analysed in Chapter 5.

3

Market Integration: The Decline of Farming and External Dependency

Synopsis: In the 1980s, Yalálag rapidly transitioned from being a predominantly local economy based on subsistence farming to being highly dependent on external staples and goods. To understand why this fundamental change took place in Yalálag, this chapter analyzes the prevailing local productive strategies, their relation to small-scale farming, and how they became embedded in broader markets before, during, and after that moment of rapid transition. Therefore, the analysis encompasses the period between the 1950s, when farming was predominant, and 2011, when I did fieldwork. Data showed a definite decline in farming and evidence of external food dependency. This chapter describes how the rapid decline that took place in the 1980s was possibly due to a combination of a long-term process of uneven modernization development in Mexico. Two economic projects that were part of national development left small-scale farmers, such as Yalaltecans, in a clearly disadvantaged position in an expanding industrial market economy: namely, a protectionist state project and later neoliberalism. My analysis shows a continuity of uneven market integration that starts with state-run development projects in the Sierra Norte in the late 1950s, which created conditions for unparalleled rapid migration, a decline in farming, and food dependency, which took place with unprecedented speed after the economic crisis in 1982 and amid structural economic changes in the 1990s.

> *Life was hard and a bit sad because we did not have money; our houses and clothes were very simple, but we used to farm, we used to have beans, there was maize. . . . We had food and that was the most important, that is why the* gotzona *was so relevant. Nowadays almost nobody does* gotzona*; almost everything is paid [labor]. And almost nobody farms these days. Now many buy maize, but that is not how it used to be. Before, only those who were really in trouble because they needed money, or those who were really, really poor could not farm. Since they did not farm, they could not do* gotzona*, and so they had to buy maize because they were very poor. Now we have money and big houses, and clothes, but almost no one farms maize. However, maize is still the most important because if there was no maize to buy, money would be worthless.*
>
> Don Constantino, Yalálag, January 20, 2012

3.1 Introduction

For most of the 20th century, as described in earlier chapters, farming was the basis of the economy of Yalálag and was also the main source of sustenance for most households. The pervasiveness of farming helped sustain local Yalaltecan households, and provided work for local people, by means of nonmonetary systems of labor organization (*gotzona*), which, as Don Constantino recounts in the epigraph above, maintained farming. Gotanza was the structure of

reciprocal farm labor that organised the foundation of Yalálag's economy until the 1980s. In that decade, as described in earlier chapters, farming started to decline quickly.

Beginning in the 1980s, over the course of just two decades, farming drastically diminished. Yalaltecans stopped being proud food producers and active traders of local and regional goods to become mostly consumers, dependent on imported produce and money. In the 1990s, migration from Yalálag took on a new speed and a path towards the U.S. Like emigration, other monetary activities (i.e., craft industries, retail, and construction) have since then multiplied and employ a good amount of the local workforce.

This chapter traces the drastic, rapid decline of farming and consequent adjustments in local production activities in the history of market integration in the late 20th century. The goal of this analysis is twofold. On the one hand, it seeks to understand the economic relevance of local farming in local economic organization and how the local economy is connected to broader markets. On the other, this chapter seeks to shed light on the role of state-run development projects as catalyzers of market integration of local production activities. Hence, I trace market integration from the 1950s, when farming was still prevalent, to 2011 when I conducted fieldwork.

My analysis underscores how state development interventions beginning in the 1960s and 1970s (under a protectionist regime) set the stage for deep global market integration in the mid-1980s. Beginning in the 1980s, structural economic neoliberal reforms and globalization propelled Yalatecans to abandon farm work and emigrate from Yalálag in large numbers. Consequently, as I show, Yalaltecans have adjusted local production activities, how they organise work, and the means they use to access foods. The mass arrival of industrial imported goods and reliance on monetary activities as a basis of local subsistence are salient characteristics of this transformation. These shifts in local means of subsistence raise the crucial

question proposed by Don Constantino in the epigraph, concerning the value of cash and the actual cost of current productive strategies in Yalálag. They also highlight a continuous state-driven path of market integration, despite differences in economic and political approaches in the 1950s and after the 1980s.

3.2 Footpaths in global markets: Yalálag's economy in the 1950s–1960s

Until the late 20th century, most of the Sierra Norte lacked basic infrastructure, such as potable water and electricity, and the towns in the region were connected by dirt roads.[71] Until about the 1960s, foot-traders (*tamemes*) and pack animals were the most common mode of transportation of goods across the Sierra Norte. Despite such infrastructural conditions, the sierra had a vibrant, interdependent economic life.[72] The main commercial routes that crossed the Sierra Norte of Oaxaca expanded all the way from the coastal plain of Veracruz to the Isthmus of Tehuantepec (see De la Fuente 1949; Nahmad 1965). Moreover, the towns of the Sierra Norte were producers of commodities that were integrated in international markets (e.g., coffee, textiles).

Within such a context of trade dynamism, the geographical position at the border between the Zapotec and the Mixe regions[73] and on the main route that connected these to

[71] According to Chance (1978: 54), the Sierra Norte had, already during the colonial period, poorer roads than other locations connecting the region with Antequera. This contrast was evident after 1529, when roads were built to connect Antequera with other regions of Oaxaca such as the Mixteca Alta, Huatulco, and Tehuantepec. There was only one main road between Tuxtepec and Oaxaca via Ixtlán in the Sierra Norte. That road closely followed a pre-Hispanic route, which, until the 19th century, served to transport important trading goods, including cochineal dye, woven cotton textiles, gold and silver from the mines, and some forestry resources (McNamara 2007: 4–8).

[72] Soil and climate diversity in the parts of the Sierra Norte allowed some degree of agricultural specialization in specific areas (e.g., sugar in warm and temperate climates with access to water; better maize yields in better soils, etc.), which contributed to regional interdependence and trade (De la Fuente 1949: 15; see also Nader 1990: 20).

[73] At this point, it is also worth noting that as Ortiz Diaz (2002) asserts, Yalálag was part of a historical economic corridor that traversed the highlands, reaching the coastal plain of the Gulf of Mexico. According to Ortiz (2002; see also Chance 1989: 73), early pre-Hispanic settlements in the Zapotec Caxonos area were located at the very top of the mountains. Ortiz suggests that they could have functioned as crow's nests and posts, forming a settlement corridor along the Caxonos route that connected the valley with the coastal plain.

farther afoot areas of the Sierra Norte (Chance 1989:11, 22, 75), made Yalálag a regional doorway and a main inter-regional trading hub. Zapotec, Mixe, and Chinantec from different parts of the sierra and beyond converged in Yalálag to trade their produce in the local weekly plaza market. This marketplace formed part of a market network that connected different parts of the Sierra Norte, as well as farther regions, such as the Isthmus of Tehuantepec, the Valley, and the Lowlands of Veracruz in the direction of the Atlantic coast. The market network was upheld by traders who moved goods by foot, reaching plaza markets on rotating days of the week in the various towns of the region (De la Fuente 1949).

Until the 1970s, Yalálag was a commercial center that connected regional produce with international market networks. Yalaltecans traded at both scales, in three spaces: the plaza market that took place in Yalálag every Tuesday, local stores in Yalálag, and at towns of the Sierra Norte under as a system of traveling Yalaltecan merchants. The weekly market plaza in Yalálag was among the three biggest regional markets of the Sierra Norte and the main hub of interregional trade and exchange of produce (De la Fuente 1949: 129; Berg 1968: 29; Nahmad 1965: 62). Yalálag also had a few stores that offered regional produce and imported produce (e.g., salt, petrol, rice, clothes, maize, and hardware products). These stores were the main centers for bulk purchases of main regional produce, such as coffee. These products were then traded on international markets. Owners of stores in Yalalag were regional intermediaries. They traded imported products either in exchange for crops meant for an international market (e.g., coffee) or for cash. For example, they traded regionally produced coffee directly with main coffee international monopolistic traders in Oaxaca City. Finally, foot-traders moved imported and regional produce through different areas of the Sierra Norte. Yalaltecans were known as skilled traders, experts with knowledge of the region and how to move goods through such rugged territory. Yalaltecan foot-traders were often heavily dependent on credits from

store owners. Moreover, as interviewees mentioned, store owners directly hired muleteers to move things into and out of the sierra (see also Jopling 1973).

The trade dynamism that combined the abovementioned ventures helped also to enhance local small-size industries in Yalálag,[74] such as tanning, shoemaking (more precisely, *huaraches* or sandals), weavers,[75] clothiers,[76] and hat-making, as well as bakers, butchers, and smiths. Yalaltecan producers earned a reputation in the region for their high-quality work (De la Fuente 1949; Nahmad 1965). Yalaltecans also enjoyed a privileged trading location and had a captive market in the Mixe and Chinantec regions (Nahmad 2003):

> ***Don Miguel:*** *Here people used to come to buy. It was very famous because communication [roads] did not exist between Oaxaca and Totontepec, nor between Oaxaca and Villa Alta. Because then people from Choapan, Zacatepec, Totontepec, Villa Alta and farther. . . let's say farther than Villa Alta; Yatzona . . . and everyone would come to do their market: to sell and buy. Yes, because here it used to be the center of coffee [collection].*

[74] That diversified economy in town, its production specialization, and consequent economic stratification contributed to physically and symbolically shaping the town and its identity. At the turn of the 20th century, each *barrio* was specialized in different economic activities, with differentiated economic status and an additional, powerful layer of local identity that persists into the present (see Cruz-Manjarrez 2006, 2013). The *barrio* of Santiago was the wealthiest *barrio* and home to most of the tanners and *huarache*-makers, followed in economic wealth by Santa Rosa (home of the traders), while Santa Catalina (home of the bakers) and San Juan (home of most farm workers) were modest *barrios*.

[75] At the end of the 19th century, demand for woven textiles had somewhat declined due to the growth of the Mexican textile industry (De la Fuente 1949: 21; see also Gómez-Galvarriato 1999). As Julio de la Fuente (1949: 98–99) observes in the mid-20th century: "Even though a good number of Yalaltecan women are locally considered weavers. The traditional weaving industry is rather a shadow of what it used to be, and weavers who still work do it mostly during non-busy moments, while many of them are already sewing machine dressmakers. . . . Weaving persists because even today [people] use traditional clothing, as well as [woven] towels, so sales are still profitable" [Original in Spanish, translation by the author].

[76] After weaving declined, Yalaltecans successfully switched to sewing, and this trade soon gained popularity and resulted in the influx of fabrics, threads, and sewing machines (Jopling 1973). Although sewing required more expensive supplies than weaving, it became a more profitable activity per labor investment (Jopling 1973: 18–19). Don Enrique's account provides a glimpse into the importance of sewing in Yalálag: "this house where I am was the first Singer business that was here. It was full of sewing machines. And there where Mrs. Carmen Alejo lives, there used to be another store that was called Las Tres Carabelas that also sold sewing machines. Yes, those machines did sell. A lot of people bought [them] to make clothes . . . for [people from] other towns, mainly around the Mixada [Mixe area] well there, around Zacatepec. . . . A lot of people used to go from here to there to sell [Don Enrique, Yalálag, February 3, 2012. Original in Spanish].

Ivet: Besides working making *huaraches*, did your family use to farm? How did they manage to do both?

D.M.: Well. . . for both cases, here there used to be more . . . many more workers than now! . . . [They farmed] Only maize and squash . . . between four and up to six [*almud*].[77]

I: Did they only farm for the family?

D.M.: Yes, only for the family because back then there was exchange. The maize was sent when it was time to prepare the soil. That was our family's subsistence; we used to sell it. We could then sell maize! Because back then, it had a good price. No! Lately it does not.[78] [Don Miguel, Yalálag, January 31, 2012]

At the core of Yalálag's vibrant economy, farming was "the lynchpin of the town's activity" (Jopling 1973: 11). As Don Miguel (fifty-eight years old when interviewed) describes above, both his father and grandfather were mainly local *huarache* producers, and they also farmed. Maize was the most important staple. Almost everyone farmed "because that way we could obtain our foods" (Don Constantino, Yalálag, January 20, 2012). Yalaltecans procured farming surpluses to trade with locals and with neighboring towns[79] (see De la Fuente 1949; Nahmad 1965). Given that surpluses were exchanged and traded, they were important means of earning cash.

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[77] During our fieldwork, we could see that the *almud* is still the most prevailing unit of measurement in Yalálag. An *almud* is both a unit of area and of volume (approximately five liters). It refers to the amount of maize in standard boxes called *almud* and also to the area of land required to farm the volume of grain/seeds (maize, mainly) contained in such boxes. In Yalálag, most commonly we talk about *almuds* as referring to an area of approximately one-quarter hectare, where roughly three and a half kilograms can be planted (Nahmad 1965: 50; González 2001: 78–79). In this work, I alternate the use of hectares and *almud* as units of measurement.

[78] Ivet: *Aparte de dedicarse a la huarachería, ¿sembraban?*
Don Miguel: *Ah sí, eso sí.*
I: *¿Cómo le hacían para hacer ambas cosas?*
DM: *Pues es que para las dos cosas, aquí anteriormente había muchos. . . . más trabajadores que en la actualidad. . . . Puro maíz y semilla de calabaza. . . . de cuatro . . . hasta seis–era lo más grandecito.*
I: *¿Y era para pura familia?*
DM: *Sí, para pura familia. Porque anteriormente también había intercambio. Se envía el maíz y cuando era tiempo de preparar tierra, pues eso era lo que sostenía a la familia, se vendía. ¡Se vendía el maíz pues! Porque anteriormente sí tenía precio. No y últimamente ya no. (Yalálag, January 31, 2012)*

[79] This was possible when rainfall allowed it. However, it is also worth noting that at other times, Yalálag was also a maize importer, and as Nahmad (1965: 49) notes, Totontepec was a main source of imported regional maize.

3.3. Farming predominance and economic diversification in Yalálag (1950s–1970s)

Until well into the 1970s, farming was predominant in Yalálag. Maize, beans, and squash were the main crops. However, a household's sustenance depended also on other goods produced elsewhere. Therefore, the need to combine farming with other economic activities to access cash was pressing amongst most households (De la Fuente 1949). Farming was thus fundamental and deeply embedded in a diversified local economy:

> *My father used to farm four or five* almud, *approximately three hectares. He used to farm that because we were many, so that we could have enough. And he also used to sell a little bit to get some cash. . . . That's how much he used to farm each season. . . . We only have rain-fed agriculture. My father used to farm around there where I am farming nowadays . . . but back then he used to rent the land. My father rented all the time.* [Juan, Yalálag, February 21, 2012]

In order to farm, Yalaltecans required both labour and land. Yet, because land in Yalálag has been extensively held as private at least since the late 19th century (see Chapter 5), access to land depended on households' wealth, and most Yalaltecan households farmed small areas (between one-quarter to five hectares). In the 1970s, Yalálag was so extensively farmed that there was a shortage of farmland. Less affluent Yalaltecans who, nevertheless, were able to farm like Don Juan's father quoted above, often rented land from wealthy households with more land. They likewise often sought plots to rent in the neighboring towns of San Francisco, San Mateo Caxonos, San Melchor Betaza, and San Baltazar Yatzachi el Bajo, where rents were lower.[80]

[80] "*Aquí en Yalálag había tierra, pero lo que sí costaba más carito. En cambio, nosotros fuimos hasta allá, de San Francisco, de San Mateo, por ahí nos alquiló. Ahí estaba ¡baratísimo la tierra!"* (Don Rosendo, Yalálag, February 19, 2011).

Access to labour was equally necessary to farm because the rugged Yalaltecan terrain prevented mechanicized farming.[81] Even small farm plots required the work of several people[82] at every stage, including clearing the fields, plowing, planting seeds, removing weeds, and harvesting, (see Images 6, 7, and 8).

Image 6. *Plowing the land in* Yalálag *with partial view of the Caxonos River, June 2011.*

[81] Livestock, mainly cattle, was important for farming and for transportation in Yalálag, yet there was not extensive livestock raising there. According to our interviewees, some families sought to have a few animals for transportation, but mostly only rich people could afford to own cattle. Rich owners made agreements with less-wealthy families in Yalálag and in neighboring Mixe towns, and with local youth, who took care of them, and took them to pasture. These workers were not paid in cash, but they would be able to use the animals for work in the fields; sometimes, they would receive some goods, such as salt or rope; and/or half of the offspring of the cattle they helped raise. A plague of bovine dengue (bovine ephemeral fever) entered Yalálag in 1961, killing most of the cattle (personal communication Don Cuauhtémoc, Yalálag; February 12, 2012). In the 1970s, after the roads were improved to better connect the Sierra Norte with the Valley of Oaxaca, cattle started losing relevance as a means of transportation. Nowadays, only a few families own cattle, which are mainly used for farm work with a few used for transportation in farming and construction work.

[82] In Yalálag, farm work in the fields has been traditionally a male activity. Only a few Zapotec Yalaltecan women worked in the fields, mainly picking chiles, planting beans, and husking corn during the harvest season. However, they contribute to farming at home where they shred, dry, and preserve the crops. Most importantly, Zapotec women select the seeds to plant. Further, they also feed the farmers at home and in the fields: they are responsible for the daily food farmers bring to the fields. Moreover, during specific farming seasons (e.g., husking), they also bring food to the fields and help with specific tasks there. This Zapotec division of farm work contrasts with non-gendered farming customs among Mixe.

Because farming in Yalálag demands significant human labor, most Yalaltecan farmers used to engage in reciprocal work agreements with other farmers. Don Constantino explains further:

> *To do* gotzona*, we used to look for a person and invite him. If he had time, he came to work for two or three days. And we had to give back the same days of work. If I went to clear the fields of weeds, then that person came [to help me]. The* gotzona *is even. . . . There were also people who used to hire us to work, and thus in those cases, they did pay us. There were not many persons that used to pay. Only a few people had the means.* [Don Constantino, Yalálag, January 20, 2012]

Image 7. *Planting a field in Yalálag.*

Image 8. *Harvesting and husking corn in Yalálag.*

People in Yalálag who could not afford land to farm and had only their own work as means of subsistence were at the bottom of the social and economic pyramid. They relied heavily on cash and therefore required to work for other people as paid workers. However, relying solely on money for subsistence was considered an undesirable situation, and most Yalaltecans avoided it. Often, paid workers were from the most impoverished Mixe towns, such as Tiltepec (Totontepec), Chichicastepec (Mixistlán), and Yacochi (Tlahuitoltepec), and they went to Yalálag for work. They, however, were mostly employed by the best-positioned Yalaltecans who owned more land than everyone else and could afford to pay workers.

The affluent families in Yalálag owned up to sixty *almud* (cf. Jopling 1973: 13), which is equivalent to about fifteen hectares. Such was the case with Don Cuauhtémoc's father:

> *Oh yes, he did farm more than sixty* almud*. Yes, because he was committed to the fields. . . . These were several [plots]. There used to be [plots] of eight, of ten, of twelve, [*almud*] and so on. Thus, it was in parts. Each one had about six almud, ten almud, two almud and so on.*

> *. . . Also, he had [land] all over the place. [But mainly] in* tierra caliente (warm soil areas)*. Only a bit also here 'in the back of the mountain' [*Tierra Fría*]. . . . In* Tierra Caliente *is where crops grew better, everything grew better, chile and everything. That is why they used to appreciate land more in* Tierra Caliente*.* [Don Cuauhtémoc, Yalálag, February 2, 2012.]

Don Cuauhtémoc's was among the wealthiest Yalaltecan households in the 1970s and therefore had privileged access to land. However, as Don Cuauhtémoc notes, the sixty *almud* his father owned did not refer to a singular plot but to several plots located at different latitudes in the rugged countryside of Yalálag.

Most Yalaltecans sought access to fields in various parts of Yalálag, but such opportunities were more accessible to wealthy families. Soils at different elevations have different temperatures and depend differently on rainfall.[83] Hence, farming land at different latitudes was a way to prevent and potentially compensate for climate-associated risks like drought (Jopling 1973). Also, the temperature difference allowed for crop diversity.[84] Depending on the climate, Yalaltecans grew different crops that complemented their dietary staples (e.g., sugar cane, sweet potatoes, agave), fruit trees (e.g., *sapodilla*, mangoes, bananas, papayas, lime, lemon, loquat, avocados, plums), and ornamental flowers often used for religious purposes (e.g., Yalaltecans use *zempatzuchitl* flowers on altars and offerings as they commemorate el Día de Muertos at the beginning of November and use *sapodilla* branches to build the main altar in the Catholic Church during Easter celebrations).

[83] Hot and temperate land crops depend on abundant rain, but cold land crops grow better when it rains less. Yalaltecan farmers knew well the differences, as Don Daniel described: "Yes, elders recount that 'When it rains a lot, there is not a good yield because it cools the crop if it rains a lot. Thus, there are no good crops then; "It is cold," they say. And when it rains a little, it produces good harvest." (Don Daniel, Yalálag, May 9, 2011) *"Sí, dicen los viejitos: 'Cuando llueve mucho no da cosecha buena ahí en tierra fría; porque se enfría ahí la cosecha si llueve mucho. Y no da cosecha buena por allá. "Ya está fría", dicen. Y cuando llueve poco, da cosecha buena."*

[84] For a detailed description of the farming techniques of the wide variety of crops, see De la Fuente (1949: 76–88).

Moreover, access to sufficient and assorted land allowed Yalaltecan households to farm cash crops such as *chile de onza* (*Capsicum annuum*), which grows at low elevations, also known as *Tierra Caliente* (hot land), where temperatures are higher. Until the 1970s, maize and *chile de onza* were the two most important commercial crops farmed in Yalálag. However, there were substantial differences in how Yalaltecans produce them and treated them economically.

Small-scale farmers grew maize together with squash and beans. Small-scale rain-fed farming, as previously mentioned, involved huge amounts of labor and weather-associated risks. Hence, it was not directly a profitable activity. Some ethnographers regard small-scale farming as an economic burden (see De la Fuente1949: 128; see also, Jopling 1973: 14–15). Although such a depiction of farming as economic detriment is truthful with respect to the arduous work and to the uncertain fate of rain-fed farming, it may overshadow the economic relevance that maize had in the regional market. The economic importance of maize is evident when considering commercial relations between Yalaltecans and other towns with poorer maize yields that instead produced cash crops, such as coffee.[85]

Given that maize was the main food crop, the prices of other food commodities tended to rise and fall with the price of maize in the regional plaza market system (Malinowski et al. 1982). Several towns in the Mixe region who suffered maize scarcity acquired maize in Yalálag (De la Cerda 1940) or depended on traveler-traders like Yalaltecans to acquire main goods, including maize. Yalaltecans traded in the Chinantec and Mixe regions where they exchanged goods, including maize, and coffee that in the late 19th century and until the first half of the 20th century had become a highly demanded product by a growing international market.

[85] De la Fuente (1949: 128) asserts, "There are big farmers who do not consider suffering [economic] losses, probably because they own different fields, ration work a lot, and are able to store maize to resell it at a higher price. It seems that for them there are [economic] losses, but only during dark years [original in Spanish]."

For as long as Yalaltecan traders produced maize to subsist, and as long as they maintained control over regional routes, they could influence the commercial prices of goods they traded, including coffee. Therefore, Yalaltecans aspired to farm not only to secure their subsistence, but also to achieve economic flexibility. Meanwhile, wealthy Yalaltecans with good access to resources farmed maize surpluses and could even store maize acquired from small-scale farmers who sold their crops when in need for money or other goods (De la Cerda 1940). As Carol Jopling (1973: 14) asserts, storage maize was, "even for the *rich* of Yalálag, tangible and readily accessible wealth; possibly a more easily tapped asset than real property or a bank account in Oaxaca".

3.3.1 Farming and market integration of cash crops from the Sierra Norte of Oaxaca before road expansion: Coffee as an example

Even though farming was the predominant activity in Yalálag for most of the 20th century until the 1970s, trade—especially, coffee trade—was the most profitable activity. These two activities were deeply intertwined. Analyzing Yalálag's role in the market chain of coffee and its relationship with farming can help us understand how the local economy was deeply integrated in both regional and international markets, what position Yalálag played in market integration, and the role of farming in that economic stratum. My analysis closely follows earlier ethnographies of both the Zapotec and the Mixe region (De la Fuente 1949; Nahmad 1965; Jopling 1973; González 2001; Aquino Moreschi 2010), my own fieldwork and interviews, and the life stories of two Yalaltecans whose fathers worked as coffee collectors: Doña Margarita [forty-nine years old] and Don Enrique [fifty-seven years old].

The history of coffee in the Sierra Norte can be traced to the end of the 19th century,[86] when coffee cultivation arrived and found good soil, weather, and farming production organisation in El Rincón, the Chinantec, and Mixe regions[87] (Hite 2011). As coffee production started and expanded in the Sierra Norte, Yalálag became a main regional coffee-collecting town together with Zoogocho and Talea de Castro on the Zapotec side of the sierra and Zacatepec on the Mixe side (Nahmad 1965). Yet, unlike other main regional coffee-collection towns of the Sierra Norte, Yalálag did not have the proper climate conditions to grow coffee as a cash crop.[88] Yalaltecans profited from moving and trading coffee. Yalálag had a prime location along the trail and a market network that was the only connection for most of the towns of the Sierra Norte before the construction and expansion of roads in the region.

Coffee arrived in the Sierra Norte when its international demand was high, especially in the U.S. This demand also boosted coffee production in Veracruz and Oaxaca. Yalaltecans enjoyed skyrocketing coffee prices for approximately half a century due to international market conditions. More specifically, there was a high demand during the post-World War II economic boom, paired with ritual coffee breaks at work[89] and a temporary lack of crop supply

[86] Roberto J. González (2001:175–233) provides an overview of coffee's arrival in the Sierra Norte. He also develops an in-depth historical analysis of coffee production in the region, particularly in Talea de Castro, and its reinvention as local tradition. See also Nader (1990).

[87] It is worth noting that coffee was also grown in the Chinantla Alta in the District of Tuxtepec. Although most studies, including this one, do not consider the Chinantla part of the Sierra Norte, "The Chinantla Alta forms a geomorphological vegetative cover and ethnic continuum with the Sierra Norte Zapoteca-Chinanteca," as Heith asserts (2011: 26).

[88] Although Yalálag does not have weather suited to growing coffee as a cash crop, some Yalaltecans living in the highest parts of the town grow coffee plants in house gardens. Temporary migration gave a few Yalaltecans access to land in areas more suited for coffee production than Yalálag. Further, those who had land and could continue moving between Yalálag and those areas cultivated land in both places. Such was the case of Don Enrique's family as he recounted: "My maternal grandfather left us a piece of land here and also in the *rancho*. I called it *rancho* because that is what it used to be, a *ranchería*. It is a town called Chinantequilla, it is in the Mixe [side]. He left us three hectares of coffee there." (Don Enrique, Yalálag, February 3, 2012. Original in Spanish].

[89] "Coffee breaks, which had originated before World War II, became even more popular during the war (both in the armed services and in industry) and in the post-war decade. By 1959, more than three-quarters of all U.S. workers had coffee available at their place of work" (U.S. Department of Commerce, cit.in González 2001: 202).

competition (see González 2001; Fridell 2007). While that situation lasted, trade was highly profitable and opened space for a variety of activities (e.g., transportation, coffee collection) that employed some Yalaltecans, who became small-scale coffee traders moving coffee and employing Mixe neighbours as laborers (see Nahmad 1965; De la Fuente 1949):

> *My dad recounts that there used to be lots of muleteers; they competed among each other. Because here, I reckon, it was only Joel Aquino's father, Carmen Alejo's father, and Artemio Primo's father, who were the richest ones since they were traders, and so them. . . . Well, my father used to transport coffee for them from Zacatepec Mixe, Tiltepec, Chichicaxtepec, Candelaria, and God knows from which other places they used to transport coffee!*
>
> *Well, from those places to here and from here to there he used to transport merchandise to sell; all kinds of foods—fish, rice, etc. Well, his work was that of transporting [goods] solely, it was not his merchandise that he carried around.* [Margarita, Yalálag, February 11, 2012]
>
> *Around that time when coffee emerged, he* [my father] *used to bring coffee and take maize to sell. Here, his boss was Mr. Máximo Alejo. It was my father's coffee and also the coffee he bought. As I say, he got to own forty or fifty mules. A lot!* [Don Enrique, Yalálag, February 3, 2012]

As these testimonies show, small-scale Yalaltecan coffee collectors were an essential part of the market chain. No one else knew well the region's rugged terrain. They traded goods that were integrated diversely into regional, national, and international markets. Although the main staples were either regionally produced (e.g., maize) or part of a broader national market chain (e.g., salt and rice), coffee was primarily integrated into the international market. Yet, these small-scale coffee collectors or muleteers depended on traders they considered their bosses (*patrones*), who were the main regional bulk coffee buyers. Bulk coffee buyers had extraordinary access to growing, buying, and storing crops; they also moved the most demanded products from outside the Sierra Norte.

Bulk coffee buyers were the intermediaries between producers and monopolist coffee traders based in Tlacolula and Oaxaca City, who ultimately made the highest profits from coffee (De la Fuente 1947; González 2001; Nahmad 1965). Yalaltecan bulk coffee buyers also owned the main stores in town. They were able to grow, buy, transport, and store regionally produced maize and coffee, as well as other regional and imported products. Because of their economic situation, they could afford farming surpluses, among which maize was important because they could exchange it in coffee-producing towns where there was a shortage of maize (De la Cerda 1940), as well as for other industrially produced goods that were scarce in coffee-producers' towns:

> *The biggest store belonged to Mr. Max. All you needed, you could find it there. Mr. Max used to sell machines, tools, etc. I mean he sold everything. And he also traded coffee. He exchanged things for coffee. Many people from other towns used to come here. They used to bring coffee and buy tools, fabrics, and machines here.* [Don Enrique, Yalálag, February 3, 2012]

Yalaltecan bulk coffee buyers borrowed money and goods to trade in advance (of the harvest season) to small-scale coffee traders who collected the coffee, as well as small-scale producers who approached them directly (De la Fuente 1949; González 2007). Hence, coffee collectors were both indebted to and depended upon bulk buyers to sell coffee, which they hoped could be enough to not only to pay them back but also to earn profits. A bitter chain of debt and trade dependency gave way to several forms of abuse,[90] including exchanging overpriced goods for underpriced coffee, with coffee producers who exchanged coffee for goods they needed—among which maize was the most important as the basis of their diet (De

[90] "My father once told me something like that. . . . That, let's say, he saw how an *arroba* [of coffee] was heavier than the stated weight . . . so that his bosses used to cheat" [Margarita, Yalálag, February 11, 2012].

la Cerda 1940; De la Fuente 1949; Nahmad 1965; González 2007).[91] In this context, farming was so important not only for subsistence but also to achieve a certain level of autonomy that allowed households to engage in other economic activities:

> *Well, my father was firstly a farmer, and then, slowly he became a trader. . . . It was just that my father was not one of those persons who stays in one spot and can do the same; he endeavored. . . . That is why I tell you; he was able to improve little by little. After that I noticed he still had his mules, but it was only to work here, and he stopped going that far. But here he also started building his tannery and to tan leather.* [Margarita, Yalálag, February 11, 2012]

> *Maize is what he farmed. Logically, he was not able to maintain both things at the same time. He was here for a while, and during the coffee season, he used to go there* [Chinantequilla]*. And when there was no coffee, he would return here to make hats.* [Don Enrique, Yalálag, February 3, 2012]

Farming was central and deeply intertwined with economic diversification, which included small-size craft industries such as hat-making or tanning and coffee trade. Profits from coffee collection provided currency that was then partly invested in farming and in other activities. As long as coffee prices were high, small-scale farmers who were also coffee collectors were able to earn profits.[92] However, the economic risks of a trade that depended on international market conditions and the actual work of transportation were unequally distributed along the market chain of coffee that included small-scale traders and bulk buyers.[93] That inequality became clear

[91] As Salazar Peralta (1988: 112) notes, similar abusive commercialization structures and dynamics prevailed in most coffee-producing areas in the country where coffee producer towns shared similar characteristics, such as lacking roads, remote geographical conditions, and most of the population self-recognized as indigenous. See also Nolasco (1992).

[92] According to De la Fuente (1949: 35), pursuing economic autonomy was also a feature among Yalaltecan migrants in urban locations.

[93] To get a glimpse into the work involved in coffee collection, we can read Margarita's testimony referring to her dad: "As he [her dad] recounted, it was a pain [working] with the animals. He used to tell how he had to go in the mud during the rainy season. And when it was raining, they needed to unload merchandise very quickly; otherwise, it got wet. And wherever they stopped along the journey, they spent the night there. And when it rained! Well, and since it was not their town, and so they did not know the terrain that well, thus they had to keep the animals together in the evening. It was thus really hard and costly that job" [Margarita, Yalálag, February 11, 2012].

after 1956, when an overabundance of coffee crops on different plantations worldwide caused a sudden fall in coffee prices (Fridell 2007; cf. González 2007):

> *Mr. Max used to give [my father] an amount to buy coffee; and my father profited because he used to buy it at a cost and he would bring it here to sell at another cost, and at that time they were paying well for coffee. Overnight, he [Mr. Max] said, "You know what? Coffee price went down. So what you bought does not have the same price; it is less." My father had our house completely full with coffee. He had bought a lot. He had spent all the money investing it in coffee. And there was no way we could return that coffee. No! Those who sold, they sold, and those who bought, they bought. Mr. Max still bought coffee but not at the same price anymore, he bought it at a much lower price. And that is how our big debt began. He* [my father] *had to sell his animals. And so was the life of many coffee collectors, not only of my father but many others.* [Don Enrique, Yalálag, February 3, 2012]

The fall of coffee prices caught coffee collectors off-guard. As coffee prices diminished, the money they earned for the coffee they had collected was not even enough to settle their debts with bulk buyers:

> *When coffee fell, it all went out of control. He wanted to go to the other side* [of the border]*. He failed the exam because back then, they used to perform physical examinations on all the* braceros*. And so he was in Mexicali; he went that far to undertake the exam to cross, but no, he did not pass because he had a hernia. And it all went out of control. And he stopped farming. He did not have enough time; well essentially, he did not have money to continue, he stopped. We had nothing!* [Don Enrique, Yalálag, February 3, 2012]

The local consequences of the fall in coffee prices on the international market were long-lasting for many. Like Don José's family, many other households went broke. That situation pushed some to permanently migrate.[94] Migration in itself was not an exceptional economic

[94] Migration is precisely another and rather recent example of how Yalálag's economy is inserted in broader markets. For a better description of migration dynamics, see Chapter 2.

alternative among Yalaltecans, especially in critical moments. In the late 1950s and 1960s, most Yalaltecan migrants moved mainly to destinations in the region and to growing cities in Mexico. International emigration was not popular because of its economic and emotional costs. Yet, the moment of the crisis due to the drop in coffee prices pushed desperate Yalaltecans, like Don Miguel's father, to attempt to migrate to the U.S. at a time when the Bracero Program (1942–1964) was still in effect. Meanwhile, the main local coffee collectors could manage the decline in coffee prices. As coffee prices slightly recovered in the late 1960s and 1970s (see González 2007), Yalaltecan traders continued in the coffee business for some time as long as regional market conditions allowed.

Yet, as the economic relevance of coffee grew, new adjustments in the coffee market chain emerged that reconfigured the regional market and diminished the role that Yalaltecans had had as intermediaries and regional traders. One such adjustment was the construction and expansion of the roads into the Sierra Norte in the 1950s and another was the Mexican government's endeavour to regulate the coffee market in the 1970s through the Instituto Mexicano del Café, INMECAFE (Mexican Coffee Institute).[95] Infrastructural changes and state

[95] The Mexican government instituted the INMECAFE in 1959 and took part in the drafting of the International Coffee Agreement (signed in 1963), which helped coffee prices recover (González 2007:203–204; see also Fridell 2007:139). As Salazar Peralta (1988) notes, the INMECAFE'S main predecessor was the Comisión Nacional del Café (National Coffee Commission) created in 1949 with a focus on research of coffee crops on existing plantations. In 1959, that commission became the INMECAFE and grew in structure and scope of activities. Yet, it was only until it underwent reforms in the 1970s that this institution was allowed to take part in national and international commercialization. In 1973, the INMECAFE further extended state regulation of coffee from production to commercialization on the international market. State intervention could have also contributed to eroding the control of Yalaltecan traders over coffee trade in the region, but it certainly did not prevent bulk buyers from achieving certain control over small-scale producers. However, evaluating whether the goals of that institute (closed in 1989) were accomplished and whether it benefited coffee producers beyond the scope of this study. Roberto J. González's (2001) brilliant ethnography critically approaches coffee production and analyzes the role of the INMECAFE in Talea de Castro, a Zapotec coffee-producing town not under Yalaltecan traders' control. For recent studies of the organisation of small-scale coffee producers in the Chinantec region, see: Matersbaugh 1997; in the Sierra Juárez, see Bastian 2006; and in Loxicha, in the Sierra Sur, Aguilar Støen et al. (2011), who assess how coffee production has benefitted forest preservation. Also, for critical analysis of the role of the Mexican State and specifically of the INMECAFE in coffee producer towns in Chiapas, see Salazar Peralta (1988) and Nolasco (1992).

intervention in the commercialization of the region's main crops were two trends that continued well into the 1970s, which transformed the regional commercial system and integrated the region into broader markets. These changes happened in ways that Yalaltecans had not anticipated and that ultimately negatively affected both their dependence on small-scale farming and their strategic regional trading position. I now look at the main structural and policy changes that reconfigured both the regional market and the integration of Yalálag into broader global markets.

3.3.2 Infrastructure expansion as a state intervention in the Sierra Norte of Oaxaca and its effects on market integration (1960s–1970s)

From the late 1960s and into the 1970s, Yalálag and the Sierra Norte region experienced unprecedented state intervention with the construction of public infrastructure, which included a primary school (1956),[96] a road (1961), a drinking-water system (1961),[97] an electric grid (1969),[98] and a health clinic (1979). The following extract from an official letter dated April 14, 1971, in which the municipality of Yalálag described the towns' amenities to the office of tourism in Oaxaca, gives us a sense of the infrastructure developments taking place at that time in Yalálag:

> *I am pleased to share facts about this community . . . This is an indigenous community, with its own characteristics that, in recent years has been taking big steps towards its incorporation into the civilizing trend. . . . [It] has postal service–three times a week, telegraph, and buses twice a week. [The latter] is not a good service due to the bad road conditions since the journey from Villa Hidalgo to Oaxaca is 138 kilometers, ten and eleven hours long. There are several trucks transporting regional products such as coffee,*

[96] That first school was built in 1956, for which communal labor had been required. Further, Yalaltecan authorities at that time played an important role in building that school. A few years later, those authorities also organized the construction of a secondary school that was private (Aquino 2002: 32).
[97] Until then, the town had transported water through a fragile system of wooden canals. Water would be collected in public fountains. That water connection was extended in 1971, a project developed in agreement with the Papaloapan Commission.
[98] Until then, only a few wealthy households owned electric power generators.

avocados and peppers, hammocks, and others. We have a population of 2,600 inhabitants that in previous years were more and now they migrate due to lack of jobs. We have fifteen schoolteachers that attend the primary and one [private] incorporated secondary school. In the past thirteen years, the cultural advance is noticeable thanks to children and youth participation. [Letter from the Municipal Authority of Yalálag to the Office of Tourism in Oaxaca, April 14th, 1971. Historical Municipal Archive, Yalálag]

Despite its efforts to convey an upbeat tone, the letter denotes the precariousness of infrastructural achievements, such as roads. For a long time, Yalálag had demanded government support for public works that Yalaltecans considered necessary and could not build on their own. Yalaltecans, and especially migrants who had worked and lived in growing urban areas, were well aware of the uneven socioeconomic development taking place in the country and had not remained idle. Yalaltecans had made their demands clear, not only requesting government support for public services, but they had also restored communal local institutions of social organisation (Aquino Moreschi 2002) and contributed substantial resources for their construction, including communal work and migrant remittances. Their demands, however, were not directly addressed by the sate.

Instead, state intervention in the Sierra Norte took place within the frame of a larger state development project that occurred in the entire Papaloapan Basin, called the Papaloapan Development Commission[99] (1946–1984). This development program came into existence within a national context that one can interpret as the prelude to the end of the Mexican Miracle (see Chapter 1). In the 1960s and 1970s, the country's unequal development was palpable. National economic growth had slowed, and urban and rural political movements had spread. The Mexican Government responded with violent repression, while also expanding public

[99] Inspired by the Tennessee Valley Authority project, the Papaloapan Commission was a rather controversial project (Fox 1972: 149) because it included the displacement of Mazatec and Chinantec populations (see Fox 1964). At the same time, at least during the beginning of the project, the Papaloapan Commission promoted infrastructural development in the Sierra Norte of Oaxaca (Nahmad 2003).

infrastructure and state intervention in agricultural production, at the cost, however, of increasing internal and external debt (Hewitt de Alcántara 2007; Cárdenas 2010).

Yet, when state support for public infrastructure arrived in the Sierra Norte, it was mostly sparingly delivered[100] under existing patronage structures. Additionally, infrastructural developments triggered adjustments in the market networks that Yalalatecans had not expected or desired.

3.3.3 Expanding roads and shifting market networks

In 1961,[101] Yalálag received its first road connecting it with the Valley of Oaxaca.[102] It was a sinuous dirt road, and the arduous journey[103] took approximately fourteen hours. Still, it was a great accomplishment, as Don Enrique describes:

> *Oh! It was the best when the road got here! It was November of '61 because in '61, cars started arriving. It was 1963 when there were [cars] here and there.*
>
> . . .

[100] A letter from the Office of the Government of Oaxaca to Yalálag and other towns in the Sierra Norte in response to their petition for health services helps illustrate this point: "In relation to the several official letters that you have sent to us indicating the desire of several towns for a health center to be established, I want to inform you that the Secretary of Health and Welfare has decided to stop the development of such works in the State of Oaxaca during the current year in order to prioritize works of restoration and connection of the potable water system." [Extract from an official letter from the *Secretario General del Despacho Palacio de Gobierno en Oaxaca* with copies to the municipal presidents of Tamazulapan Mixe, Juquila, Juan Carlos Yautepec, Solaga, and Yalálag. February 6, 1971, Municipal Historical Archive, Yalálag]. It is worth noting that, later that year, Yalálag suffered a whooping cough (pertussis) epidemic that killed several inhabitants [Telegram sent to the Chief of the *Servicios Coordinados de Salud Públicos del Estado*, August 24, 1971, Municipal Historical Archive, Yalálag].

[101] I found discrepancies in people's accounts of the specific year when the road was opened. On the one hand, a few interviewees, including Don Miguel and Don Enrique, referred to it happening sometime between 1961 and 1963. Both remember quite clearly that by 1963, there were cars using it. On the other hand, Jopling (1973: 62) asserts the road did not open until sometime around 1965. Given the constant weather problems the construction faced, and the difficulties of such an enterprise given the terrain, I assume the road underwent reconstruction several times after its formal opening to which I have not found specific references.

[102] That road reached Cuajimoloyas, a town already connected to the valley to transport timber. It was a dirt road, vulnerable to weather conditions.

[103] As Don José described: "Despite the bruises and bumps, we used to leave at six in the morning from Oaxaca to get here at six or seven at night. [The journey used to take] all day long because the road was really ugly." [Yalálag, February 3, 2012. Original in Spanish] Likewise, the local authority in 1971 stated: "It is not a good service due to the bad conditions of the dirt road beginning at kilometer 138, the journey from Villa Hidalgo to Oaxaca takes ten to eleven hours." [Extract from an official letter to the Department of Tourism, April 14, 1971, Historial Municipal Archive, Yalálag. Original in Spanish].

It was '66 and '67 when the market here reached its highest moment because trucks arrived here. And it was really beautiful! Around this time [in the evening], the plaza was still going on, on Tuesdays people were still selling. They could sell, still. And sometimes [they started selling] already on Mondays! There were stalls already, and people started selling! They were there already! Oh! It was so beautiful! [Don Enrique, Yalálag, February 3, 2012]

During the first decade after its construction, the easing in movement of goods enhanced trade in Yalálag and had its trading peak precisely, as Don Enrique mentions. Yet, with the road connecting to the Mixe and Chinantec regions, the regional trading network was also reshaped, and with it, Yalálag lost its role of regional hub and coffee collector.[104]

The construction in 1969 of a road connecting the Mixe town of Ayutla with the Zapotec town of Mitla in the Valley of Oaxaca was a decisive moment. Yalálag began to lose its prominent commercial status. Before the construction of the road in the Mixe region, the Ayutla plaza market was almost as important as Yalálag[105] (Nahmad 1965). Ayutla, like Yalálag, was a main gateway to remote Mixe towns and to the Chinantec region. Meanwhile, the Zapotec town of Mitla, like Yalálag, was home to leading traveling traders and prominent coffee collectors.[106] Yet, because Mitla lies in the Valley of Oaxaca, it had better access than Yalálag to other commercial and political centers such as Tlacolula and Oaxaca City. The road to Mitla and Ayutla enhanced the commercial position of both Mitla and Ayutla, eroding the regional commercial prominence of Yalálag and of Yalaltecan coffee collectors (Nahmad 1965; Aguilar

[104] On the side of El Rincón, for example, after Zoogocho obtained road access, this town hosted the most important regional market. However, that situation changed when, after important lobbying efforts of "Taleans with coffee interests," a road to Talea de Castro was built in 1959, and that town became the main market seat (see González 2001: 202).

[105] Before road construction, Ayutla was in second place in sales volume, right behind Yalálag (Nahmad 1965: 62). Yalálag shared its top rank (of more than 50,000 pesos in sales) only with Tlacolula, and Matías Romero and Juchitán.

[106] As Nahmad (2003: 457) notes, the traders he designates as a "trading caste" from Mitla and Yalálag had historically profited from trade in the Mixe region of products such as clothing, bread, soap, sandals, and so on.

and Alatorre 2011). That situation is best described by ethnographer Carol Jopling (1973), who studied Yalálag in the early 1970s:

> The market [of Yalálag] itself does not account for a large monetary return to the town, but rather by attracting trade, it engenders a high return in the tiendas from the Mixe buying mezcal to the trader picking up corn, avocados, coffee, or shirts for resale. In general, Yalaltecans commented that the market used to be much larger, but that now, the plazas in Zoogocho, and especially in Ayutla since its new road was built four years ago, have grown larger and are siphoning off some of the trade which Yalálag used to have. It is not clear whether, in fact, these are the reasons or if the decreasing population and the greater number of Yalaltecans who go to Oaxaca with more frequency is reducing market activity (pp. 31–32).

As Jopling's description denotes, the road network indeed favored Ayutla's market, and Yalaltecans perceived that situation as Ayutla stealing their commercial activity. However, regional commercial competition did not completely jeopardize Yalálag's market. The road had certainly eased movement of goods and reshaped the market network, but for a few years, regional production was still immersed in same market networks. Things were changing, but Yalálag's market was still alive, and so was farming:

> *Yes . . . but there was not much [market] competition. Competition is what finished the market. Because it used to be only on Tuesdays that people were waiting [for] foodstuff. Yet, as the road improved, other products became available little by little. That is when trade went down.* [Don Enrique, Yalálag, February 3, 2012]

> *The bulk of the business for the two large stores in Yalálag is coffee and corn buying, and transport (one store has two trucks, the other one) and the merchandising of a wide variety of goods and staples used by Yalaltecans* (Jopling 1973: 26).

As Don Enrique explains, in the late 1960s and in beginning of the 1970s, Yalálag's market did not face strong competition. More importantly, as Jopling describes, maize and coffee were still the main valuable regional crops that sustained local business in town.

Yalaltecan traders continued to keep relative control over the movement and trade of the most important goods because they were the best trackers in the Mixe region that, until then, still lacked roads, and those roads that existed were still very rugged.[107]

However, in the mid-1970s, the Ayutla-Mitla road extended to Totontepec, passing close to Tlahuitoltepec. Both Totontepec and Tlahuitoltepec hosted regional markets and were both positioned on historical traveling/trading routes that connected the Mixe and Chinantec regions with the Caxonos Zapotec region via Yalálag and with the Valley of Oaxaca via Mitla. When the Tlacolula-Mitla road extended to these two towns, the old foot-trails that had connected Yalálag with those regions lost relevance. Totontepec and Tlahuitoltepec gained better positions as trading hubs. Soon thereafter, the volume of their economic transactions started surpassing those of Yalálag's market. Finally, the road network in the Sierra Norte strategically connected coffee producer/collector towns (in both the El Rincón and on the Mixe side) with the main trading towns in the Valley of Oaxaca, eroding Yalálag's strategic position as a key coffee collector. Indeed, the need to facilitate the movement of commercial goods such as coffee[108] and wood from the sierra (González 2001; Klooster cit. in Merino 2004; also Mathews 2012) had more weight than local long-standing demands for road connection of towns of the Sierra Norte to the Valley of Oaxaca. The road shifted the regional market network in a way such that Yalálag lost its former position as an economic hub.[109]

[107] The road, for example, Don Enrique recounted: "was ugly. Well, it was a dirt road. It was a dirt road; still it had to traverse the river. In 1968, they built the bridge. I had to go to put it up. That time I had to go help to level it. That time I was in 5th grade at the primary school, and they brought us out: 'Let's go finish levelling it [the bridge]!' Because the people were not enough, I mean, the tequio was not enough. [Thus] We went to level that little bridge." [Don Enrique, Yalálag, February 3, 2012].

[109] Further, the construction and expansion of roads in the Sierra Norte reshaped movement and routes, not only of goods but also of people. Historical routes that had commercially and culturally linked the Sierra Norte with the Isthmus of Oaxaca and the coastal plain of the Gulf of Mexico began to lose their preeminence to the Valley of Oaxaca.

3.3.4 The arrival of CONASUPO retail stores: Market integration of local farming

In the 1970s, state government intervention had expanded in the Sierra Norte not only in the form of infrastructural developments, but also in the chain of agricultural production and commercialization of main traditional crops, among which maize was the most important. Specifically, in 1974, a retail shop CONASUPO (National Company of Popular Subsistence) opened in Yalálag, and with it came significant changes that deeply affected local farming. CONASUPO was a state-owned enterprise directly connected to the government's food supply system, including the delivery and regulation of the prices of staples, particularly maize (Yunez Naude 2003: 98-99).[110]

Even though government intervention in agricultural production was not new, the expansion of the CONASUPO into the Sierra Norte in the 1970s was unprecedented. The CONASUPO was a government institution established in 1965 that concentrated the government's food regulatory activities, including market regulation, processing, storing, and distributing main crops, as well as the regulation of domestic and external trade (Yunez-Naude 2003). Its arrival in Yalálag in 1974 took place within a specific short period in which the Mexican State, facing a food deficit problem, reconsidered a agricultural policy that, beginning in the 1930s and until then, had channeled most incentives toward commercial farms and irrigated lands (Appendini 2008). Instead, between 1971 and 1982, the government decided to provide economic and infrastructural resources to support small- and medium-scale farmers, such as Yalaltecans. Those incentives included storage facilities, marketing, and government-stabilized credits[111] (see Appendini 2008). Accordingly, the role of the CONASUPO was to aid

[110] It is worth noting that for roughly two decades, local authorities had demanded government support to acquire health services.

[111] Credit is vital for small-scale farmers. In the historical archive of Yalálag, we found a list of thirty-two farmers who had applied to the Sistema de Servicios Integrados de Apoyo a la Economía Campesina (System of Integral Services Supporting the Farming Economy) for farming credits.

farmers in producing, commercializing, and accessing staples (Yunez Naude 2003; Hewitt de Alcántara 2007). In theory, CONASUPO's goal was to regulate the market of staples, eliminating intermediaries, preventing large local farmers from controlling the market, granting the acquisition of basic staples to impoverished farmers, and paying fair prices to small-scale producers (Yunez-Naude 2003; Hewitt de Alcántara 2007). In practice, however, CONASUPO's strategy proved complicated and rather detrimental to Yalaltecan farmers.

A first unintended and disadvantageous consequence that the CONASUPO brought to Yalálag was the introduction of a new species of beetle (*Prostephanus truncatus*) that infested local crops, drastically affecting Yalaltecan farmers (Aguilar and Alatorre 2011; Aquino Moreschi 2002). Because the plague contaminated maize, it made its storage practically impossible. For instance, Don Miguel's father was a prosperous *huarache* maker, who, until then, had farmed surpluses to trade: "My father was able to farm a lot because in those years—in the 60's, 65' and until about 1975—we could preserve maize really well; but lately not anymore." Hence, most farmers, including prosperous ones, had to limit their farming, purposely avoiding farming surpluses, and barely focused on subsistence farming.

Second, and because staples sold by the CONASUPO were produced in different areas of the country (although also often imported) and subject to a state-guaranteed fixed price,[112] the arrival of the CONASUPO retail store in Yalálag damaged the control that main Yalaltecan traders, who were often also coffee collectors, had over the trade of maize. In doing so, the CONASUPO was seemingly accomplishing its goal of eliminating intermediaries and preventing the control of the market by a few prosperous regional farmers. However, it shifted

[112] Between 1970 and until 1988, state agencies related to agricultural production and distribution fixed guaranteed prices, taking into consideration production costs, inflation rates, international prices, as well as the impact of final prices in the Mexican Consumer National Price Index, subsidies, and public finances (Martínez Fernández 1990: 940).

a long regional commercial chain that had been based on regional small-scale farming of crops such as maize. Furthermore, the arrival of the CONASUPO in the Sierra Norte integrated local and regional agricultural production in a broader national market that for a short period was state-regulated and protected.

These market changes that damaged former local economic activities, such as regional trade and coffee collection, and infrastructure development (e.g., roads, schools) indirectly triggered the migration to urban destinations of Yalaltecans seeking new economic opportunities:

> *We all left! I was the only one who became a technician, but the rest became professionals. . . . I worked in three big factories. . . . I started earning money, money, money. The money I earned was the money I sent here . . . I sent boxes of school supplies to all my siblings because they were four: two sisters and two brothers. . . . I started working and started supporting them; I helped my father sustain the family. And I started farming on my own. I used to send money to my father, and I told him, "You know what, Dad? We are going to farm, and we are going to return to it [farming]." "Okay, if you say so, we are going to do so." And he farmed. He said, "We farmed, and we harvested". As I returned, I could see the maize; it was a good harvest: so good! That is for my little siblings so that they do not suffer.* [Don Enrique, Yalálag, February 3, 2012]

As Don Enrique recounts, all his school peers left Yalálag pursuing their careers and dreams of a better life. In the 1970s, Yalaltecans mostly moved to growing urban areas, largely in Mexico. However, migrants in the U.S. were also shifting to urban destinations, mainly to the city of Los Angeles[113] (see Chapter 2).

[113] Los Angeles was then experiencing vigorous economic growth in various sectors of the economy beyond the manufacturing industry as its service, financial, wholesale, and retail sectors were rapidly expanding (Soja 1983: 208).

Even though not all migrant Yalaltecans fulfilled their dreams, several, like Don Enrique, acquired new, remunerated jobs (e.g., skilled jobs, trade, and domestic service) and sent money home to continue farming. Farming was still a predominant production activity in Yalálag in the 1970s (Jopling 1973); and in the face of increasing migration and market changes, households adopted new strategies to farm, including the use of fertilizers (Aguilar and Alatorre 2011), reducing the size of their farming plots, and hiring paid day laborers.

In short, state intervention significantly shifted market conditions, and yet Yalálag kept a diversified productive economy with increasing access to monetary resources that were put towards continued farming, which while still considered an important source of food, had lost its economic relevance.

3.4. Productive adjustments in non-agricultural activities in the 1970s

Infrastructural developments in the Sierra Norte and protective economic policies in the 1960s and until the 1970s had diverse consequences in Yalálag's secondary sector. Access to electricity and a water system helped manufacturers mechanize production. Also, the road allowed *huarache* makers and clothiers to gain access to new materials that made production easier, as the following testimonies recount:

> *Around 1972, there was not much demand for* huaraches*. They used to be made in the region; as I said, they used to come here and buy them, but that has changed lately. From the '70s to the '80s is when things changed a lot, and the* huarache *demand increased. That is when they became well known. That is when we started hiring workers to have more merchandise.*
>
> *In those [previous] years, I used all the material naturally from here. We did not have access to rubber yet. It was all home material. The* huaraches *were original and authentic of pure sole. So then around 1977, we got to know that material that is more recently known as "airplane tire" that is what we are using now . . . the rubber, and the straps, the patent leather. Work started modernizing a little bit. It was not material from here in the region*

anymore, but inputs from other places started entering; as for example, León [Guanajuato] is where they make the patent leather. [Don Miguel, Yalálag, January 31, 2012]

*Sara: Those "*pechera*" t-shirts, as they called them, [were] like those that people used to wear to dance, but they made them out of muslin; the muslin was bleached—that is how they used to sell it.*
Ivet: And the muslin, did they make it here?
Sara: No, it was brought here. . . . It came from Oaxaca or Puebla . . . .
Ivet: And did your mom also make clothes?
Sara: Yes, for a while, they [my parents] were making clothes; for about three or four years. And her father used to take them to Mexico. He used to go to Mexico to sell it in the Zona Rosa *[. . .] yes, he had his siblings who lived there. He used to go every month.*
Ivet: And, what kind of clothes did your mom make?
Sara:-The same; muslin t-shirts, and blouses like one that was called "seagull" or [another] "little angel." That was a blouse like this; of very thin fabric, transparent, a sort of loose shirt. Those are the "seagulls" as they called them because they have very loose sleeves [wide]. [Sara, Yalálag, January 16, 2012]

As these testimonies reveal, manufacturers gained better access not only to imported inputs (e.g., industrialized raw materials and sewing machines), but also to differentiated markets. In the case of the *huarache* makers, they could better reach their niche regional market. In the case of the clothiers, they could access new markets in urban destinations. Although external bulk buyers still bought clothes directly in Yalálag, both the road and the migrant networks had eased the journey to areas where demand was growing. As Sara recalls, her grandparents and then her parents sewed clothes in Yalálag and then sold their merchandise in the *Zona Rosa*, a neighborhood in Mexico City that was at that time a hot tourist spot for American "hippie" tourists (Rizzo 2015: 55) seeking "traditional clothes" and

local youth embracing their fashion[114] (see Jopling 1973). Yalaltecans responded quickly to that increasing demand by creating new designs.

Infrastructural developments, demographic changes, and a protective national market favored Yalaltecan clothiers at a moment when tourism was expanding in the country and creating a new market (see Clancy 2001). Sewing gained popularity in the 1970s[115] (Jopling 1973), and several Yalaltecans enjoyed the favorable market conditions that protectionist policies sustained until early in the 1980s.

3.5. The increase in emigration and farming's decline (mid-1980s and 1990s)

Still, as the 1980s started, most Yalaltecans considered themselves farmers more than anything else, despite their diversified economy (see Table 3). However, it was precisely during that decade and in the 1990s that Yalaltecan farmers faced significant changes and challenges. In 1982, Mexico entered an economic recession,[116] which signalled the end of what many had called the Mexican Miracle.[117] The government first responded with state austerity measures, which translated into cuts in public and private expenses and a consequent fall in salaries and employment, while prices rose all over the country.

Back in Yalálag, the 1980s had started with adverse farming conditions due to poor rains that traditionally motivated Yalaltecans to emigrate temporarily. Local infrastructure and economic developments in Yalálag were significant but did not offer work niches that could

[114] Rizzo (2015: 56) argues that Mexican middle-class youth embraced traditional clothes as a fashion re-appropriating American "hippie" tourists' tastes and not necessarily indigenous culture.
[115] This activity gained such widespread popularity that it started including men's labor, when before it had been a predominantly female activity (see Jopling 1973: 82).
[116] Domestic economic circumstances (i.e., dependence on oil exports and increasing public and external debts as the main sources of foreign currency) had made the national economy especially vulnerable to international events that coalesced, such as the fall in international oil prices and the economic recession in the U.S. that preceded the U.S. Federal Reserve's decision to increase its interest rate in 1981 (González Marín 2002; Cárdenas Sánchez 2010).
[117] The Mexican peso devaluated three times in 1982, and the government had to cut public expenditures when confronted with a moratorium on foreign loans (Cárdenas 2010).

represent economic alternatives to local farmers in need. Neither could these developments economically or symbolically satisfy migrants who had been affected by the economic downturn, causing expulsion of Yalaltecan farmers from their towns and their fields.

Table 3
Population Distribution by Occupation, 1980

Occupation	Male	Female	Total
Farmer	271	40	311
Huarache maker	152	14	166
Craftsman	12	49	61
Clothier	4	46	50
Retail	16	21	37
Weaver	0	15	15
Employee	5	3	8
Mason	4	0	4
Tanner	3	0	3
Factory worker	2	1	3
Teacher	2	1	3
Midwife	0	2	2
Domestic service	0	2	2
Carpenter	2	0	2
Shipment	0	1	1
Secretary	0	1	1
Nurse	1	1	2
Printer	1	0	1
Tailor	0	1	1
Milkman	1	0	1
Butcher	1	0	1
Tortilla maker	0	1	1
Concierge	1	0	1
Student	289	236	517
Housewife	39	294	333
Total	**806**	**729**	**1,526**

Table source: "Datos previos al resultado del censo general de población 1980," April 10, 1982. Elaborated by third grade students of the Preparatory School Mártires de Tlatelolco, Plantel Fresno (1979–1982). Document found at the Municipal Historical Archive, Villa Hidalgo, Yalálag

Contrasting with prevailing job losses in cities in Mexico in the 1980s, the city of Los Angeles was becoming "a global city of corporate headquarters, financial management, and international trade," with striking (non-agricultural) employment growth (Soja 1983 et al.: 195),

where new forms of capital flow and labor that not beholden to a model of state intervention and social welfare were taking place[118] (Soja 1983 et al.; Soja 2014).

It was this local context that Yalaltecan migrants, such as Don Samuel, encountered upon their arrival in Los Angeles. Don Samuel temporarily migrated to Los Angeles in the late 1970s. His brother, Enrique, and his brother's brother-in-law, had moved to Los Angeles earlier and encouraged him to join them there, promising that a job was already waiting for him:

> *And we arrived there with his boss. He was Chinese, and he told him, "I found two workers." . . . And they taught me everything I had to do; cutting meat; cut this and that; onions, vegetables; to cook rice. "This is your job, and we cook," they said. "When I need something, I let you know, and you bring whatever we need." . . . I suffered a lot, but I completed a year with them. Except that they did not pay very well. They did not raise my salary. So, then I left there and went to sew in a factory, but that was not profitable. You have to buy it all, to eat, to drink, everything! Unlike in the restaurant where one can eat or drink when one is hungry or thirsty. I was there for about four months, and I did not like it, so I went then to a factory where they used to make big lamps—sort of trophies or with images. But the work was unpredictable there. Sometimes there was a lot of work, and sometimes there was not. And when there was no work, the boss cut working hours. They paid low [wages], and as I said, sometimes they cut hours, and they only gave us four or five hours [of work] in the week, and the money that we earned was not enough. So, it was not worth it. So, then I wondered what to do. So, there are some [religious] brothers congregated in a church there, and I talked to them, too, and they told me, "You should instead enter the restaurant where we are." "Ok! Can you recommend me there?" I asked. "Yes, I can recommend you". So I went to a restaurant that was called Restaurant Hamlet Hamburger. I was there for about four or five years. But I worked only a few days: four days but then also forty hours. There were times I started at eight a.m. until eleven p.m., and they paid per hour. At that time, they paid the minimum wage in the United States. At*

[118] Soja et al. (1983: 200) refer to a double process of restructuration of capital and labor in which both are highly centralized and concentrated in transnational corporations, which expanded in this period. This is how they explain the economic boom experienced in Los Angeles that encompassed the arrival of corporate headquarters and international trade, as well as extensive layoffs and plants closures, the weakening of unions, the re-emergence of poor working conditions, increasing poverty, and ethnic segregation.

that time, we earned two and a half USD per hour. And I was there when it was raised to three and a half USD per hour. And sometimes, when one works extra hours, they pay "overtime," as they call it. And so, I could earn some money. And we used to eat there, too. . . . And as I said, I worked four days there. So, then I looked for another job for the other three days. I worked at people's houses. There I used to go to plant flowers or hillocks because there are parts where there are hills in the city itself. So, there I went to clear weeds, or to fix the gardens, or to water the flowers. Sometimes I also entered the houses to clean—for example, the windows, because they had also cleaning ladies at their houses to clean their beds and everything. So, I did different things. And so, they gave me what the cleaning lady could not do. [Don Samuel, Yalálag, October 6, 2011]

As Don Samuel recounted, Los Angeles did have plenty, albeit precarious, job opportunities. Working conditions were exploitative, and some places—especially manufacturing—did not allow him to even make a living. Yalaltecan migrants, like Don Samuel, developed work and living strategies that allowed them to earn enough to afford to live in the city, while also being able to send money home. Such strategies included working extra hours at different jobs or working in restaurants and in domestic service—the sort of jobs that growing suburban areas required (see also Jopling 1973; Gutiérrez Nájera 2007; Aquino Moreschi 2010). As Don Samuel recounted, he strongly depended on his social network—close relatives, community members, religious groups, and other Latino migrants—to find jobs and share living expenses.[119]

In the 1980s, and as had been the case in previous decades when migration from Yalálag had remained mostly in Mexico, migrant households with access to remittances continued farming and could eventually hire temporary workers, who were mostly from underprivileged

[119] Yalaltecan migrants were, thus, part of an increasing immigrant population in Los Angeles that Soja (2014: 32–33) defines as "agglomeration of the working poor rather than a welfare-dependent underclass" required then in the restructuring economic process as it was shaping in Los Angeles.

Mixe neighboring towns (see Chapter 2). That was the case for Don Augusto, who migrated temporarily to Los Angeles early in the 1980s:

> *Ah! Since my wife is smart, and as I used to send money, she used to look for day laborers. She farmed and did it all. Thus, she was not in distress [that I was gone]. And since my little child was already a bit grown up—the first son, he helped his mom a lot. They did not suffer at all. They had food.* [Don Augusto, Yalálag, February 2, 2012]

As in earlier times, remittances aided migrant households in farming, and farming was mainly destined for self-consumption. Aguilar and Alatorre, who conducted fieldwork in Yalálag for several years in the 1980s, found that 84% of Yalaltecan households were food self-sufficient (2011: 102). Food self-sufficiency was so highly valued among Yalaltecans that they looked down on households who consumed maize sold at the CONASUPO retail store, as Armando recounts:

> *In the past, people had the following perception of maize; that the maize that is sold here in Diconsa* [formerly CONASUPO] *was to feed their pigs or animals. People who used to buy maize in the* CONASUPO *were very criticized because generally people had maize—not much, but everyone had maize at home.* [Armando, Yalálag, February 23, 2012]

Nevertheless, the longer Yalaltecan migrants stayed abroad, and the greater the workforce loss to international migration became, the weaker the farm work organisation within households and the social workforce labor that used to sustain the system through reciprocal aid became. Instead, migrant households had to reorganize farming tasks, and paid labor became more necessary than ever. In the case of Don Augusto's household, for example, his wife[120] had to take the job of hiring and coordinating day laborers in order to continue farming.

[120] Farming in the fields had been a predominantly male activity among Yalaltecans. An exception to this was chile harvesting, for which young and adult females were hired.

Theirs was not an isolated case in the early 1980s, when most farming households were hiring workers (Aguilar and Alatorre 2011), which further increased the economic costs of farming.

Households attempted to compensate for the loss of workforce by reducing their farming plots, farming in areas closer to the main town, and prolonging farming periods on the same plots. These shifts in farming strategies indirectly increased the use of fertilizers (Aguilar and Alatorre 2011), which were nevertheless expensive. In this context, Yalaltecans sought government support, as expressed in the following letter addressed to the Oficina de Coordinación y Asesoría Municipal en Oaxaca (Office for Coordination and Municipal Advise in in Oaxaca), signed by the municipal authority[121] on May 27, 1984:

> Chemical fertilizers are essential to insure a good production. The application of fertilizers will take place in June. We have been expecting for a month the arrival of fertilizers that we requested from the promoter of the Bank of Agricultural Credit, and they have not yet been delivered. There are 250 small farmers requiring the acquisition of fertilizers. For such a number of farmers, seventy-five tons of ammonium sulphate are required, and thirty-five and a half tons of super-simple phosphate. We demand your mediation with the agent of the bank, so that it fulfils our urgent need. [Extract from letter dated May 27, 1984. Municipal Historical Archive of Villa Hidalgo, Yalálag, file entitled "Year 1984." Original in Spanish.]

As the excerpt indicates, a vast number of farmers in Yalálag wished to farm and appealed to the government for support. Yet, as I have already demonstrated, government aid was poorly delivered and most often adverse to local productive needs. This situation did not change in

[121] It is important to note that the local Yalaltecan authority at that time considered farming a pillar of Yalaltecans' self-subsistence and culture (Aquino Moreschi 2002). It constantly urged government institutions to support Yalaltecan farmers. These petitions included, for example, a letter addressed to the Mexican president on occasion of his visit to the Sierra Norte, signed May 27, 1984, in which the authorities specifically requested support for their traditional farming: "[we demand] new impetus in providing substantial support to our tradition of MAIZE farming, delivering fertilizers and suitable credits. The preservation of our indigenous culture depends fundamentally on this tradition" [Letter under file entitled "Year 1984" at the Historical Municipal Archive of Yalálag. Original in Spanish].

the wake of the economic crisis of 1982,[122] when, instead of supporting local small-scale farmers who, like Yalaltecans, faced workforce loss to migration, the government drastically reduced public expenditures and institutional support for small-scale farmers.

The letter excerpt also shows the efforts of Yalaltecan authorities to support local farming. The authorities in Yalálag were local activists who had been elected in the early 1980s as result of a long local political movement that sought to revitalize Yalaltecan identity and cultural practices (see Chapter 5). Their political group, locally known as *Grupo Comunitario* or *Campesinos*, aimed to defend and preserve self-sufficiency farming. They regarded this practice as basis of their cultural practices; as the backbone of community collective institutions, such as communal work; and the Communitarian Assembly the basis for their self-determination (Aquino Moreschi 2002, 2010; Gutiérrez Nájera 2007). Consequently, they not only demanded government subsidies, but also endeavored[123] to contest state programs (see

[122] This was a double-bind decision. The government was reducing expenses: an orthodox measurement. Further, it was also responding to the prescriptions of the International Monetary Fund (IMF) as a condition for economic aid, after the economic crisis of 1982; and then, after 1986 also from the World Bank, which with the Mexican government, signed several agreements to access loans. Yet, the Mexican government had also been undertaking further structural shifts toward market liberalization as a response to the economic crisis (see Appendini 2001; Cárdenas 2010). As González Marín (2002:21) expresses, the government's reaction seemed to assume that state intervention and market protection had directly led to the economic crisis. Yet, most of these voices came from those who, early on, supported how the model had been developed. Further, this reaction did not question or analyze other important aspects of how the protectionist model had been implemented (see Cárdenas 2010).

[123] Local authorities belonged to a political faction known as *Grupo Comunitario* or *Campesinos* that led a transition in power in 1981 with their arrival in the municipal offices. The concern of the *Campesinos* was nevertheless not a simple consequence of insular resistance to change. Actually, among their members and leaders were several former migrants and intellectuals who had gained academic and political experience attending universities and participating in political movements in Mexico City. Furthermore, their critical approach to socioeconomic changes in Yalálag is remarkably parallel to the case Soja et al. (2013: 35–38) describe in Los Angeles, where a coalition of local unionized workers, facing shifting working conditions, also asked academics (including Soja) to help them understand the socioeconomic changes taking place in the 1970s that were transforming their workplaces and the city. Both cases reveal different critical approaches to in-depth local changes due to broad global economic market reconfigurations that affected both localities simultaneously. Each movement had specific local roots, and in the case of the *Campesinos* in Yalálag, their political approach to the decline of farming responded to local questions regarding their cultural practices and identity. Moreover, farming was understood as a cultural matrix of local practices, including primary communal traditional institutions—communitarian assembly, community work, and community service—that they considered the basis for self-determination (see Aquino 2002, 2010; also Gutiérrez Nájera 2007). In doing so, this movement built a new political approach and challenged academic notions, such as those regarding indigenous people as alternative forms of the proletariat.

Aguilar and Alatorre 2011; see also Aquino Moreschi 2002: 98–100). A paradigmatic example of this was the temporary blocking of the CONASUPO's sale of maize:[124]

> *Under Communitarian Assembly agreement, it's been deemed appropriate to stop the sale of maize at the CONASUPO due to the fact that [the sale of] this maize brought from foreign places is hindering the trade of maize produced in this community. When local maize is offered, it has to be underpriced in order to be sold. This damages the local economy and maize farming in Yalálag. This stoppage will last for two months.* [Extract from a memorandum signed July 10, 1984]

The abovementioned efforts of local authorities to defend small-scale farming show their own limitations to challenging state intervention and counterbalancing its consequences. However, such attempts illustrate the strong effects of market integration in local farming. Although market integration of small-scale farming, and specifically of maize, in Yalálag had started in the 1970s with the introduction of the CONASUPO retail stores, its effects amplified in the 1980s in the context of increasing production costs to outmigration, state subsidies cuts, and later shifts in agricultural and food policies.

After 1988,[125] structural policy reforms focused on reducing state intervention in market regulation[126] (Dornbusch 1997; Cárdenas 2010; Weaver et al. 2012), easing movement of global goods and capital, while increasing state control of migrant circulation.[127] Food and agricultural

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[124] "the CONASUPO has always sold everything cheap; beans, maize, squash seeds. All these products are sold cheap. Thus poor farmers can't sell their products at a fair price, because the CONASUPO sells cheap. Therefore, they can't sell it at a just price." [Don Cuauhtémoc, Yalálag, February 2, 2012]

[125] In 1988, Carlos Salinas de Gortari became president of Mexico in a controversial election that many Mexicans and analysts still consider fraudulent (see Thompson 2004). Salinas de Gortari was quite familiar with the new economic structural program because he had worked on the early economic policy shifts while serving in the Secretaría de Programación y Presupuesto (Budget Secretariat Office) of the federal government from 1982 until 1987, when he ran for the presidency.

[126] Which further translated into cutting restrictions on both foreign goods and financial capital, as well as state downsizing (i.e., cutting subsidies and massively privatizing public enterprises; companies were sold in rather obscure ways to "a select group of presidential friends, some of whom had connections to drug cartels" (Weaver et al. 2010: 7; see also: Hing 2010) while further amending constitutional laws regarding land property (see Dornbusch 1997; Cárdenas 2010; Hing 2010; Weaver et al. 2010).

[127] A paradigmatic example of this is NAFTA, the most important trade agreement signed between Mexico and the United States (and Canada) that nonetheless left out labor migration (Hing 2010).

policies were separated and became market driven. Food policies, on the one hand, specifically focused on securing the acquisition of main crops (at inexpensive prices), while agricultural policies sought to promote commercial agriculture.[128] Hence, public subsidies and institutional agricultural support concentrated on commercial farmers.

Meanwhile, in the same year, the U.S. government inaugurated a series of border-enforcement policies that further criminalized undocumented migration, which indirectly caused more permanent international migration than before, adding to population and workforce loss (see Chapter 2; see also Aquino Moreschi 2010; Andreas 2000; Cornelius 2001; Cornelius and Salehyan 2007; Sarabia 2012). In the 1980s, emigration intensified and remained strong through the 1990s (see Figure 11). Not only did more Yalaltecans shift routes north than in previous years, but many others decided to stay due to shifting regulatory migration policies (see Chapter 2). Population loss was more significant among people between ages fifteen and thirty-nine (see Figure 12) reducing the available farming workforce:

> *Farming went down little by little as people left. Because at that time, as I told you, I used to work with others who at age sixteen or seventeen were already farming independently. They no longer farmed with their parents but did so independently [as a separate household]. So, what does that mean? Well, that at that point, there is a new worker to join. So, if one of them left, that meant losing a working partner. I slowly started losing [partners] to do* gotzona*; mainly to do* gotzona *with.* [Tomás, Yalálag, January 31, 2012]

[128] "where [nowadays] twenty families control the industry. Sinaloa is one of Mexico's prime, modern industrial-agricultural regions, as well as the core of the country's drug trade" (Hing 2010: 14).

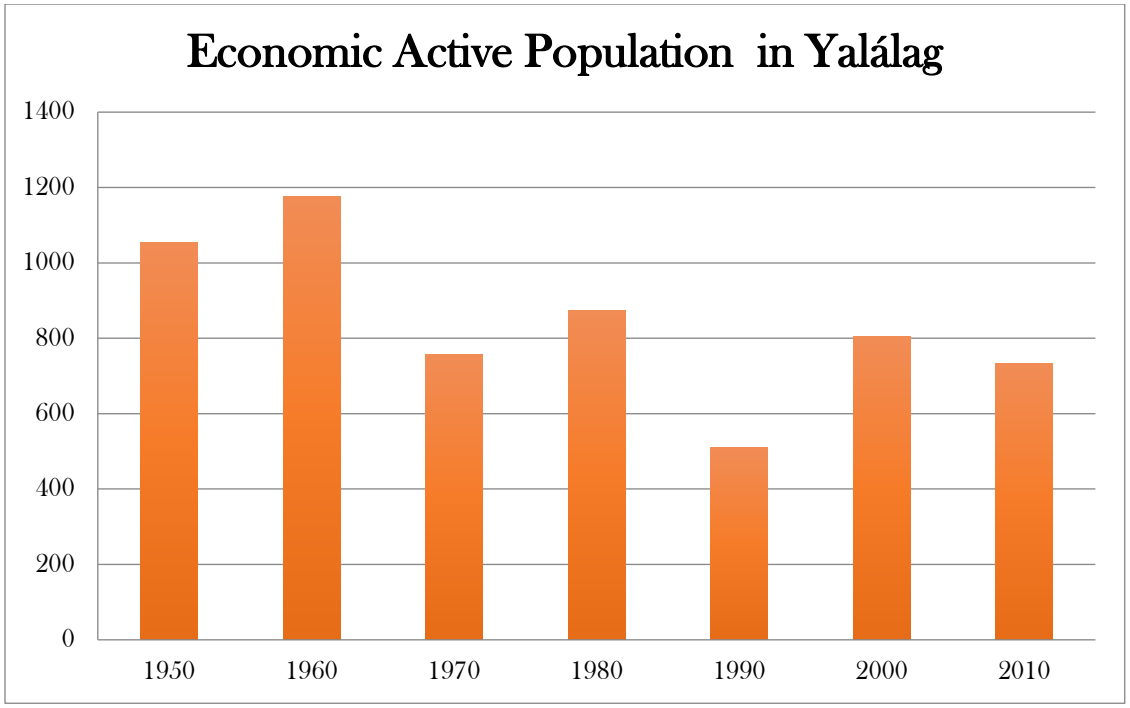

Figure 11. *Shifts in the economically active population that, according to INEGI, refers to people aged fifteen and above who worked or were employed at least one hour a week in the years indicated.* Source: INEGI.

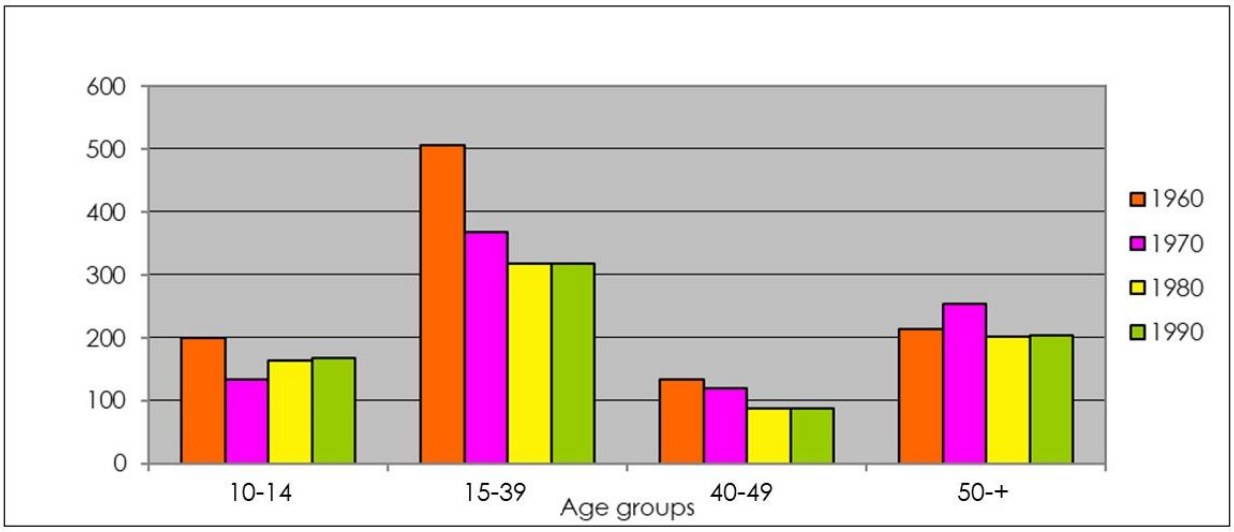

Figure 12. *Male population in Yalálag between 1960 and 1990 by age groups.* Source: INEGI.

Furthermore, beginning in the 1980s, the government ended former food import restrictions, deregulating the prices of maize to align them with international producers, as it

engaged in the North American Free Trade Agreement (NAFTA) in 1994[129] (Appendini 2001 and 2008; Hellman 1997; González and Macías 2007; Martínez Fernández 1990; Lara 2014; Cárdenas 2010), integrating local markets in an impossibly unbalanced position[130] wherein small-scale farmers such as Yalaltecans lost any chance to compete or their capacity to control the local trade of their main crops.

The abovementioned shifts in economic policies, infrastructural conditions, increasing receipt of migrant remittances, and the productive adjustments enhanced the arrival of imported products and the multiplication of small retail stores in town (Images 9 and 10).

Image 9. Food produced elsewhere, including transnational companies, is transported to Yalálag, February 2011.

[129] Tariffs were reduced without asking for any form of reciprocity from foreign partners (Cárdenas 2010: 208–209). In the case of trade agreements, there were not always mechanisms that could compensate for the uneven economic relationships between Mexico and its more economically and industrially advanced partners. One paradigmatic case was the signature of the NAFTA in 1994: when added to the explicit exclusion of compensatory mechanisms, there was also legal asymmetry in terms of how countries assumed commercial accords that were signed as treaties in Mexico, but only as agreements for the northern "partners" (Santos Baca 2014: 116).

[130] Besides the fact that staples produced in the U.S. were rather cheap compared with increasing storage, credit, and transportation costs in Mexico (due to increasing interests rates), the U.S. government also extended a preferential credit line to México to import foods (Appendini 2001: 104).

Image 10. View of the Tuesday food market in Yalálag, February 2011.

As imported staples and foods found their way into the Sierra Norte, regional and local producers faced increasingly broad and stiff competition from domestic and international industrial producers:

> *Competition is what finished the market: competition! Because it used to be that people expected [accessing] their foods only on Tuesdays, but the road slowly improved access to other foodstuffs. That is when trade—the market—declined. Now whatever is in the city is also available here. That is why it declined. One can go to a store and find everything! We do not need to wait until Tuesday to buy, but it is there at the store.* [Don Enrique, Yalálag, February 3, 2012]

The incorporation of Yalálag into broad food markets jeopardized both subsistence farming and farming of maize surpluses that used to be regionally traded. Less-wealthy households, which had traditionally farmed for self-consumption, were the most affected by

the demographic loss and economic hardships. Farming did not seem to compensate for the extraordinary amount of work and the monetary investment it required:[131]

> *Farming is a burden. To put it simply, it is really hard for me. One has to wake up early, have a good breakfast early . . . . They [my siblings] went to school, and so we all work now in retail . . . Farming became a failure to us. But no, my siblings did not want that, either. As I said, it is really arduous for them because it is not a good business anymore. And that is why we stopped. Above all, it is very tough. Yes, we abandoned it, as I say.* [Don Cuauhtémoc, Yalálag, February 2, 2012]

> *Those who used to work (the fields) the most, were the rich—the rich who had husbandry, who had land, who . . . were the only ones who hired day laborers. . . . Ah! And as I was telling you, they passed away. So what is left?! And their children they chose to leave, they moved to the city. They did not care about the fields. And so that is what happened.* [Don Augusto, Yalálag, February 2, 2011]

In short, as shifting economic policies came and went, Yalaltecan farmers faced excessively rising production costs, the withdrawal of state support, and the consolidation of national and international grain corporations. In most households where I conducted interviews, elders were the only ones who continued farming. Such was the case for Lucas, a young, single Yalalatecan adult who still lived with his parents when I interviewed him. His father was the only one who farmed, while he and his siblings were not encouraged to do so:

> *Well, I don't know why they [my siblings] did not farm. Maybe because they were not married, and later, they just were not interested in farming, and since we used to live all together, it was only my dad who used to farm. He used to farm, and we would help him. And well, we still were his responsibility. Thus, we never started farming. The eldest [sibling] learned [to farm], but he did not like it; he was not interested. . . . Some neighbours invited him to go to work in the bus company, he liked the idea, and he left with them. With my other brother, it was the same. He worked in the* huarachería*. He was*

[131] Further, and as Aquino Moreschi (2002: 98) asserts, farming became associated with ideas of rusticity, lack of knowledge, and lack of study that were in opposition to urban manners—the latter considered cultivated and knowledgeable.

working [there] for a few years, and then he left for the United States. Two other [siblings] are in the United States: one in Los Angeles and the other one in Carolina. My sister is here, and my other brother lives in Matías Romero. [Yalálag, February 6, 2012]

3.6 Expansion of non-agricultural production activities in the wake of the decline of farming

From the 1980s, as the costs of farming increased and its economic relevance waned, households unfailingly reduced their farming plots, and many young adults shifted to non-agricultural activities. As already noted, many migrated. Meanwhile, in Yalálag, non-agricultural activities also expanded (see Figure 13), in which craft industries (*huarache* making, clothiers), construction, and retail prevailed.

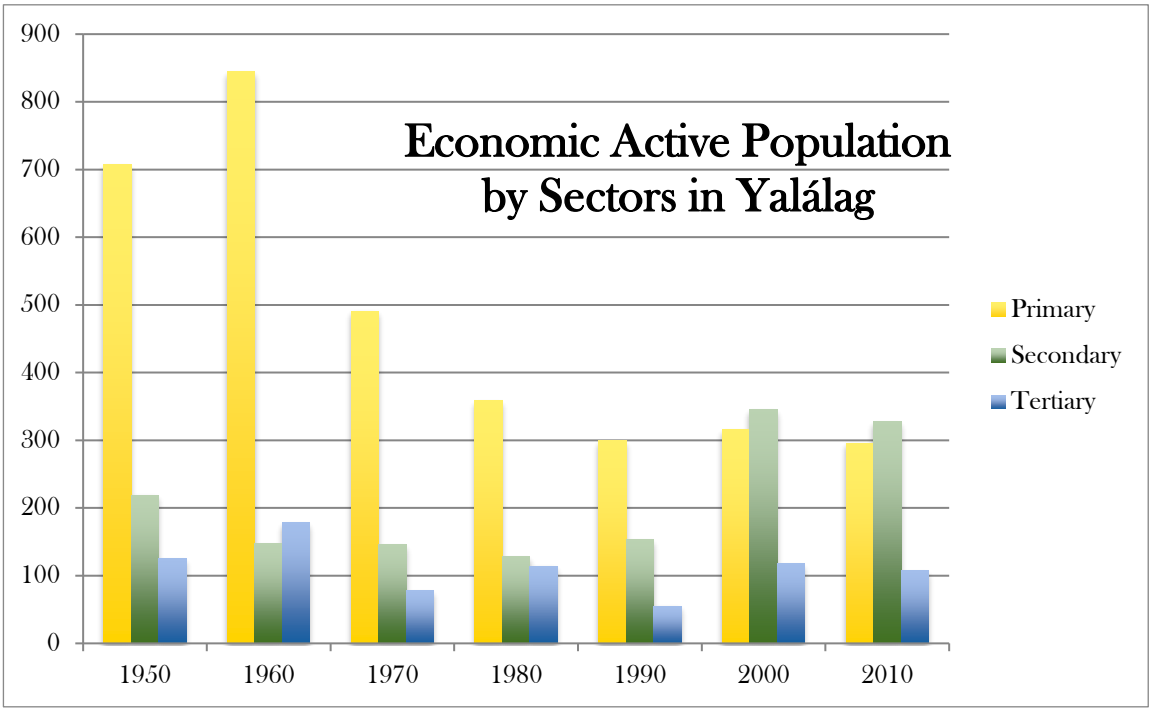

Figure 13. *Shifts in economically active population per economic sector.* Source: INEGI (General Population Census from 1950 to 1980, General Population and Housing Census 1990, 2000 and 2010).[132]

[132] The definition of these sectors by INEGI have slightly varied (e.g., until 1960, the primary sector including hunting as an economic activity). However, INEGI has constantly identified the following activities by sector: primary sector: agriculture, forestry, livestock, and fishing; secondary sector: extractive industries, construction, supply industries, and manufacturing; tertiary sector: service industry.

With the rise in migration, migrant remittances directly and indirectly contributed to sponsoring the economic shift to nonfarming activities. Such was the case with Don Samuel, who upon his return to Yalálag, after having migrated to Los Angeles in the late 1970s, stopped farming and instead opened a retail store in town and invested in animal husbandry outside Yalálag:

> *I changed my work. We opened this store then. Little by little, we started selling. And I used to be at the front of it here, and I opened a popsicle store. But we stopped that—that is not a good business. I used to go to Oaxaca to buy stuff and would come back and sell it here.*
>
> *. . . I only bought maize every year—a lot, about 300 or 400 kilograms. . . . Because I did not have time anymore. I used to go away. I came back, and an uncle that used to live in Paraíso, in Oaxaca near Veracruz, he told me to buy livestock for husbandry and that he would raise them. "Fine", I said because I like animals very much because they give you money when you need it.* [Don Samuel, Yalálag, October 6, 2011]

Like Don Samuel's household, other households diversified their economic activities refocusing on non-agricultural activities, and like him, many sought to open stores as an attractive economic alternative. This trend of opening stores gained popularity in Yalálag beginning in the late 1970s (see Table 1). The construction of the road eroded the regional and local economic relevance of former big store owners in Yalálag because it eased the transportation of goods. Then, in the 1980s, national economic policies increasingly paved the way for the influx of imported goods and foods:

> *. . . In the 1980s, yes, there were a few more stores; even where there were no stores (before) they built one. And where there was not a house, they built one up.* [Don Enrique, Yalálag, February 3, 2012]

As Don Enrique states, together with the expansion of retail in Yalálag, there was a significant increase in construction work. Not only did households with access to migrant remittances commonly seek to refurbish their homes, organized migrants invested significant

economic efforts in collecting money from amongst their community members in the U.S to support the construction and refurbishment of public buildings and infrastructure. Construction required a good number of workers, and this also became a source of paid jobs in town:

> *I bought two donkeys, and for two months, I carried sand, and for two other months, I carried gravel. Later on, I started buying rebar and wire. And then I worked with a master builder who came from Oaxaca and learned more. From 1977 to 1980, I went to Mexico and worked with a master mason. . . . In 1982, I started working [here] in the construction because I was the education alderman. I started working in the [construction of the] municipality. I did several services. . . . Then I did not work in farming because I did not have enough time. I almost did no work in the fields. And for that municipality [building], a private engineer came to supervise the construction of the building. . . . And people who saw me working in the [construction of the] municipal building commissioned me to build their houses.* [Juan Aquino, Yalálag, February 21, 2012]

> *When I started working in construction, I started as a helper, and so there, I could make a bit more money. Because it used to be fifteen pesos a day, and so it was ninety or ninety-five pesos a week. That was a lot of money for me . . . in '83—'84, more or less I think, all the time there was work.* [Vicente, Yalálag, June19, 2011]

Construction started attracting former farmers and farming day laborers. As Don Vicente noted, construction workers earned slightly better salaries than farmers. However, it was and still is often the case that Mixe individuals take these jobs, like Don Vicente, and Yalaltecan Mixe who, with the peak of migration, became a pivotal source of local labor (see Chapter 2). Meanwhile, making *huaraches* and clothing have also continued to be important production activities for Yalaltecans. These activities, which initially benefited from the expansion of the road and infrastructure, have faced significant, challenging market conditions since the 1980s.

Despite the fact that "traditional" clothes have earned a place at souvenir shops in tourist destinations, Yalaltecan clothiers have struggled to reach markets, adapt to shifting demands,

and compete against other producers, including industrialized and even international manufacturers.[133] They have sought to find alternative marketplaces at still-emerging tourist destinations, where they have to continuously adjust to demand swings, according to shifting and often unpredictable tourist arrivals, as Sara noted: "There was a period when sales went down. And so they [i.e. her parents] switched to trade."

Meanwhile, *huarache* makers have kept their production focused mostly on the regional market of the Sierra Norte,[134] which is accessible at current prominent plaza markets (i.e., Talea de Castro, Zoogocho, Villa Alta, and Tlahuitoltepec). While Yalaltecan *huarache* makers have experienced an increasing demand due to arrival of migrant-remittances in other towns of the Sierra Norte, they face increasing competition amongst new Yalaltecan producers. This internal competition is often considered detrimental for local *huarache* production:

> *There was a moment in which there was a lot of competition in the* huarache *[making]. And thus rivalry! There was a guy who started selling cheaper, and it was not a business for us. There were a lot of people! [in the trade]. And before, the* huaraches *were really good because. . . . My husband never used chemicals, or machines; it was all handmade!* [Ana, Yalálag, January 2, 2012]

> *Oh, yes! There is competition, but as I say, people know our [good quality] work and that is what keeps the demand. We keep preserving it; we cannot abandon it. . . . And I do not know why they cheapen their work. Because we sell the* huarache *now for MX $210* [circa twenty USD]*, and they should not be costing that: they should be more expensive. We cannot price it higher because of the competition.* [Don Miguel, Yalálag, January 31, 2012]

133 During my fieldwork, clothing makers and embroiderers often shared their concern about people copying their designs and making them elsewhere. Meanwhile, well-documented cases of imitation of the typical Mixe blouse design by different large fashion firms validates the concerns of Yalaltecan clothiers.

134 Although huaraches were also popular items in "hippie" fashion, I did not find cases of Yalaltecan *huarache* producers who had switched to these target tourist market niches. Rather, *huarache* producers seemed to have focused on the regional market.

As Ana narrated, the shift to mechanized modes of production replaced traditional forms of work, and some *huarache* makers who could not afford transitioning to mechanized production, like Ana's husband, went out of business. At the same time, local competition has kept prices relatively low. Successful producers, like Don Miguel, have combined traditional and new methods in ways that have allowed him—and other Yalaltecans—to preserve the quality of their work, while maintaining low prices.

Yalaltecan *huaraches* have the advantage of being well-suited to the rugged terrain of the Sierra Norte; they are more durable than imported industrially produced hiking shoes and locally more fashionable. Still, *huarache* makers face strong, uneven competition against industrial shoe producers and urban styles (Gutiérrez Nájera 2007). Currently, Yalaltecan *huarache* makers strive to maintain their reputation as producers of high-quality *huaraches*, as well as to adapt to regional, changing fashion demands. But as their production has become increasingly dependent on imported materials, costs are closely tied to swings in foreign exchange rates. Consequently, *huarache* makers have to walk a thin line to balance local and international competition while preserving their reputation for high quality of their products.

Still, in 2011, when this study was conducted, *huarache* making remained one of the most important economic activities in town and an important work niche employing local youth who continued abandoning the fields:

> *I used to see the* huarache *makers. And I told [myself], "Well, this is very easy because they are not under the sun, and they are seated." I thought it was very easy. I started. When I started to work, I began moving the leather in the water, at the tanneries. Moving only because I did not know the process; the boss would say, "Do this, do that," and that is it. I continued and worked for two years moving leathers. And in the afternoons, they gave me the chance to learn* huarache *[making]. And so when I learned, they let me make* huaraches*, and so I slowly started, from the very bottom.*

> *Often one can assume the work is easy, but it is not. The heat is the difference, but the tiredness is the same. I was almost fourteen when I started working with the leathers.* [Tomás, Yalálag, January 31, 2012]

Tomás was the youngest of three children and the only one who did not emigrate.[135] Tomás' mother worked as a farming day laborer.[136] As Tomás noted, besides offering a good income, *huarache* making seemed more compelling than farming to the few remaining younger Yalaltecans like him.

3.6.1 Monetization of poverty: From producers to consumers

> *It is the government's fault because it gives lots of money to people. That famous program of* Oportunidades*! What I notice here is that people are only waiting for the day that [cash] aid arrives, and they do not put themselves to work.* [Don Enrique, Yalálag, February 3, 2012]

Don Enrique's statement about the negative impact of state welfare programs in local productive work was the kind of expression I heard constantly in Yalálag, even among people who received cash through welfare programs. To be clear, their critical statements do not mean that Yalaltecans have completely stopped working, but allude to the negative impacts that welfare programs have had on the practice of farming. As I have shown so far, several factors pushed Yalaltecans away from farming to non-agricultural activities, including regional market shifts, changes in agricultural policies, and workforce loss to the turbulent increase of international migration.[137] Yet, as Yalaltecans constantly reminded me, abandoning farming has

[135] Tomás also wanted to emigrate as did his older sisters, but his responsibility to care for his single mother kept him in Yalálag. His was not an isolated case. In fact, care of parents is an important reason for returning among Yalaltecan young adult migrants (see Chapter 2).

[136] Yalaltecan women do not farm, but Tomás' mother was from Mixistlán and had arrived in Yalálag sometime between the late 1970s and the early 1980s.

[137] I purposely use this expression to draw attention to two works. Nikos Papastergiadis (2007) uses the word "turbulent" to describe the accelerated speed of contemporary migration, as well as the complexity of its scope. Aquino Moreschi (2010: 136) uses the term to better describe the unprecedented acceleration of international migration from Yalálag and how it became part the everyday life, while also transforming different aspects of it. In my own use of the word, I emphasize how broad economic and policy shifts are indeed pivotal forces. At the

also been largely promoted by welfare programs that, beginning in the 1990s, have adopted a monetized nature, focused on conditional cash transfer programs to directly subsidize small rural households' consumption, rather than small-scale farming production.[138]

At the beginning of the 1990s, the state recognized that farmers' income was unavoidably dropping due to the deregulating of food staples prices (Appendini 2008) and open market competition under NAFTA (SAGARPA 2014). The government launched and presented its most important agricultural subsidy program, in which economic funds were directly transferred to farmers in 1993, supposedly as a compensatory mechanism. However, this Programa de Apoyos Directos al Campo; best known as PROCAMPO (Program of Direct Support to the Countryside) targeted commercial and potentially commercial farmers (Appendini 2008) and excluded small-scale subsistence farmers such as Yalaltecans.

Yet, also early in the 1990s, the state refocused the aim of rural social welfare policy to alleviate poverty as its main goal. The earliest moment of this transitioning process started early in the 1990s with the launching of the Programa Nacional de Solidaridad, Pronasol (National Solidarity Program) in the Sierra Norte of Oaxaca,[139] which included economic funds for

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same time, I recognize the value of understanding those different layers as issues that converge at this point with a transformative force, causing profound local changes. Likewise, I want to emphasize the role of the nation state and new international governance institutions in shaping local lives.

[138] As already mentioned, the Mexican State had shifted its approach to food policies and agricultural production. It abandoned the aim of pursuing food self-sufficiency for the goal of acquiring enough food in an international open market economy; this further supposed that domestic market-competitive farming production would provide enough revenues to allow the state to do so.

[139] The program was announced in 1988 during Salinas de Gortari's inaugural speech, and it started in 1989 in specific areas of the country, whose specific target populations, susceptible to poverty, were indigenous people, farmers, and inhabitants of highlands, semi-desert rural areas, and marginal zones in the main cities. It is possible that the program could have been implemented in 1990 when the Fondos Municipales de Solidaridad, the Fondos para el Desarrollo de los Pueblos Indígenas, and the Programa Niños en Solidaridad started. I do not have a specific date for when it was implemented in Yalálag, but in 1993, the program was already functioning as a testimony from a local authority in *Proceso* denoted (see Robles 1994).

infrastructure,[140] and a target-specific conditional economic transfer[141] subprogram Niños en Solidaridad (Children in Solidarity) (started in 1991) that delivered monetary scholarships. These scholarships were limited to a small number of children belonging to households in considered to live in extreme poverty, although to no more than one child per household. Then in 1997, the Programa Nacional de Educación, Salud y Alimentación PROGRESA (National Program of Education, Health, and Food) was launched, and it became a structured, conditional cash-transfer mechanism that narrowed its target population to specific households considered to live in extreme poverty. These households became recipients of economic aid under the condition of complying with the participation in required health and education activities (e.g., scheduled doctor's appointments, participation in local sanitary activities, school attendance).

The program arrived in Yalálag in 2000 and has continued with slight adjustments. The program was renamed as *Oportunidades* in 2006. In 2011, there were approximately 272 registered households in the program, which number represents roughly 820 individuals of the total Yalálag population of 2,138 at that time. The number of beneficiaries shows the large reach of the program. At the same time, the fact that not everyone in Yalálag is a recipient enhanced internal conflicts regarding the allocation of monetary resources[142] (see also Fox and Aranda 1996; Barajas 1997; Oehmichén Bazán 2003; Montalvo 2013, 2014).

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[140] That situation is best illustrated in the testimony of a Yalaltecan, who was also part of the local authority, as it appeared in a national magazine in 1994: "The funds from *Pronasol* arrived late all the time, during rainy season, when the local authorities are already about to submit their annual reports." Further, the article noted that Yalaltecans "consider that the program has contributed to 'destroy' the Tequio and to confront farmers as it occurred recently in the town of San Juan Yaee, where the authorities agreed to do without the funds from *Solidaridad* as only fifty of the 400 primary students received an annual scholarship of 300 new pesos" (Robles 1994).

[141] Economic resources were channeled under specific funds and sub-programs (e.g., Municipal Funds of Solidaridad, the program Escuela Digna, Niños en Solidaridad, etc.).

[142] Meanwhile, the program growth has not been matched with an expansion of health care services for which the program has also indirectly promoted conflicts regarding access to health services.

Poverty alleviation became the main purpose of monetary subsidies, and Yalaltecans together with small-scale farmers became its subjects. With this shift towards poverty alleviation, small-scale farmers, like Yalaltecans, were seen through a new lens. From producers, small-scale farmers like Yalaltecans became rather potential subjects of poverty-alleviation programs. Monetized welfare increased cash circulation in Yalálag at the precise moment when Yalaltecan households were facing significant challenges to continue farming. At the same time, direct cash-transfer welfare programs had been paired with food policy programs that channeled resources towards the purchase of cheap foods. Altogether, these changes in public policy contributed to strongly reshaping Yalaltecans' economic strategies and their productive role.

In 1999, the CONASUPO as it had originally been conceived, had changed altogether along with its name. Its remaining opened retail stores, now under the name of *Diconsa*,[143] continued offering subsidized and often imported maize, with the goal of eradicating poverty.[144] Subsidized (often imported) staples available at the *Diconsa* gained popularity among Yalaltecan households, as Armando, the store manager recounted:

> *Before, in the store, they used to sell only three to four tons (of maize) a month. I am talking about '98, '99, until 2000. Beginning in 2000–2005, this started increasing from five to six tons a month, until today that we almost reached a maximum of twelve tons a month. This means that slowly people stopped—are stopping, farming. . . . I mean, out of one hundred [people], I think only eight or ten are farming. So that ninety percent are still buying at the [*Diconsa*] store. So they get their supplies here . . . ninety percent of the population. . . but mainly young people. I am worried about something that I have talked about with youngsters lately; young people, young families are those who buy the most. Elders keep a reserve [of staples]. People of my father's age, for example, they still farm a*

[144] Most subsidies o grains stopped around 1999, except for those on maize and beans. The Mexican government had changed focus again and this time embarked in a large cash-transfer program that reached Yalálag around 2000.

bit; they have the habit or the tradition of farming. But young people, no! It seems easier to work two days and then they come to buy a sack of maize. [Armando, Yalálag, February 23, 2012]

As Armando explained, the arrival of cheap imported food has significantly increased, and this is evident especially among the young generations. The problem, as Armando clearly pointed out, is the generation gap that widens between those who farm and those who do not. This generation gap also includes young people who learned and farmed early in their lives, but kept switching production strategies, as Santiago related:

It was only purchased maize . . . there in the CONASUPO. Or at times, when we have some extra money, we buy [maize] from the [local] fields maize criollo,[145] *one or two* arrobas. [Santiago, Yalálag, December 4, 2011]

Santiago clearly expressed the cost difference between the CONASUPO and locally produced maize. Young adult Yalaltecans face the conflict of not being able to afford good-quality food and not finding the means to produce food. Santiago's case is paradigmatic of this conflict because he had farmed most of his life, first together with his mother, who farmed and worked as farming day laborer, and then as an independent farmer, when he had his own family. Yet, by the time I interviewed Santiago, he also had stopped farming. As he related, he does prefer to eat maize grown in local fields because he knows it is a better-quality food. However, locally farmed crops have become more expensive than imported subsidized staples offered at the *Diconsa* store, which are nevertheless of very bad quality, as Armando related:

Actually, when someone asks me at the store, "Is it true that this maize isn't good?" I tell them, "It is not good! I know what I am selling, and it is not good!" Why isn't it good? First of all, it is so-called transgenic maize—a kind of forced maize. Secondly, we used to get maize supplied from the United States; it was from there that most of the maize used to

[145] *Criollo* is the term Yalaltecans use to define locally grown crops, including maize. Santiago, as most Yalaltecans, recognizes that the quality of locally grown maize is better.

come. Not anymore. They say that the south and southeast of the country are supplied by maize from Central America. Thus, it is of dubious quality. I do not know how they farm it. People ask me, and I say, "Yes, it is of bad quality." Moreover, sometimes the maize comes with a sort of powder that looks like quicklime. [Armando, Yalálag, February 23, 2012]

At the time I conducted fieldwork, I found that most Yalaltecan households depended on purchased foods, including maize from *Diconsa* and other retailers (see Figure 14):

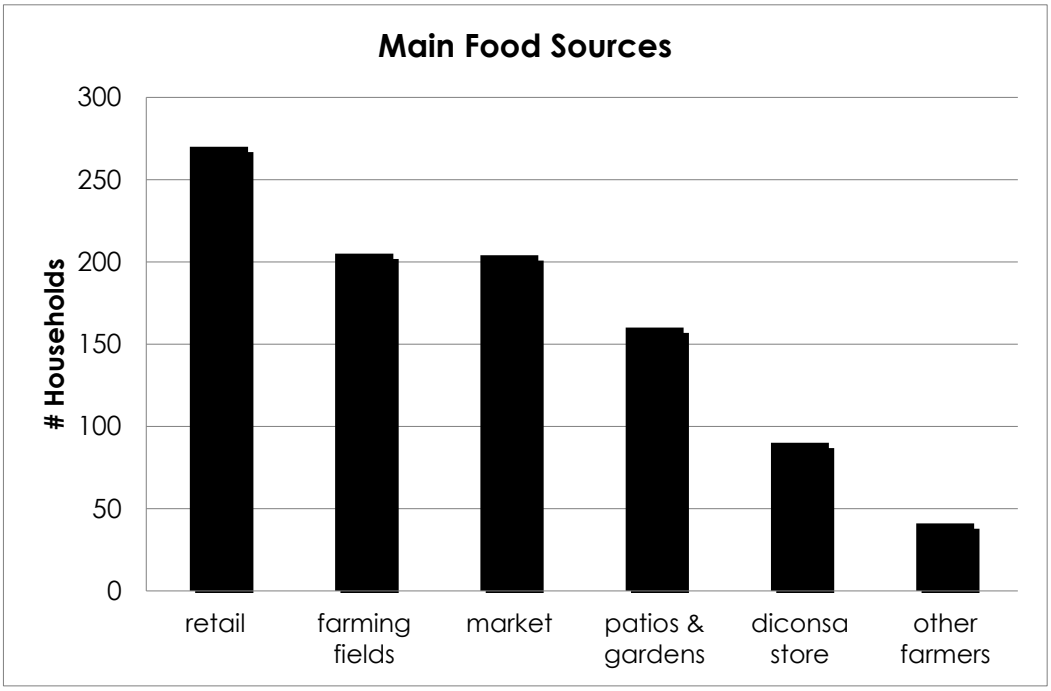

Figure 14. *Main food sources according to household surveys conducted in Yalálag during the summer of 2011.*

The local economic system in Yalálag, once based on small-scale farming and supplementary activities, has rapidly shifted from being in-between monetary and subsistence farming (De la Fuente 1998: 23) to becoming increasingly reliant on monetary activities and externally produced foods. This subsistence shift not only diminished the quality of the foods that most Yalaltecan households consumed, but as I now show, it also made the town increasingly vulnerable to meteorological events and market shifts.

Yalaltecans have come to face the crude realization of their increasing vulnerability in the context of external food dependency. In 2010, for example, a year before I started fieldwork for this study, the CONASUPO prices had increased due to international market conditions. Also, in November of that year, the Caxonos and Mixe side of the Sierra Norte endured an unusually long period of constant rain that led to landslides, causing severe damage to main roads (Associated Press 2010) and food shortages. The experience of both events was fresh in the memory of Yalaltecans and seemed to have made a strong impact on their view of subsistence strategies to such an extent that a few young adults were taking steps to return to their fields (see Chapter 5).

3.7 Conclusions

The analysis in this chapter shows that both a rapid decline in farming and the acceleration of international outmigration in Yalálag in the late 1980s were due to long-term processes of agricultural and food policies that started early in the 20th century under a protectionist regime, which focused on promoting internal industrial and urban growth, thus diminishing small-scale farmers' production capacity and workforce. Under a protective regime, state economic policies and development projects led to an unequal integration of rural, small-scale farming areas' produce and workforce into expanding markets: a process of market integration that only accelerated, propelling Yalaltecan small-scale farmers into an impossibly unequal position in the late 1980s and especially in the 1990s, under neoliberal reforms.

In this chapter, I trace how state development infrastructural projects, which reached the Sierra Norte only in the late 1950s, appeal to small-scale farmers and local demands, but fail to effectively respond to them. Instead, these programs were successful at integrating local farming and the local workforce in national and international markets, while also reshaping the regional market system to the detriment of Yalaltecan producers and traders. A paradigmatic

example of this was the construction of roads in the region that eased the movement of people and goods. The construction of the road and the arrival of the CONASUPO reshaped not only the regional market network, but also how local agricultural production became integrated into broader markets in a way that harmed the economic relevance of farming, and the regional position Yalálag once had. Also, the arrival of the parastatal store CONASUPO in the 1970s, under the so-called protective regime, integrated (and polluted) local maize into the market. As the state expanded the market of maize and controlled prices, Yalaltecans faced impossible competition and unequal access to adequate subsidies or institutional support. After the economic crisis of 1982, Yalaltecan farmers faced even deeper challenges due to cuts in subsidies, and drastic job losses in Mexico. This promoted international migration to the U.S. because global financial cities such as Los Angeles demanded a cheap docile workforce that migrants, such as Yalaltecans, provided.

Back in Yalálag, farming workforce loss to international migration exhausted traditional forms of work organisation. Meanwhile, increasing economic production costs at the moment when the state started dismantling its core programs and subsidies for small-scale farmers and opened up to food imports without price regulations led to even further detrimental on against small-scale farming. At this point and with the support of migrant remittances, Yalaltecans switched to monetary production and economic activities, including small-scale retail. Yet, as the mass arrival of external goods proliferated, Yalálag's strategic regional trading position further weakened. Meanwhile, increasing external dependency on local subsistence became a source of concern for young and old Yalaltecans, due to the poor quality of accessible foods and increasing vulnerability to meteorological drastic events.

Other economic activities that gained popularity in Yalálag beginning in the 1980s are *huarache* making, clothes manufacturing, and construction. These three activities provided

local jobs and allowed for some degree of economic diversification. However, they all depended mostly on external raw materials and external market conditions.

Beginning in the late 1980s, adopting a neoliberal economic focus, the state conceived two radically different categories to differentiate farmers: as producers if they are market "competitive," or as a (unproductive) "poor" population, if they are not. Yalaltecan farmers did not fit in the former category. Welfare programs with a restricted focus on poverty alleviation have increased cash circulation, while helping to undermine subsistence farming and displacing small-scale farmers from the productive role they previously had. Now the government conceptualizes Yalaltecans and other small-scale farmers as susceptible to poverty. Furthermore, current state welfare programs launched in Yalálag in 2000 increased cash circulation but restricted welfare access to extremely poor households, which contributes to fostering local divisions, while increasing the workload of public servants.

In sum, my analysis shows that the clear acceleration of the decline of farming in Yalálag in the 1980s and 1990s was a response to the constant state economic developmental approach that favored the uneven integration of small-scale farmers such as Yalaltecans in broad global markets, first as producers, then as workforce, and most recently as passive consumers. Rather than a radical disruption in the transition from the state-regulated to the neoliberal developmental approach, I found a continuous reproduction of uneven development and market expansion.

4

Farming Decline and Land Use Change

Synopsis: This chapter assesses land use changes in Yalálag as a consequence of farming decline. In it, I test a hypothesis from forest transition theory, which postulates that the waning of farming in Yalálag has opened land use management paths leading to forest recovery. My analysis finds a heterogenous landscape that encompasses a concentration of small plots used for self-subsistence farming in areas closer to the main town; an emergence of new cash-crop cultivation in farther *tierra caliente* [hot land] areas; the settlement of newcomers from neighboring Mixe towns in Yalálag's countryside; and the establishment of a forest preserve, where former privately owned plots have been collectively bought to be converted into communal land. These findings show that, whereas farming decline in Yalálag has led to incipient forest recovery, most of the forest recovery has taken place in specific areas where new institutional arrangements to protect natural resources have been established. While emerging land uses in protected areas seek to preserve natural resources, they also respond to a political concern regarding recent migrant settlements into areas of Yalálag that were left fallow. These results emphasize the importance of local social arrangements to enable sustained forest recovery and the challenges these efforts face due to emerging land use conflicts.

4.1 Introduction

> *The countryside has changed because people do not farm. Therefore, there is now a lot of ... like in this side we are looking at, pure ... how can we call it? A jungle? Just mountain? Yes! It is just mountain, just scrub! People do not work anymore!*
>
> Don Augusto, Yalálag February 2, 2012.

Farming in Yalálag has declined drastically since the late 1980s and the 1990s (see Chapter 3). Recent ethnographies note this change. Gutiérrez Nájera (2007: 82), for example, emphasizes that "much of the agricultural land, which was once cultivated, now lays fallow and some has even returned to forest as a result of outmigration" (see also Lache Bolaños 2000: 17; Aquino Moreschi 2002: 97–98, 2010: 141–144; Cruz Manjarrez 2006: 301–302). Yalaltecans like Don Augusto are bewildered about the changes they have witnessed over the past forty years. Yalálag's countryside has indeed changed dramatically, and expressions like Don Augusto's show how sudden, contrasting, and novel these changes have been. Local concerns regarding changes in the flora and fauna combine with distress about the arrival and settlement of Mixe families (see Chapter 2) and worries about increasing dependence on external food resources (see Chapter 3).

The decline of farming in Yalálag falls into a global pattern of intensification and concentration of industrial agriculture that displaces small farming (Klooster 2003, 2005; Rudel et al. 2000, 2002, 2005; Bray and Klepeis 2005; Lambin et al. 2001; Schmook and Radel 2008; Meyfroidt and Lambin 2008; Lambin and Meyfroidt 2010; Meyfroidt et al. 2010; Hecht 2014). According to forest transition theory (FTT) (Mather et al. 1999), the decline of small farming has the potential to open institutional pathways that lead to net reforestation. Thus, in this chapter, I aim to document how land use and local forest management have changed in Yalálag as result of farming decline and assess whether forest recovery is taking place. It is clear that industrial development has led to the rise of intensive agriculture and to a sharp decline in local subsistence farming in Mexico (Appendini et al. 2003; Appendini 2001; Appendini and Verduzco 2002; Appendini and Torres Mazuera 2008; Ávila Sánchez 2005; García-Barrios et al. 2009; cf. Bartra and Otero 2005). However, the economic displacement of small-scale farming as a primary subsistence and economic strategy for rural households does not necessarily lead by itself to forest recovery, but instead opens a myriad of resource (e.g., land, forest, water) uses and management pathways. This diversity of use and management of local resources depends on the specific context; what new productive and economic strategies become available to the local population; how production activities are integrated into broader markets; whether these activities reshape resource use; and whether views, values, rights, norms, and institutions of resource governance also change (Klooster 2003; Rudel et al. 2005; García Barrios et al. 2009; Aguilar Støen 2011; Robson and Berkes 2011).

Based on data from interviews, local archives, field recognition journeys, and analysis of satellite imagery, this chapter describes new land use and land tenure trends, analyzing the relationship between land use changes, forest recovery, and adjustments in uses of forest and natural resources. To understand the historical trajectory of land use change in Yalálag, I

analyzed three satellite images from 1979, 2000, and 2010. Satellite imagery was selected as follows:

Date	Type	Path	Row
02-28-1979	Landsat3	WRS PATH = 025	WRS ROW = 048
01-11-2000	Landsat5	WRS PATH = 024	WRS ROW = 048
01-22-2010	Landsat5	WRS PATH = 024	WRS ROW = 048

The first satellite image was taken in 1979, while the second image was taken after twenty years of continuous emigration. The last image was taken in 2010 and reflects the landscape as I saw it during my field work. Although the intention was to sample each decade, we were unable to find satellite images from the 1990s that were not obstructed by cloud cover. From the images, we[146] calculated elevation (DEM), the normalized difference vegetation index (NDVI), and, for the images from 2000 and 2010, the normalized difference wetness index (NDWI). To associate the pixels in the images with different land cover classes, we ran a supervised classification using training samples I took in the field. Specifically, I used a GPS to register different points in farming fields, secondary forests in the hot and cold climate zones, reforested areas, and settlements outside the main town. We used ENVI software (Exelis Visual Information Solutions, Boulder, Colorado) to generate a surface reflectance signature file for each of five land use classes: water, urban, agriculture, pine-oak forest, and seasonally dry tropical forest. We used the signature files to classify all pixels in the images. When we found errors (e.g., an obvious terrestrial pixel classified as water), we corrected them by refining

[146] Prof. Dr. Raul Ponce-Hernández, Dr. Oumer Ahmed, Dr. Tetsuji Ota, Dr. Richard E. Feldman, and MA Martin E. Romero Sánchez helped me to obtain and analyze satellite imagery for this chapter. I want to profoundly thank them for their advice and support.

the spectral signatures and/or creating additional signatures. We repeated the same procedure until our examination revealed no obvious errors.

4.2 Background: Farming, land diversity, and land access

Located in one of the "most rugged, mountainous terrains in southern Mexico" (Chance 1989: 3), Yalálag's approximate 70.41 sq. kilometers $(km)^2$ of land include a broad range of climates due to an elevation range that spans between 700 and 2,500 meters above sea level (masl) (INEGI 2005). Hence, locals differentiate three microclimates: (1) *Tierra Fría* (Cold Land) at high elevations (above 1,500 masl); (2) *Tierra Caliente* (Hot Land) at the lowest elevations (between 700 and 1,100 masl); and (3) *Tierra Templada* (Temperate Land) at intermediate elevations. Altitude and climate differences contribute to vegetation diversity. Pine-oak forest is present in *Tierra Fría* (see Images 11 and 12). Tropical dry forest consisting of *huizaches,* or columnar cacti, mostly of the species *Vachellia farnesiana*, is found in *Tierra Caliente* (see Images 13 and 14). Mixed forest—for example, Mexican alder or *Alnus acuminata arguta*, and copalillos or *Bursera submoni*—are found in the semi-warm humid climate of *Tierra Templada* (see Image 15).

Image 11. *Pine-oak forest of* Tierra Fría *in Yalálag, February 2012.*

Image 12. *Pine-oak forest of* Tierra Fría *in Yalálag, September 2011.*

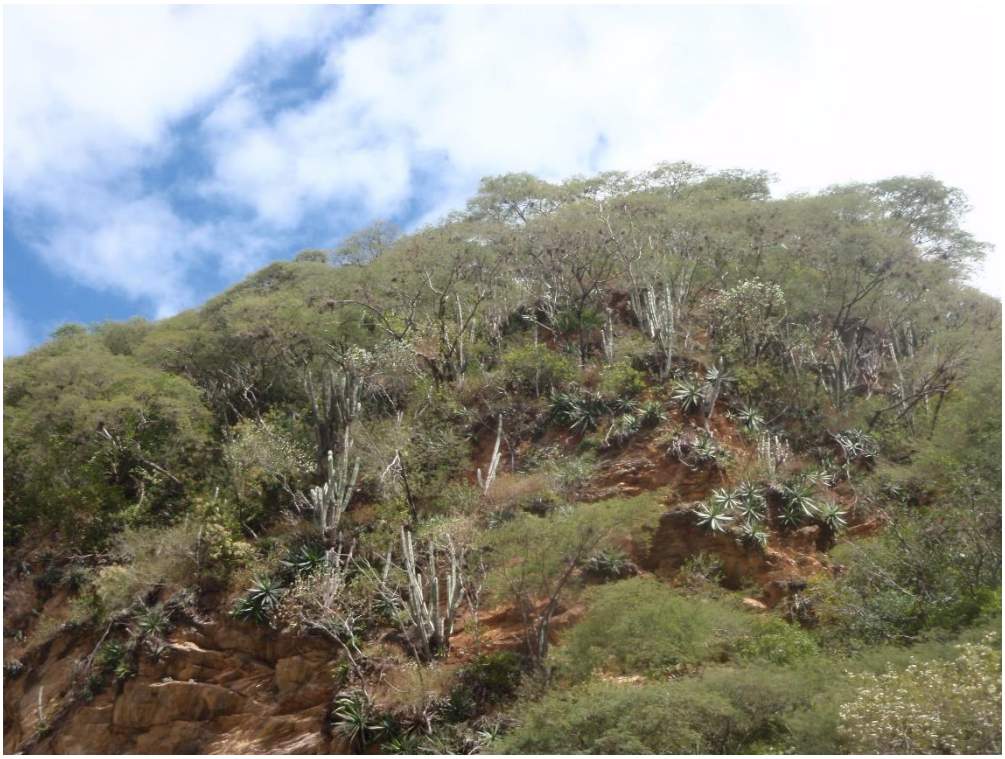

Image 13. *Vegetation in* Tierra Caliente *in Yalálag, November 2011.*

Image 14. *Another view of vegetation in* Tierra Caliente *in Yalálag, November 2011.*

Image 15. *Mixed forest in* Tierra Templada *in Yalálag, October 2011.*

This mountainous landscape is traversed by three permanent rivers: the Trapiche and the Arco (see Image 16), which join the Caxonos River, a permanent river tributary of the Papaloapan River. The Caxonos is a natural border between Yalálag, San Francisco Caxonos, and Yatzachi el Bajo (see Image 17).

Seasonal streams flow in different parts of Yalálag feeding the three perennial rivers. These seasonal flows have been important water resources for Yalaltecan farmers, who endeavor to maintain access to them.[147] However, because the feeder streams dry up during the dry season (February–April), they are not used for irrigation, and instead, rain-fed agriculture is predominant.

[147] Among these, the Brujo River stands out because of the volume of water it carries and because of its proximity to the town and the road.

Image 16. *View of the Arco River, named after the arched bridge.*

Image 17. *View of the Caxonos River with Yalalag's* Tierra Caliente *(right) and San Francisco Caxonos and Yatzachi el Bajo (left). The area that belongs to San Francisco Caxonos is the hill in the foreground, and the second hill to the left belongs to Yatzachi el Bajo, November 2011.*

Yalaltecans have traditionally recognized two main seasons: dry (February—April) and rainy (April–December). A period in August is called *canícula* (dog days) when a short dry period normally takes place (De la Fuente 1949: 13; cf. Lache Bolaños 2000: 17–18). However, locals have noted a delayed onset of the rainy season such that it begins in May and sometimes not until mid-June. Beyond this, Yalaltecans have noted striking variations in rainfall volume in the past decades.[148] Local testimonies about disparities in precipitation match data we obtained from the British Atmospheric Data Centre (see Figure 15). In September 2010, an unprecedented long rainfall caused severe mudslides (Associated Press 2010). Weather and rainfall are, in short, becoming increasingly unpredictable, a situation that increases both the difficulty of farming and the vulnerability involved (see Chapter 3).

[148] As Don Ricardo expressed: *Yes, it is raining later. Before, it [the rainy season] was from April until September. Yes, it is delaying a lot. The first rain used to fall in April, 1st, 2nd of April, a heavy downpour. Thus, people start that way to work [in the fields].*
Yes, there was a drought. That is when it started. On that occasion, everyone stopped because they had a very poor harvest. They used to farm a lot, and then they only harvested four or three donkeys [load of harvest]. I lost, too. I only harvested about four sacks. . . . I don't remember well. It was around '91 or '92. . . . Well, it has happened [again] but not that often. One year like that, and another it rains, and another . . . where I farm more, and then there is a drought. For example, we think now that it would not rain but right now it is raining. . . . (Yalálag, June 19, 2011).

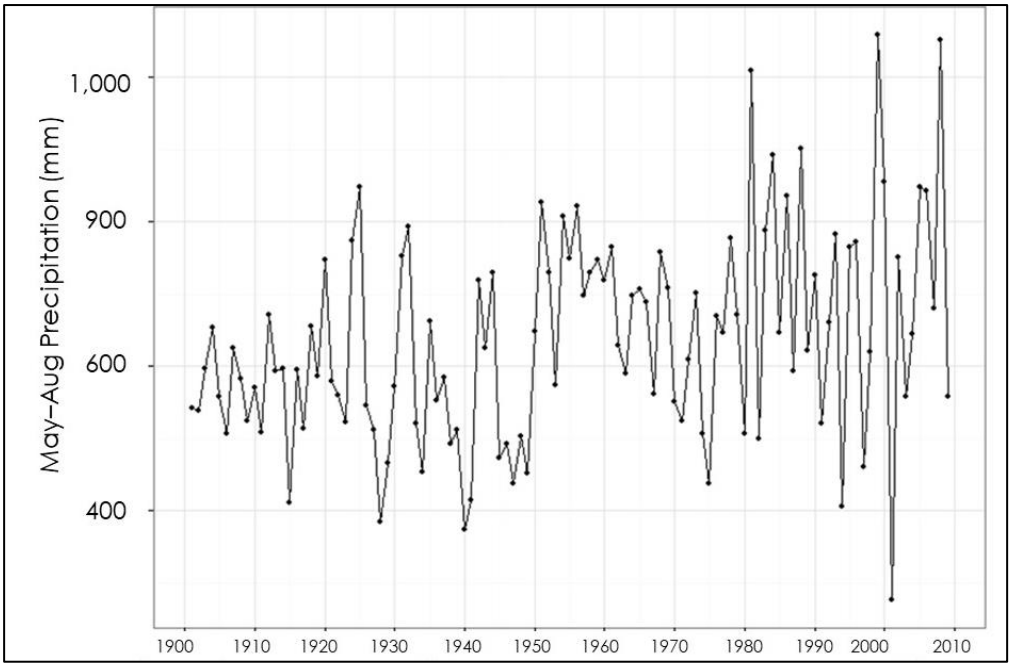

Figure 15. *Summer average precipitation in Yalálag from 1900 to 2010.* Source: British Atmospheric Data Centre, elaborated by Richard Feldman.

Despite the roughness and steepness of the terrain and the dependence on variable rainfall, Yalaltecans have a long farming tradition. For most of the 20th century, the countryside of Yalálag was so predominantly farmed that it showed some erosion and deforestation (De la Fuente 1949).

> *Did not I tell you that Yalaltecans also used to farm? Yes, all the elders used to farm. Everyone! Yes! They used to go as far as two hours walking to the limits with Mixistlán. They used to farm as far as two or three hours walking. Yet now they stopped.* [Don Vicente, Yalálag, June 19, 2011]

Since most families farmed, Yalaltecans knew a lot about matching crop varieties to each microclimate (De la Fuente 1949; Aguilar and Alatorre 2011). *Tierra Caliente* was where *chile de onza* grew and where maize grew faster and more plentiful. *Tierra Templada* is similar to *Tierra Caliente* but was mostly in the hands of wealthy Yalaltecans because it was closer to town and, therefore, easier to access for farming than plots that were farther afield. *Tierra Fría* provided secure crops—especially during dry years—and *Tierra Caliente* produced abundant

and rapid harvests of main staples (e.g., maize, beans and squash).[149] Meanwhile, farming at different elevations also allowed Yalaltecans to access different varieties of main staples and fruits. Farming was, until early in the 1980s, the basis of the local economy and the main source of local subsistence. However, Yalaltecans started facing unprecedented outbound migratory flow (see Figure 16) and regional, national, and international economic shifts that led to unprecedented farming decline by the 1980s.

4.3 Quantitative Assessment of Farming decline in Yalálag

> *Since 1990, people don't farm, not anymore. Nobody anymore! It's all scrub. Nowadays they say that there are jaguars all over on this side. Nobody farms! Well, people farm but only nearby [the main town].* Don Vicente, Yalálag, June 19, 2011

As stated in Chapter 3, and noted by Don Vicente, Yalaltecans observed a sharp decline in farming since the 1990s with remaining farms limited to areas near the main town. Distant areas have been left fallow. According to our analysis of satellite imagery, the farmed area of Yalálag declined from 30.4% of its total land in 1979 to only 9.68% in 2000 (Figure 17). The farming decline (1979-2000) occurred in parallel with the peak of international emigration and a consequent reduction in the number of people working in the primary sector (Figure 18) that, in the case of Yalálag, pertained to agriculture, given that this was the main economic activity within the primary sector (fishing and hunting were also popular, but not considered full-time occupations).

[149] As Don José noted: *The advantage there [in the cold land] is that whatever one plants, it grows—here in the high parts. There, chilacayota grows very well. And the maize we used to grow in the elevated parts lasted longer. The maize that grows in the lower areas does not last very long. It lasts two or three years, and it starts rotting. And here in the elevated parts, it would last six or seven years stored, and it did not rot because the soil is good, and it took time enough to dry. . . . In hot land, [things] grow faster. . . . In the elevated parts . . . "so much care is not necessary," they say. Things grow there. And it is true. Maize grows. . . . In hot land things grow faster.* (Yalálag, February 3, 2012).

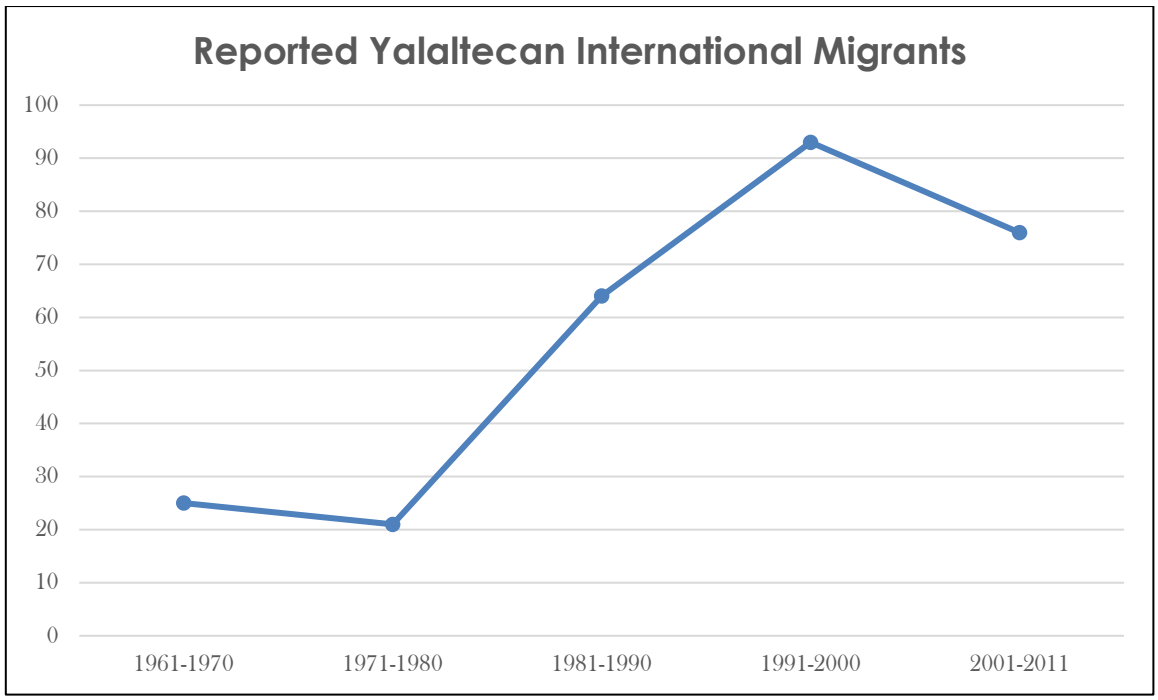

Figure 16. *Emigration flow from Yalálag between 1960 and 2011.* Source: Surveys conducted in Yalálag, summer 2011.[150]

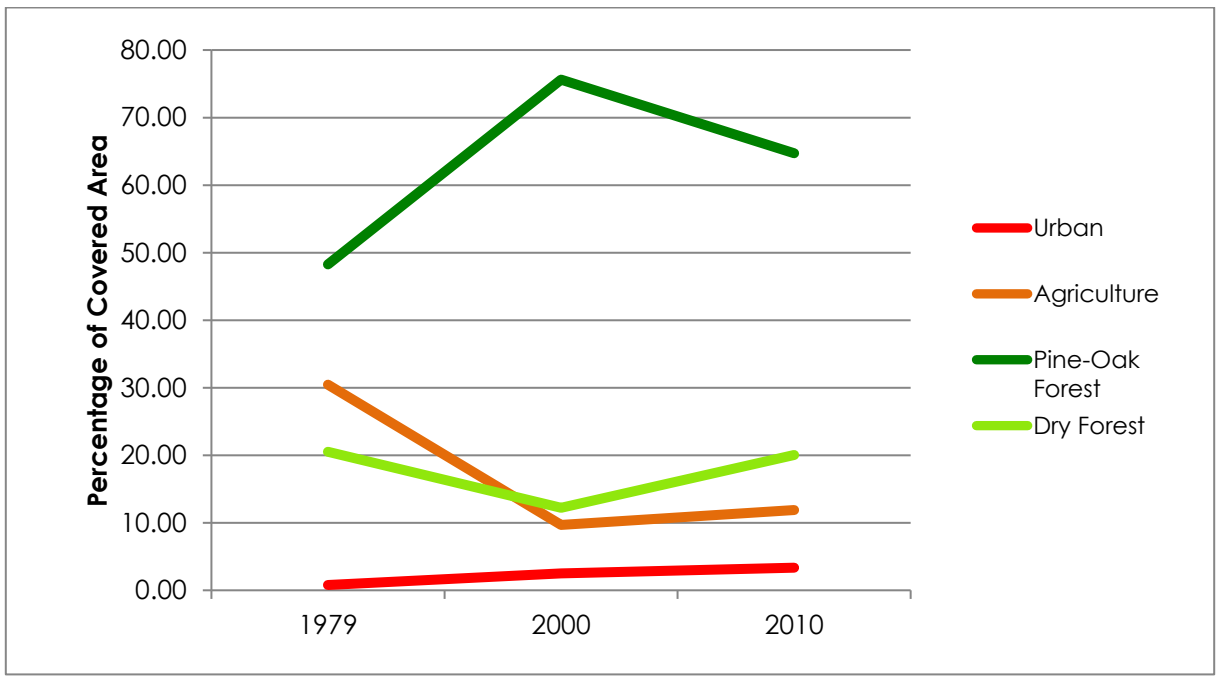

Figure 17. *Land use trajectory in Yalálag according to our analysis of Landsat images.*[151]

[150] With the help of the local clinic and a youth group, I surveyed local households, including a question about family members who migrated and in which year. Most people did not remember the exact year their family members had migrated but gave an approximate date. The data are not cumulative but refers to the number of migrants reported to have left in that decade, and do not include returning migrants.

[151] As stated in the introduction of this chapter, we lacked satellite imagery for 1990 that fit our criteria for analysis: hence, the lack of information for that year.

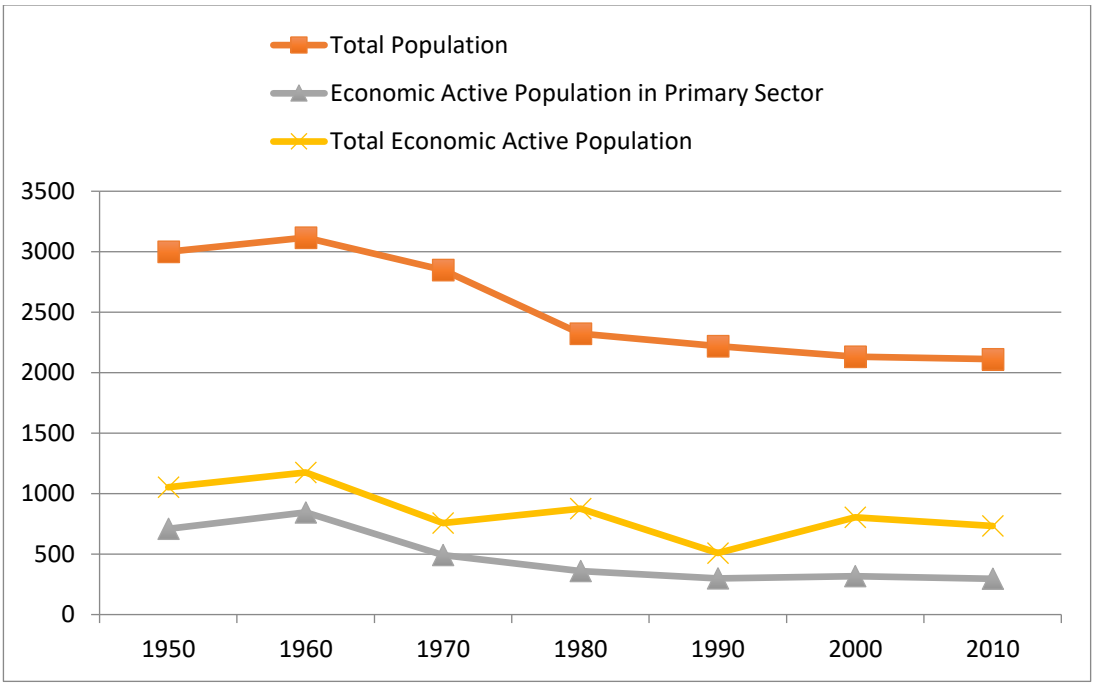

Figure 18. *Population dynamics in Yalálag 1960- 2010. Source: INEGI*

Total population decline was evident in 1970. However, although the most significant loss of workforce in the primary sector was evident in 1990, the number of people working in the primary sector (agriculture) had been in decline since the 1960s, and that trend continued in the 1970s and 1980s. It is important to underscore that, until the late 1970s, Yalalatecans continued to farm despite significant market challenges, such as the arrival of the CONASUPO in 1974 (see Chapter 3). Farming was highly appreciated among the local population because it was considered the most valuable food source. Moreover, Yalaltecan migrants could maintain physical ties with their hometown because they often returned and contributed economic resources that could compensate for the workforce loss that affected farming work strategies. However, according to testimonies and to land use analysis (*Figure 17*), farming activity contracted drastically in the 1980s and 1990s. This contraction of farmed land happened amid shifts in border enforcement in the U.S. that increased migration risks and costs, deterring migrants from returning to Yalálag, as well as structural economic policies that cut public

subsidies and support to small farmers, increased farming costs, and flooded the local market with cheap staples (see Chapters 2 and 3). Yalaltecans who still farmed sought to cut labor, risks, and time. Hence, access to nearby farming plots in *Tierra Templada* became highly coveted:

> *Yes, we used to farm. We farmed, and looked for people to help us farming. Yes, we farmed for about four or five years. . . . Back then, my in-laws still had their land plot, but after they sold it. Everything changed and we could not farm. That [land plot] was nearby—it was just before. . . the secondary school, and so it was easier. But it is only possible to find available land faraway. That is the problem.* [Ana, Yalálag, January 2, 2012]

Besides proximity to the main town, access to the road[152] and water (e.g., close to the Brujo River, the main tributary to the Caxonos River[153]) were important characteristics for potential buyers.[154]

As farming declined and became confined to *Tierra Templada*, fruit tree diversity (e.g., mangoes, bananas, papayas, lime, lemon, loquat, and avocados) was lost. Most people had orchards close to farming fields but far from the *pueblo*. When people stopped farming, they also stopped their treks to take care of those orchards:

> *I remember very much that my grandfather used to take us [to the fields], and there were small guavas that tasted a little sour-sweet, and it was great for us, to eat that! And my grandfather used to farm bananas, and he used to cut bananas, and my mother then*

[152] Even though some Yalaltecans have cars, access to fields near the road is easier because of the popularity of taxi-motorbikes. In the early mornings, especially during the harvest season, and after three p.m. when the work in the fields stops, it is common to see motorbikes coming and going to the town from locations near farming areas. It is also very common to find people walking along the same road and dirt paths to places farther away from the road.

[153] Like the rest of streams in Yalálag, this one acquires different names at different locations, which reflect local characteristics such as bridges, or traditional stories, and accounts. According to De la Fuente (1949), Yalaltecans differentiate the different sites or parts of the rivers.

[154] Water allows for the introduction of mostly rudimentary, irrigated systems. Also, water is necessary to grow sugar cane, a crop that has remained popular. Rich water streams in Yalálag are located in the lower parts of *Tierra Caliente*. However, today they are highly polluted because they receive all the urban sewage, which was introduced in the 1980s. including water waste from *huaracherías*. Seasonal springs and small ravines are spread across different parts of Yalálag.

cooked them as sweets, or we ate them when they were ripe. And that used to be our fruit; lemons, limes . . . that used to be our fruit. [Ana, Yalálag, January 2, 2012]

Nowadays, some fruits are grown in home gardens. However, taste preferences have shifted—especially among younger Yalaltecans—making the long-term viability of those trees unpredictable.

4.4 Land use changes at the turn of the century

As discussed previously, in the 1980s and 1990s, as farming declined in Yalálag's outlying areas, new trends in land use and land tenure emerged. One of the most significant changes was the settlement of Mixe families on land that Yalaltecans stopped farming, a situation that triggered concerns and actions to protect the forest and water sources.

4.4.1 New old neighbors: Mixe settlers in Yalálag

In the 1980s and 1990s, farming was concentrated around highly coveted areas close to the *pueblo*. At the same time, returning migrants started acquiring properties in the *pueblo* (e.g., houses or a plots to build on).[155] As a result, land prices in and around the town increased. Conversely, land in distant areas continued depreciating: "The countryside is cheap . . . yeah, people only want close-by land. Even to farm, people want nearby" [Don Augusto, Yalálag, February 2, 2012]. Hence, distant areas became affordable to workers who came from neighboring Mixe towns and could now farm and settle in the outlying areas close to the sites known as Pozo Conejo, Tras Del Cerro, Lachibee, and La Mina (Image 18).

[155] Some migrants owned multiple houses in town and lent or rent them to family or people who could not afford to buy a house. One of these tenants was Don Vicente, who had lived since his childhood in the countryside of Yalálag, having arrived from Mixistlán with his parents, and who in 2000, as an adult, moved to the main town but could afford only to rent one of the recently built houses in the *pueblo*: "I used to rent there. I was there for ten years. It was not expensive. It cost MX$300 per year. Since I used to take care of the house, I only paid electricity and water." This trend of buying houses to rent had already emerged in the 1970s as migration increased (Jopling 1973: 86). It is possible that some Mixe immigrants already rented such houses at that time. However, as mentioned in Chapter 2, during that period, several Mixe families that moved to Yalálag were settling in huts outside town.

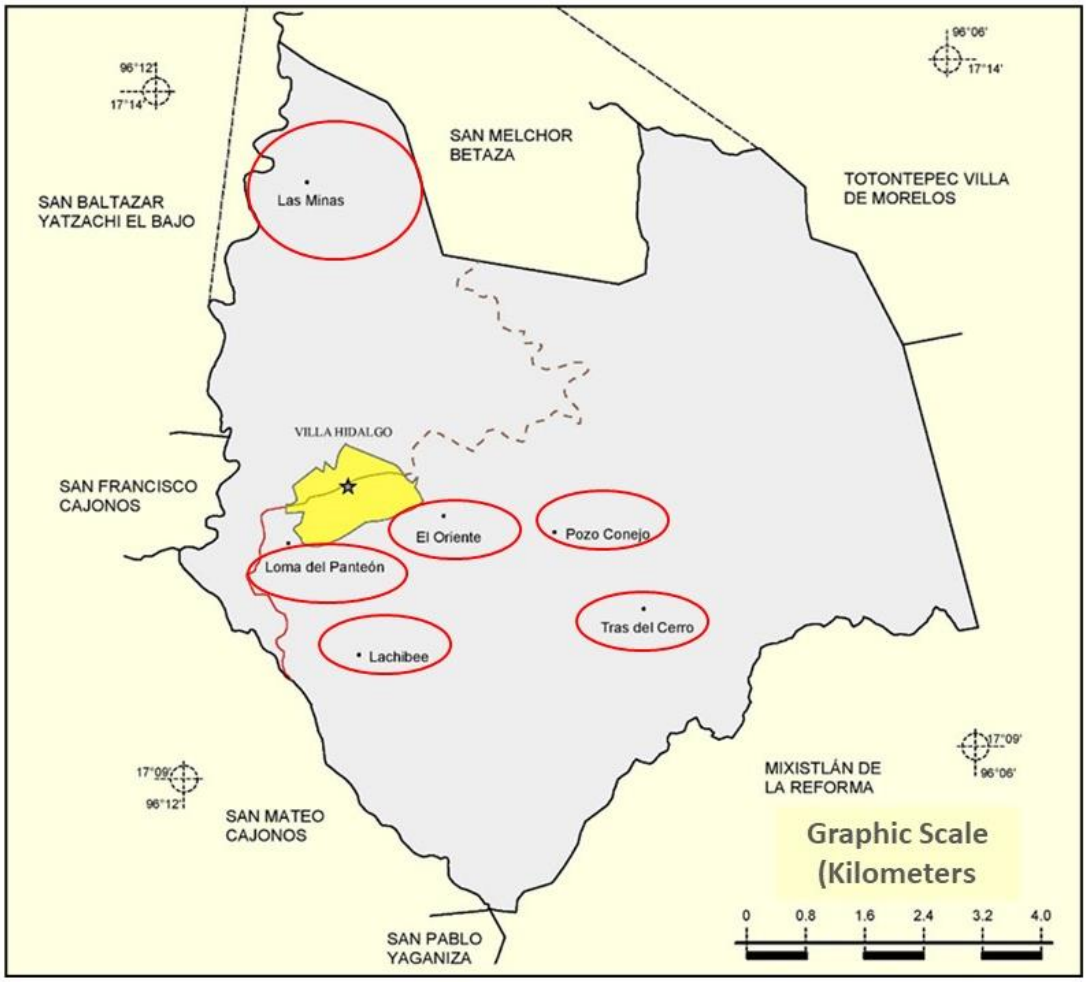

Image 18. *Map of Yalálag including settlement sites.* Source: INEGI.

Mixe families practiced subsistence farming on their newly acquired plots, which counteracted the decline in farming due to Yalatecans:

> *. . . in Yalálag, there have been many changes. One of these changes is due to the emigration of the children of the Zapotec that left—and still are leaving, to the cities, abandoning local activities. Another change is that in the town of Yalálag, . . . the number of inhabitants of Mixe descent, who have been born and raised in the town itself, and whose grandparents were from neighboring Mixe towns has increased. Now these children are we who have not abandoned, nor forsaken the most hazardous work: farming. Even Mixe women farm the same way as men.* [Ricardo, Yalálag, February 2012]
>
> *How many used to come! And in that time, the Mixe used to buy maize! Not anymore. Now they farm! In that time, they, let's say, they used to acquire maize from here; they used to work [here] and take away maize. They used their salary to invest in maize. They*

> *used to come here because they did not have maize. . . . And now they are . . . they are the opposite. Last year, they have come to supply maize here to me.* [Don Cuauhtémoc, Yalálag, February 2, 2012]

As both testimonies assert, incoming Mixe families kept farming more determinedly than Yalaltecans. These households had provided Yalaltecans with workforce to continue farming, had the ability to produce crop surpluses, and contributed local social duties to the system of social organization (see Chapter 5). However, in the 1990s, Yalaltecans had grown increasingly worried about the fact that Mixe settlements in Yalálag were expanding because they feared it could affect access to land and their main water sources located in those areas. They also worried that the settlement could lead to territorial divisions and conflicts. Historical border conflicts and socioeconomic differences between Yalaltecans and their Mixe neighbors, together with an increasing sense of loss of economic predominance—denoted, for example, in Don Cuauhtémoc's assertion quoted above—added to the territorial concerns regarding the Mixe settlements (see Chapters 2 and 3).

Then, likewise in the early 1990s, Yalaltecans expanded their water system to tap into springs located close to the border with the adjacent Mixe towns of Mixistlán de la Reforma and Totontepec. The project, the decline of farming, and the arrival of Mixe settlers led Yalatecans to envision ways to preserve access to land, as well as forest and water resources, in the areas where the Mixe had settled. As a result, Yalaltecans believed it was necessary for Mixe families to move closer to the *pueblo*. The decision, however, was controversial because Mixe families who had settled in distant areas had rented or bought land plots from Yalaltecan owners.

4.4.2 Water concerns and forest preservation

In 1994, Yalaltecans endeavored to develop an infrastructural project to extend their water system to springs located in Piedra Blanca and Piedra Venado. Those two sites are where water

sources in Yalálag are most abundant, but they are also the farthest away from the main town, with Piedra Blanca located right at the border with the town of Chichicaxtepec, in the Municipality of Mixistlán de la Reforma (see Image 19). Yalaltecans had frequently endured water scarcity in the *pueblo*[156] during the dry season, and the possibility of extending a water system to those springs, which Yalaltecans had already identified as the most important, promised a solution to that problem.[157] The project was highly significant to Yalaltecans. Water in Yalálag—it is important to stress—is not only a vital natural resource, but also an important input for main economic activities that gained popularity in Yalálag as farming declined: *huarache* making and clothing manufacturing (see Chapter 3). Improving and extending the water connection to town became feasible in 1994 when local authorities obtained access to public resources that matched their own significant local collective workforce, materials, and organization.

These springs are of vital importance for Yalaltecans. Yet, circumstances converged such that the municipality acquired official responsibility for administrating its water resources at a time when local municipal authorities were deeply interested in revitalizing the communal and traditional social fabric of Yalálag (see Chapter 5). The way the local authority at that time carried out and organized that project by means of communal organization also became pivotal to the reassessment of land use and the preservation of the forest as a vital element to sustain the aquifer. The political group that occupied the municipal presidency in Yalálag in the 1980s

[156] Furthermore, the main town was undergoing a rapid process of urbanization; many houses of migrant families were built or refurbished with bathrooms and drainage systems. As Ana described, "The houses here now they are all made of concrete, unlike before. When we left and came back, there used to be only tile-roof houses, with two little crosses, thus very typical. That is how houses used to be. And they slowly were changing. Everyone goes to the north, and they return, and they make their houses. Now, everything is very different (Ana, Yalálag, January 2, 2012).

[157] Their water supply from 1984 extended to springs located in an area called *Piedra Venado*, toward the east side of town. Prior to this, their water supply system was built of wood and clay; hence, it required continuous, arduous reparations.

until the mid-1990s played a key role in these changes. This group, self-defined as Grupo Comunitario, carried out a political project that revalued traditional social norms and institutions such as communal work and farming. Aided by communal work and economic contributions from migrants, the Grupo Comunitario while in the municipal presidency built important infrastructural public works, such as the water system.[158] In the 1990s, when Yalaltecans started reassessing the preservation of water resources, they also aimed to preserve other natural resources, including soils and rivers. An example of this whole reassessment was the enactment of new norms that prohibited dynamite fishing and included the project of building a wastewater treatment plant.

Yalálag was not alone during this time at making efforts to establish new norms and strategies to protect and preserve forest and natural resources. Several Zapotec communities in the Sierra Norte had incorporated and appropriated scientific narratives about environmental degradation, enacting norms of forest protection that were tied to their political struggles to regain control of forest and resource management (Bray et al 2005; Merino 2004, 2008, 2018; Mathews 2002, 2008, 2009, 2012). The topics of environmental protection, including forest protection, were themes that local authorities in the Sierra addressed in their regional meetings in the 1990s.[159] Their shared experience and their regional gatherings indicate political organization at the local and regional level, as well as the political relevance forest protection had; people in Yalálag were aware of and party to these political discussions (see Aquino Moreschi 2002).

[158] For an in-depth analysis of the political indigenous project of the Yalaltecan authority in the 1980s and early 1990s and its contribution to the regional Zapotec political movement, see Aquino (2002).
[159] Resolutions by the Assembly of Authorities of the Cajonos Sector, held on July 13, 1996, included: "a) Conservation of forests and soils, b) Conservation of water springs and rivers, c) Conservation of local flora and fauna, d) Rational use of chemical fertilizer (advantages and disadvantages), e) Better use of organic fertilizer, f) Composting. . ." (Minutes of Assembly of Authorities of the Cajonos Sector, July 13, 1996).

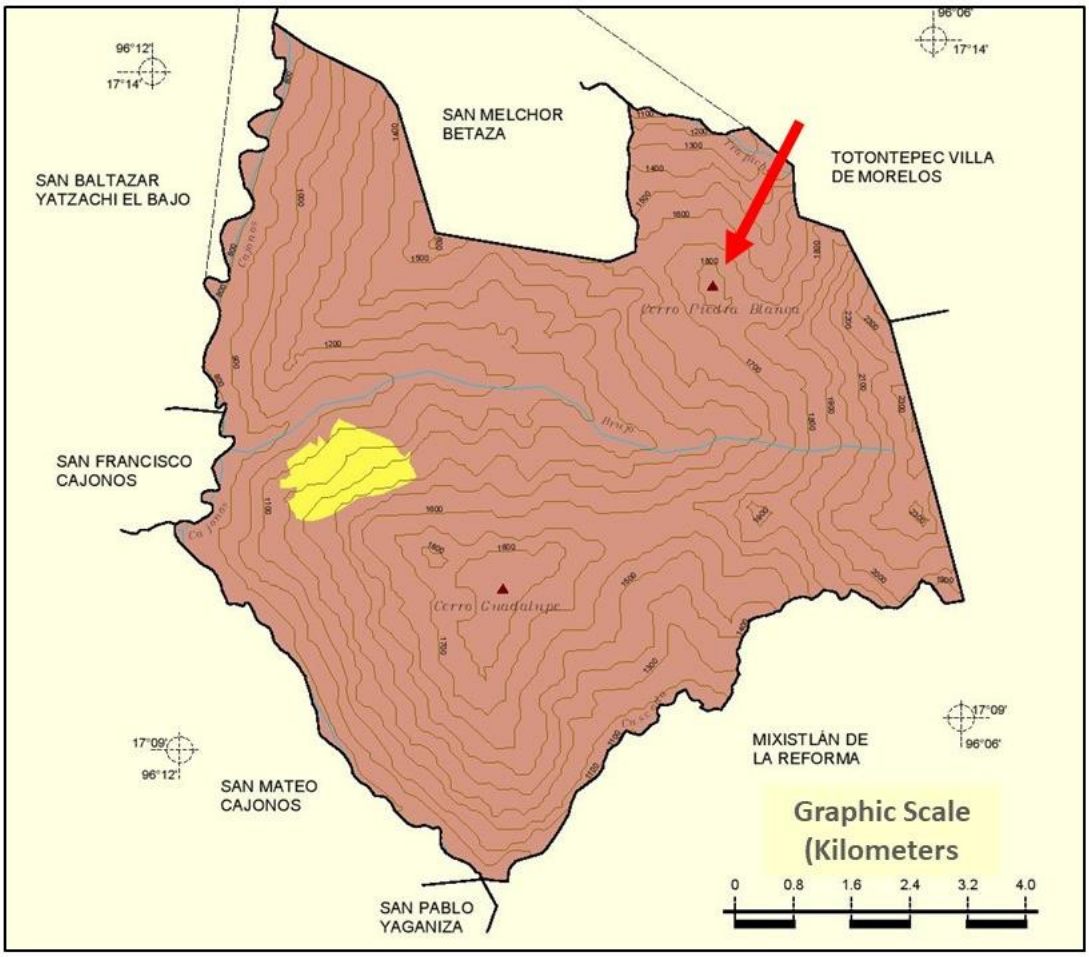

Image 19. *Map of Yalálag with main town (yellow) and the site of Piedra Blanca.* Source: INEGI.

In Yalálag, the local authorities held collective meetings to explain the relevance of their springs and of forest preservation.[160] Special attention was given to Piedra Blanca, Piedra Venado, and their surrounding areas, which then became special protection zones. Yalaltecans decided to convert those areas into a communal reservoir. The seed for that collective effort was already planted because one of the few remaining plots of communal land[161] was part of

[160] That year, for example, Yalaltecan authorities held a public meeting with owners of goat herds to explain the impact of livestock on the forests and aquifers, as we can read in the following extract of a letter addressed to the director of *Seguridad Pública y Vialidad del Estado de Oaxaca*: "There will be a meeting with owners of goats to orient them and convince them to abandon such kind of livestock since it causes immense harm to farming fields, to water springs, to gardens, to corn fields and to the forest" (Official letter, March 10, 1994. Original in Spanish).

[161] Noted as *pieza number 12* in the Municipal Inventory, it states, "A communal property located in the *paraje* known in Zapotec as '*Lachebellia*', in the mountain at the border between this Villa and the town of Chichicaxtepec, with a length of 7,062 metres and 25 centimeters and a width of 1.5 kilometer. Its southeast and

that area. A key element at that time was the fact that Yalaltecans had already stopped farming those areas.

Simultaneously, the establishment of a forest preserve area was a means of directly tackling the prevalence of Mixe settlements. Yalaltecan authorities were directly confronting how Mixe families used the forest in those areas, which included logging and raising livestock.[162] Yet Yalaltecans were also worried about the potential territorial division and conflicts that could take place over the long term if Mixe settlements continued. Their concerns were not unfounded. There are several cases in Oaxaca where population movement to neighboring towns has led to settlement claims by arriving people who aim to become a new independent town, which has led to land-related conflicts (see, e.g., Romero-Frizzi 2011; Cruz Rueda 2014). Besides such historical precedents of conflict, Yalaltecans have their own particular history of struggles, border conflicts, and other differences with their Mixe neighbors. Consequently, the authorities considered it necessary to relocate these families to the *pueblo*.

At the center of Yalaltecans' argument for the relocation of Mixe families settled in forested areas was their concern for and efforts to protect their forest and water resources, as expressed in a letter to the governor of Oaxaca in 1997:

> *One of the most crucial needs of the Community is protecting the forest and the territory where water springs that feed our water connection* [a gravity run system of water pipes and reservoirs] *are located. One practical way to protect such water springs is achieving the relocation of Mixe settled in the territory of Yalálag.*
> *For this purpose we will have a meeting with settled Mixe . . . . We hereby request proper arrangements to send a government representative to be present at such a meeting . . .*
> [Extract from official letter from the local authorities to the Governor of Oaxaca,

northeast sides are positioned toward this town, while it borders with the town of Betaza and Chichicaxtepec to its north side" (Municipal Inventory of year 1944, Municipal Historical Archive, Yalálag. Original in Spanish).

[162] See minutes dated March 17, 1997 entitled "*Reunión de ciudadanos radicados en la ranchería Pozo Conejo jurisdicción de Villa Hidalgo Yalálag*" in Historical Municipal Archive, Yalálag.

November 13, 1997, Folder entitled "Año 1997," Historical Municipal Archive of Villa Hidalgo, Yalálag]

As the letter also expressed, Yalaltecans asked the state governor for his support to accomplish their goal of convincing Mixe families to relocate to the *pueblo*. The meetings local authorities had with Mixe families about relocation did not go smoothly.[163] In addition to those meetings, Yalaltecans pursued other forms of persuasion, including economic pressure: specifically, avoiding buying produce or hiring laborers from among the Mixe settled outside of the *pueblo* and especially in protected areas. Further, the municipal authority sought to concentrate access to main public services in the *pueblo*. Under these circumstances, some Mixe households started moving to the *pueblo* in subsequent years. However, other settlers have refused to move. Among households remaining outside the *pueblo*, some argued that they bought those land plots where they settled and farmed. Additionally, increasing demand for property in the *pueblo* due to the arrival of migrant remittances had raised the prices of land and properties in the main town, which further complicated the prospects of Mixe households moving there. Meanwhile, there is a social tension between Zapotec Yalaltecans and Mixe settlers in preserved areas. The latter claim they have rights on basis of their work contributions to the town, which exacerbates an already complex situation:

> *According to some recollections, Yalaltecans are to blame for this situation, and why? Because while having a farming plot there, they sold it to a Mixe. And then slowly they started arriving. That was the mistake. . . . Yes, it was a mistake by the Yalaltecans. They made them work. They occupied (their workforce) for the renovation of the municipal (offices), and to build the protective wall for the clinic. They hired them, they made them work, and that is why those people feel they have rights—legally or illegally. They fight for their rights because they worked to earn merit.* [Cándido, Yalálag, January 23, 2012]

[163] Meetings held with Mixe neighbors stopped at the end of 1997 when some Mixe families refused to attend them and filed a legal complaint against Yalaltecan authorities (see documents in the file entitled "*Año 1997*" in the Historical Municipal Archive of Yalálag).

Paradigmatic and likewise the most challenging cases of settled households whose members have refused to be relocated are those located in an area close to Mixistlán de la Reforma known as Pozo Conejo. Even though only a handful of people remain settled in a few other locations outside the main settlement, 179 people were reported living in Pozo Conejo in 2010 (INEGI). This area has become a site of legal dispute and of social tension.

As a consequence of that conflict, Yalaltecans have become even more eager to protect not only their springs and forest in those areas, but also to secure ownership of the land. Starting in the 1990s, the local authority decided to acquire former private property plots to expand the stretch of communally owned land that existed in that area, as Don Tadeo explains:

> *In 1994 we started suffering from water scarcity, and at the same time, we realized that our biggest water source was located on communal property. But we also realized that other water springs were on private land. Thus, in order to preserve our water sources, we needed to preserve our forest, we needed to protect the soils, we needed to avoid animal husbandry, and we needed to avoid logging. We needed to avoid a lot of things so that this ecosystem could be appropriately protected. Thus, in order to do so, we needed to bring communal property back, so that the area becomes property of the community, and preserved by the community with proper commitment.*
> *Here, we started recuperating communal property, due to the problem of water. If we want to have enough water in Yalálag, and if we don't want people to suffer water scarcity, we need to return to communal property, because that land is already abandoned! The land is owned but has been left fallow! And these plots form part of a very valuable ecosystem due to water scarcity—not only here in Oaxaca, but in the whole world, right?* [Don Tadeo, Yalálag, February 5, 2012]

As Don Tadeo describes, in the 1990s, the local authorities proposed the idea, encouraging private owners of plots[164] located in and around sites of Piedra Blanca and Piedra Venado to sell them to the municipality to enlarge the parcel of the communal land and thus enlarge the formal protected area. That initiative was proposed and

[164] This included both Yalaltecan and Mixe owners.

approved in the Communitarian Assembly, a formal meeting that is the maximum authority in Yalálag, constituted under verified attendance by a majority of citizens (see Chapter 5):

> *Well, this is rather because the [communitarian] assembly determined that we had to buy all the plots so that they become an ecological reservoir; that the money [to acquire the land] should come from the water committee treasury. So that is how we [the Water Committee] are involved: we have to pay for the land that is being bought.* [Potable Water Committee, Yalálag, September 25, 2011]

The priority areas the municipal authority sought to acquire were precisely those where springs are located, which are close to the borders of Yalálag with Mixistlán de la Reforma and San Cristobal Chichicaxtepec. But, then the site of Pozo Conejo also became an important focus area. Since the decision of collectively buying and owning the land in those areas was taken, Yalaltecans have responded positively. The Water Committee became, at first, the local entity responsible for the administration of economic resources to buy the land and for the work of forest protection in collectively preserved areas. In 2001, that committee was renamed the Water and Ecology Committee (Minutes of Communitarian General Assembly, December 27, 2001), but as the area of the purchased land increased, so did the responsibilities of the Water Committee.

By 2008, the municipality had acquired a total of 1,100 hectares, and at that point, the work of protecting the forest surpassed the capacities of the Water Committee. Hence, in 2009, Yalaltecans instituted the *Comité de Vigilancia* (Committee of Monitoring), responsible for enforcing norms of forest protection and reforesting. The tasks connected to forest protection have proved to be rather challenging. Perhaps the most important problem Yalaltecans still face is that of securing land ownership. As it happens, both parties—the Yalaltecan authority and the Mixe settlers of Pozo Conejo—have filed lawsuits aiming to secure land ownership of

the disputed area without any legal success for either side. After both parties received unfavorable judgements from the civil court, despite their rather expensive legal process, in 2011 the local Yalaltecan authority asked a committee of professional Yalaltecans residing in Oaxaca City for legal counsel on this issue. After reviewing the legal proceeding of the abovementioned lawsuit, the committee and local authority realized that Yalaltecans lacked general legal recognition of their land ownership with regard not only to Pozo Conejo but to their entire territory.

In 2011, the group of Yalaltecans who advised the local authority realized that Yalálag's land was still registered as "national land" under the Registro Agrario Nacional (Agrarian National Registry), which means that the nation, rather than the community, is considered the holder of property in Yalálag. Although Yalálag was entitled to its territory in 1709 (De la Fuente 1949: 20), and while the agrarian reform of 1917 legally recognized collective land ownership by indigenous communities as *communidades* (communities), Yalaltecans still lack legal certainty regarding their land tenure. Yalálag is not an exception in this legal uncertainty, which is rather a general problem among towns inhabited by indigenous people in Mexico, leading often to legal and social conflicts (Stavenhagen 2003; Romero Frizzi 2011; Torres Mazuera et al. 2019). There are multiple reasons for this legal ambiguity, including the very long and intricate legal process the agrarian law requires, having to travel to government offices in Oaxaca to present land ownership certificates issued in colonial times (see Romero Frizzi and Oudijk 2006; Romero Frizzi 2011), and the lack of legal and institutional support (or even the will) to guarantee and defend social property in indigenous territories (Stavenhagen 2003; Romero Frizzi 2011; Torres Mazuera et al. 2019). In the next chapter, I continue my examination of the problem of property and land tenure in Yalálag, with special attention to

the forest preserve area and social organizational strategies to protect it. Here, it is important to take this challenge into consideration to understand the path of forest recovery.

Another difficulty Yalaltecans have faced in protecting forest and reforesting their priority areas has been gaining access to institutional support that enables them to accomplish their very pragmatic goals. For example, when the *Comité de Vigilancia* has sought native trees to plant and approached private or governmental organizations, it has often received other varieties of trees, including fruit trees. Meanwhile, the committee has figured out ways to circumvent these challenges so as to continue their work. Hence, Yalaltecans envisioned building a greenhouse to grow local seeds. Then, in 2011, they were finally able to obtain technical advice and economic support from the CONAFOR, the National Forest Commission, that matched local collective resources, and they were able to complete the project in 2012 (see Images 20 – 22).

Image 20. *Reforestation area with reforested fields on top, September 2011.*

Image 21. *Partial view of a reforestation area and its surroundings, September 2011.*

Image 22. *Partial view of the greenhouse, February 2012.*

Still, the *Comité de Vigilancia* continues to face significant challenges. To start with, the protected area has not yet received federal recognition as such, despite Yalaltecans' attempts to achieve that status since 2008. Further, the conflict with Mixe settlers is still unresolved. A total of 179 inhabitants were still settled around the site of Pozo Conejo in 2010 (INEGI). Meanwhile, the legal process between Mixe settlers and Yalaltecan authorities, which started in 1997, has cost both parties significant time, money, and stress.

4.4.3 Emerging monoculture and land ownership imbalance

Farming areas in *Tierra Caliente* were once preferred for rapid crop growth and for their suitability for chile cultivation, another main cash crop. Yet, already in the 1980s, several plots in *Tierra Caliente* were left fallow because of their distance from the *pueblo*, a propensity to have pests that affect farming plots, and an abundance of wildlife, which had become normal in such areas (see Image 23). This has led to forest regrowth over large swaths of land (see Image 24).

Image 23. *Abandoned farming field in* Tierra Caliente, May 2011.

Vegetation has become abundant in *Tierra Caliente*, and according to several testimonies, wildlife has found new habitats there, as described by Don Juan (now deceased), a Yalaltecan farmer who was 74 years old when I interviewed him:

> *Snakes are abundant here. . . . The puma is only recently arriving, and I have seen that animal; it runs away immediately. But the jaguar, that never shows up. There is no jaguar right now, but last week, they said it came around and killed two donkeys somewhere there behind the mountain.* [Don Juan, Yalálag, February 21, 2012]

Don Juan knew well the *Tierra Caliente* because he had worked in such areas since he was a child and was one of the very few Yalaltecans who still farmed there, several kilometers away from the *pueblo*. He watched the land go fallow, and then he saw pumas and jaguars.

Image 24. *Forest regrowth in* Tierra Caliente*, November 2011.*

Although forest regrowth has taken place in *Tierra Caliente* with environmental consequences, those areas have become once again attractive to new farming entrepreneurs who are now cultivating agave. In 2011, several plots ranging in size from 1 to 1.5 hectares[165] were found in those areas (see Images 25–27). Farming agave is not new. In the past, many Yalaltecans used to plant agave among corn and other variety of crops, mostly for self-consumption. Yet, the tradition is rather rare. In 2011, only Don Juan planted agave that way. Then, a few other Yalaltecans planted agave as a commercial monocrop, either directly to distill mezcal (an alcoholic drink made from the agave cactus, extremely popular in Oaxaca and now

[165] As explained earlier, the terrain steepness does not allow for great farming extensions. This also applies for agave that is, however, planted in different plots that in some cases are close to each other.

internationally) or as a cash crop.[166] Of those agave farmers, most developed businesses in artisanal mezcal production: hence, planting only small areas.

Yet, in 2011, one Yalaltecan, a migrant who became a businessman in Mexico City and gained access to substantial sums of cash, was planning to produce mezcal for the international market. He had already planted several plots and was building a distillery in Yalálag. His brother, Don Aquileo,[167] managed the construction of the distillery. Don Aquileo recounted that his brother had started buying land in 2000. By 2012, he owned approximately 300 hectares, and was acquiring more plots, most of which were in *Tierra Caliente*.

All the plots that Don Aquileo's brother had bought were at least five kilometers away from the *pueblo*. Most of them had been fallow for decades, and forest had regrown during that time (Images 25 and 26). Such was the case for the area where they were building the distillery and where the planted plots were.

[166] In an interview, a major agave farmer explained to me that agave prices fluctuate significantly. Further, he and his family had realized that, compared with the price of mezcal itself, selling the agave was not a good business.
[167] Don Aquileo was managing his brother's distillery project at the time of my fieldwork.

Image 25. *Partial view of a field planted with agave, Yalálag, February 2011.*

Image 26. *Agave-planted fields in the background. The picture shows vegetation dynamics surrounding them, Yalálag, September 2011.*

Don Aquileo noted that because their aim was to produce mezcal for export, they needed a good volume of agave plants. [168] They were planning to buy agave from the neighboring towns of Albarradas and Zoochila, where there were already agave producers, and they also had the goal of planting one million agave plants in Yalálag. According to Don Aquileo, they were planting approximately 2,500 agaves per hectare.[169]

Image 27. *Partial view of the distillery under construction and surrounding agave fields. Yalálag, April 2014.*

Besides the project's large dimension, what is remarkable is that this single project concentrates land ownership of large areas of *Tierra Caliente* under one single owner. The

[168] Given that most extensive agave farming is in hands of a single Yalaltecan (to produce mezcal for export), the potential economic benefits are unlikely to be redistributed.

[169] According to Don Aquileo, their extensive planting strategy takes into account the hilly and rough character of the terrain in Yalálag. Planting agave follows an X pattern—planting agave in the four corners and in the middle—which is a different strategy from the one agave growers follow in the valley.

combination of forest clearing for monoculture and the concentration of several plots held as private property contrasts strikingly with local efforts at forest preservation and expanding communal land around the main springs located in *Tierra Fría*.

Finally, it is important to underscore that emergent cultivation of agave as a cash crop differs radically from earlier agave cultivation. Whereas, in the past, most Yalaltecan farmers grew agave, and whereas agave was a common crop found in Yalálag's countryside, those traditional forms of agave cultivation differ greatly from the current landscape. As Don Emilio recounted:

> *Look; it was there where farmers worked that they had their rows of agave. Because the experts say that where maize is farmed is where good agave grows. The agave also requires special care: to not have weeds, and to have space. I am not sure if it needs two or three meters so that it gives a good juice. And nowadays, those people that farm maguey, they keep it very crowded, there is no space.* [Don Emilio, Yalálag, January 23 2012]

In short, this emergent way of cultivating agave as a cash-crop is significantly reshaping land use and reshaping the landscape in Yalálag, deterring forest regrowth.

4.4.4 Young Yalaltecan farmers: A new generation goes back to the fields

Another land use trend in the fields of Yalálag was emerging around 2011. A fair number of young adults, Yalaltecan and Mixe, recently returned to farming. Some were farming for the first time; others were farming after a break of several years. Contrasting with the abovementioned agave farmers, these young farmers were growing basic subsistence crops, including maize, beans, squash, and, when there was sufficient access to water, sugar cane and other fruits and vegetables. In most cases, their farming plots were not larger than 1.5 hectares. Beyond this, in most cases, they were farming in land near the main town and/or close to the road for quick access.

Many of these new, young farmers were returned migrants (or offspring of migrants) who had acquired access to cash; some had also acquired or inherited the land they were farming. Yet, most of them lacked farming experience, as in the case of Armando, who had just started farming:

> *Farming, actually, I just started this year. I did have any notion [about it] not like my friends or peers do. I had some idea but not as I do know now. In fact, I started learning about maize and beans as an adult. Even nowadays, I am experimenting with the beans. I still do not have the precise wisdom [of], for example, if this is the time I should plant beans, [or] when do I have to plant chile? I keep asking my friends, "What should I plant?" "Farm this." "And now?" "Well, do it this way." So they are guiding me as I am learning right now.* [Armando, Yalálag, February 23, 2012]

This incipient return to farming among Yalaltecans has taken place along with a drop in international emigration since 2009 and in parallel to the small flow of returning Yalaltecans (see Chapter 2). These new farmers seem also to be responding to the increasing costs of staples:

> *And now since the* CONASUPO *went up, maize went up. too. . . . because the* CONASUPO *has always sold maize cheap. All that they sell is cheap. And so then poor farmers cannot sell their produce at a good price because the* CONASUPO *sells cheap. They did not sell it at a good price then. But these days, we sold well the maize! Because of the same reason that [prices at] the* CONASUPO *went up!* [Don Cuauhtémoc, Yalálag, February 2, 2012]

The price increases at the CONASUPO that Don Cuauhtémoc mentioned are the consequence of crop shortages due to extreme weather in Mexico and the U.S. in 2010 (see Neuman 2010). As Armando recounted, "each week it went up 25c from November to December. As in January it reached the cost of 5 pesos . . . that is the top price." This was also a result of extreme weather during a period of unusual constant rain that led to landslides at the end of 2010, which blocked the main road (Associated Press 2010). Hence, Yalaltecans

experienced a period of food shortage and realized the extent of their dependency on external foods.

As part of the same trend, a handful of young farmers began combining self-subsistence farming with small-scale cash crops, namely vegetables, destined for local consumption. Within this small group, two farmers received economic and professional support from the Special Programme for Food Security (SPFS) of the Farming and Agriculture Organization of the United Nations (FAO) to each build a greenhouse, and they both grew tomatoes. It is worth noting that the SPFS is not a governmental program but was designed by the FAO to target food insecurity. Yet, it is implemented through government and local organizations, which also contribute some funding. It arrived in Yalálag in 2010 and was a strategic element in the development of these two projects:

> *I entered this program because, for four years, I had already my little tomato plants but at home. So then I felt inclined [to farm] and started searching for support, but unfortunately, there was not any help, not even within family. It is not as it used to be. Back then, it rained nicely; around this time, there were already crops, and now not anymore. Then the elders recounted that when they farmed chile, it was at the harvest [chile] that farming paid itself almost entirely. Thus everything else, such as maize, squash seed, was profit. But now not anymore; now this work requires spending more money to farm.*
> *So, when I tried to look for support [to farm], among my family, they told me, "No! Farming leaves nothing!" But I kept searching, and searching.*
> FONAES [Fondo Nacional de Apoyo para las Empresas de Solidaridad] *arrived, also promoting projects. But since I am registered [as born] in Mexico City, I could not apply in 2007. In 2008, there was another chance, but I also couldn't apply. I had already the documents, but my license was stolen, and thus I could not make it. And so, time passed until at the end of 2009, they started promoting* SPFS. *In 2010, they arrived and explained to us how this project operates. . . . .*
> *Thus, the strategy of* SPFS *is that we become self-sufficient, that we obtain enough to eat, and an internal market develops here in the community.* [Leo, Yalálag May 8, 2011]

As Leo tells us, the SPFS responds directly to the problem of food dependency and its bureaucratic requirements are more feasible. Yalaltecan farmers have slowly become enthusiastic about this program.[170] However, according to interviewees, it was uncertain how long the program would last.

Further, as Leo (age 34) described, this recent return to farming among young farmers has been arduous. Besides lacking government support and facing economic burdens, they also have to deal with the pejorative opinion of farming and farmers that prevails in Mexico. Because of these challenges, it is unpredictable how viable farming will be in the future for these young Yalaltecans who have recently returned to farm.

4.5 Assessment of forest recovery

> *Processes more complex than the simple abandonment of agriculture and the recovery of forests occur in Mexico; these processes may involve recovery, but they may also involve further loss or degradation of forest cover* (García Barrios et al. 2009: 868).

As we can appreciate in the imagery of land classification (Figure 19), in the year 2000, pine-oak forest had reappeared in several parts of Yalálag. Pine-oak forest went from covering only 43% of Yalálag in 1979 to 69% in 2000 (see Images 28–30). This land use shift suggests that forest recovery was underway in Yalálag in 2000, yet forest did not continue recovering along a clear trajectory. Rather, the percentage of pine-oak forest-covered area diminished to only about 58% by 2010. Although this meant a total gain of 15% of forest between 1979 and

[170] Although the Mexican government approved the SPFS in 2002, and the program began operation in the country in 2003, it started being promoted in Yalálag only in 2009. Although, at the beginning of this program, many Yalaltecans were skeptical and did not embrace it enthusiastically, the few projects that took off quickly improved their initial perception. At the time of our fieldwork, people were applying to the program to build five more greenhouses (two more for tomato, two for chile, and one for flowers).

2010, it is relevant to note the downturn in this trajectory. At the same time, according to land classification imagery, there is no remarkable gain or loss in areas of dry forest.

This apparently confusing situation is better understood when one considers that, as farming declined in areas distant from Yalálag's *pueblo*, new differentiated land uses under different tenure regimes began to occur. These changes included the establishment of new settlements, the institution of an area of protected forest, the return to self-subsistence farming, and the emergence of new monocrop cultivation. This complex trajectory reinforces the argument that farming decline, especially in Latin American contexts, involves more complex processes than simply forest recovery (Klooster 2003; Rudel et al. 2005; García Barrios et al. 2009; Aguilar Støen 2011; Robson and Berkes 2011).

By 2010, farming had reappeared on 2.21% of the land in Yalálag. That shift had taken place in areas that were near the main town, even though large farming areas also reappeared to the south and southeast of Yalálag, that is, near the main town and toward the border with Mixistlán de la Reforma. That finding is relevant given that most farmed plots in those locations are farmed by Mixe neighbours, either renting farming plots while living in their own town or already permanently settled in Yalálag.

Now, in order to evaluate whether these new norms and institutions for forest protection have truly contributed to forest recovery around *Piedra Blanca*, I compared land cover around that area using the satellite imagery we classified, where I found a clear forest reforestation taking place as farming declines (see Figure 20). Hence, land use changes taking place in the determined protected area correspond to forest recovery.

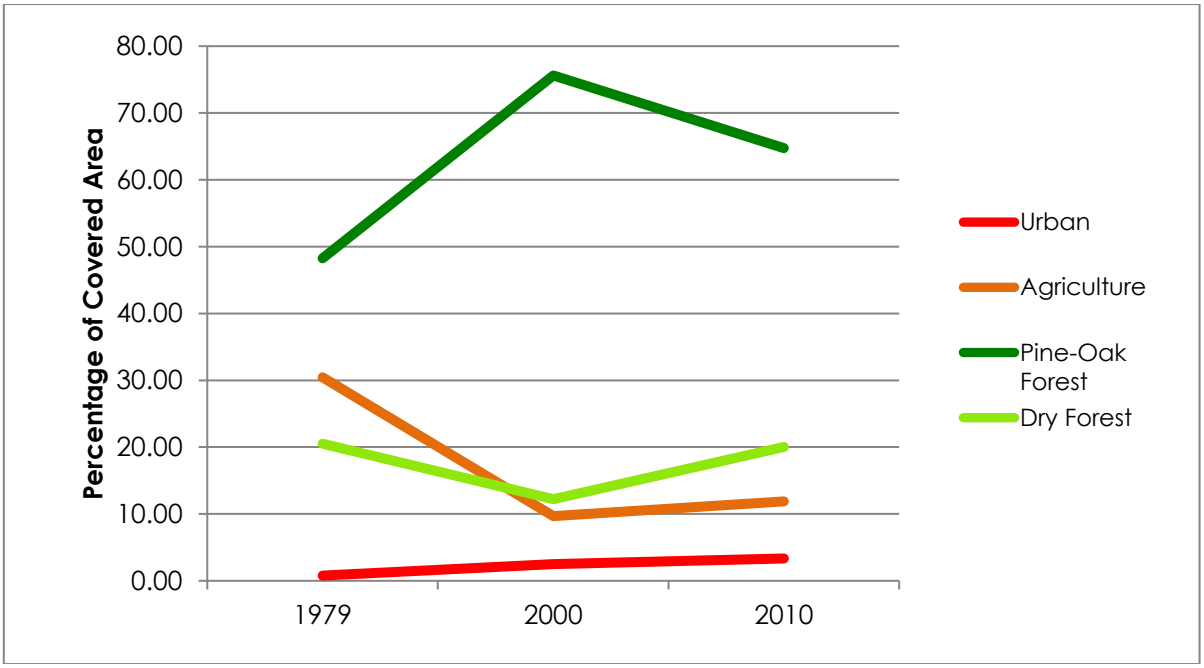

Figure 19. *Land use trajectory in Yalálag, according to our land classification of satellite imagery analysis.*

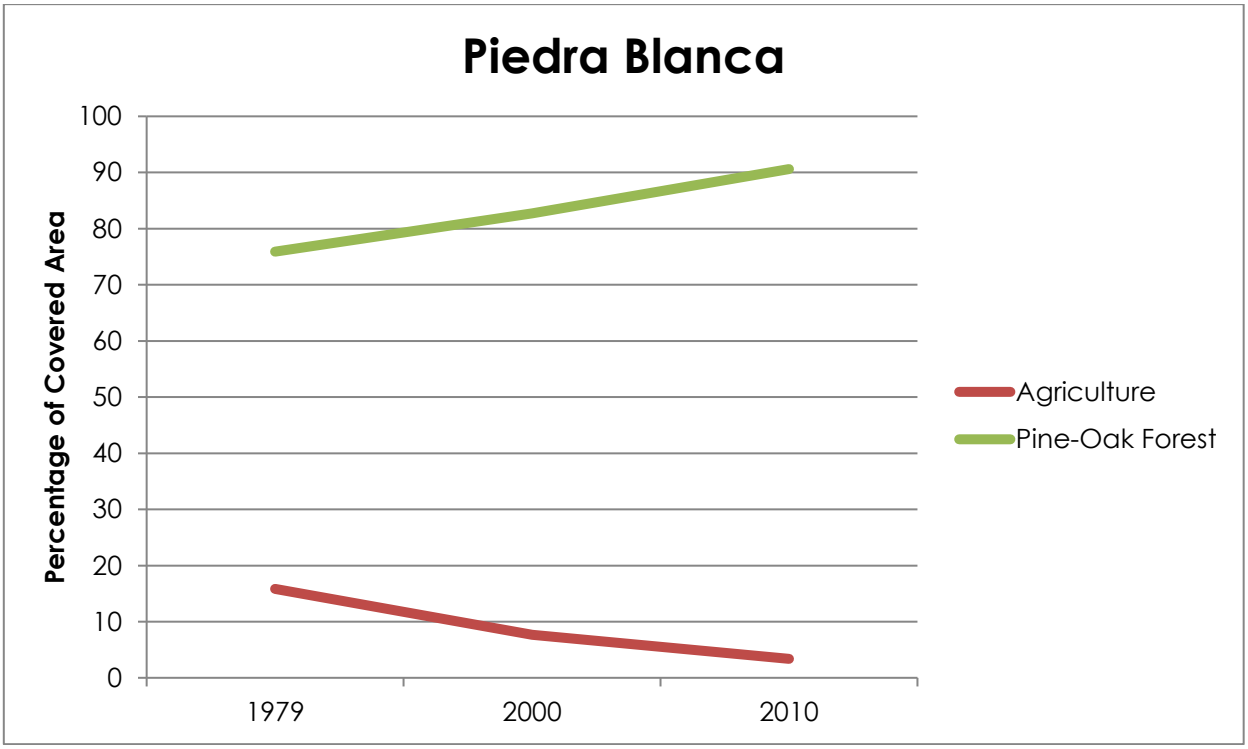

Figure 20. *Land use trajectory around* Piedra Blanca, *according to our land classification of satellite imagery analysis.*

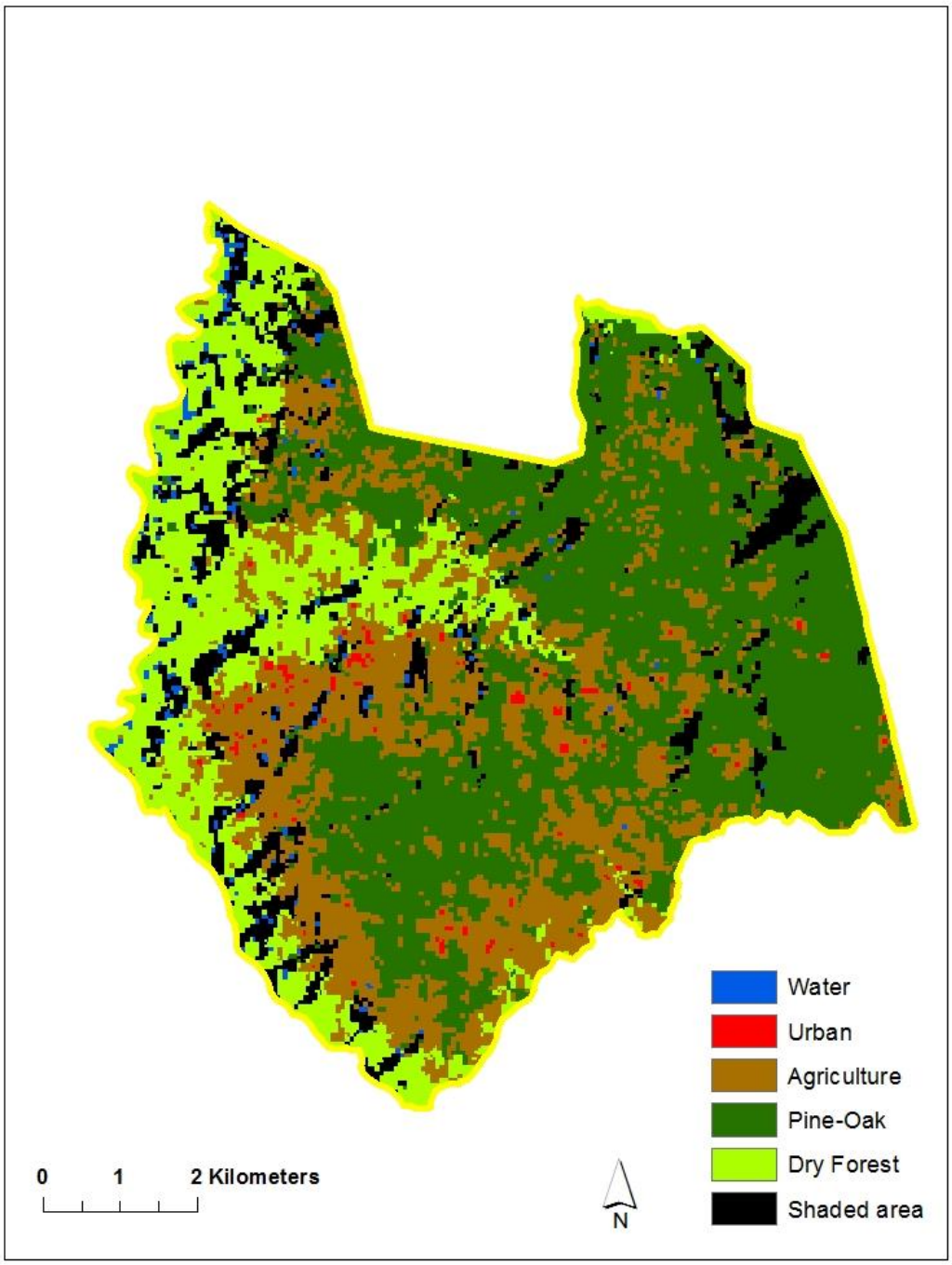

Image 28. Land use classification of satellite imagery of Yalálag, 1979.

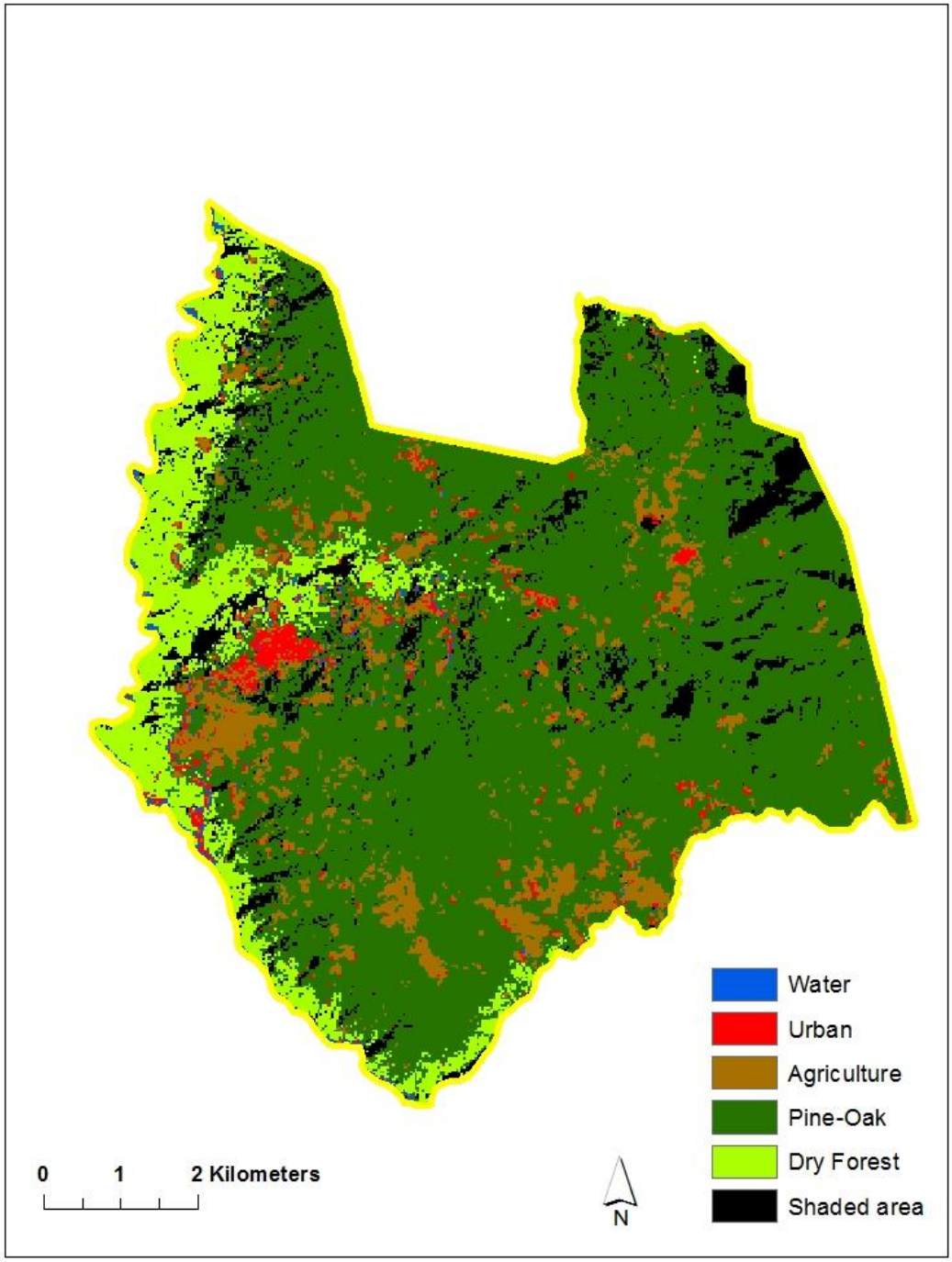

Image 29. Land use classification of satellite imagery of Yalálag, 2000.

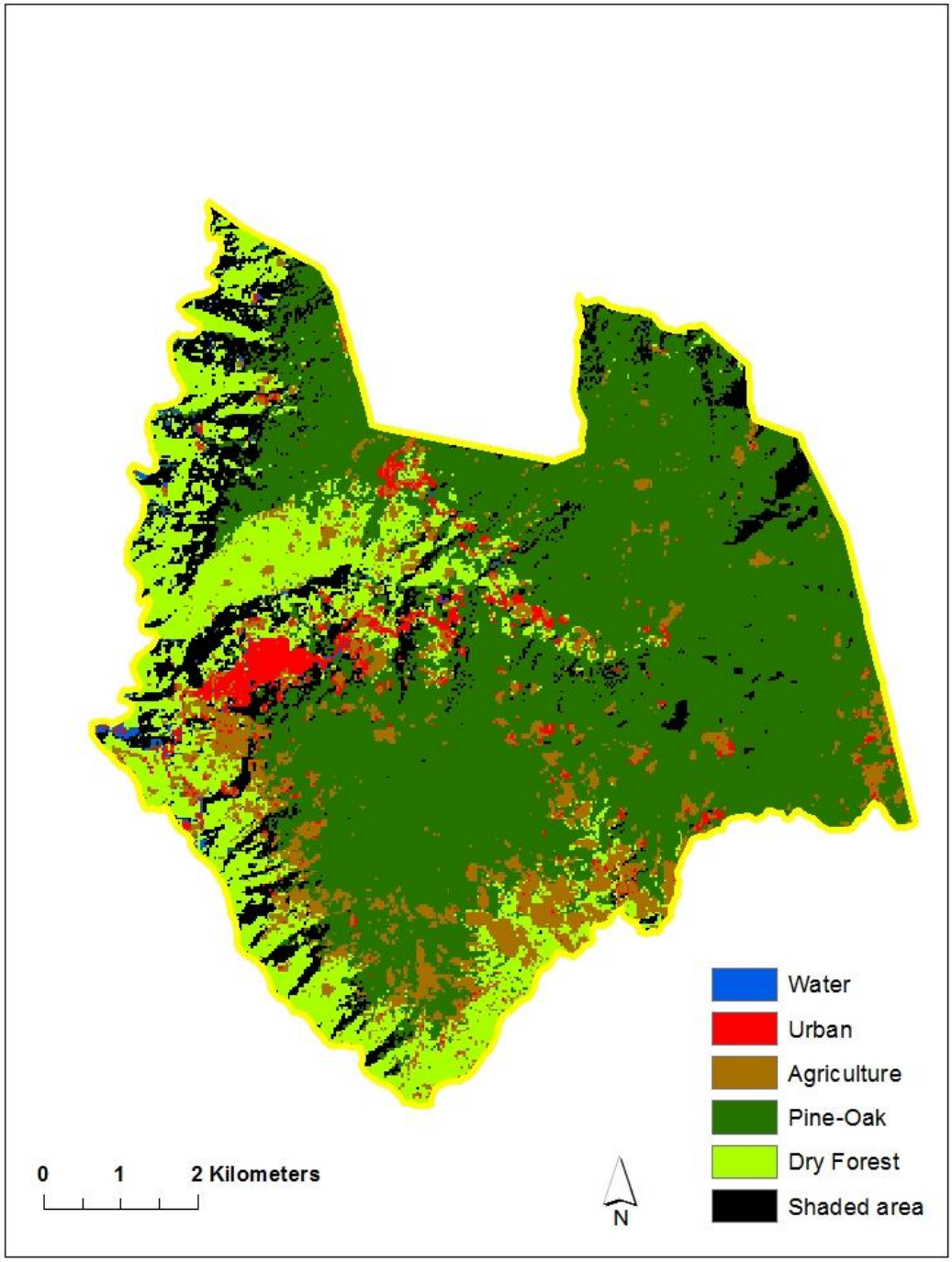

Image 30. Land use classification of satellite imagery of Yalálag, 2010.

4.6 Conclusions

In this chapter, I analyze land use changes taking place in Yalálag over the past thirty years. Analyzing historical data, interviews, ethnographic information, field reconnaissance notes, and satellite imagery, with which we analyzed land cover, I sought to understand the main factors of farming decline as well as further recent trends in land use. Further, I assessed whether land use change in Yalálag fits the forest transition model that Mather et al. (1999) suggest.

I found that farming has declined in Yalálag since the 1980s due to a combination of factors that include demographic loss to emigration, shifts in governmental policies related to agriculture, the reconfiguration of the regional and national markets, and the massive arrival of industrialized crops and foodstuffs produced elsewhere.

Workforce loss, together with a lack of institutional support, the disappearance of regional markets at which to sell crop surpluses, along with the arrival of (subsidized) external foods have made subsistence agriculture ever more expensive for Yalaltecan farmers and contributed to them becoming economically and institutionally vulnerable. Meanwhile, the accelerated growth of local retail and of inexpensive foods produced elsewhere have also contributed to the transformation of production/consumption habits.

As my findings suggest, in only thirty years, Yalaltecans went from being self-sufficient subsistence farmers to consumers dependent on externally produced staples. This shift taking place in Yalálag corresponded to a general tendency of transformation of rural communities in Mexico[171] that other anthropological studies describe (see, for example, Arias 2005). Furthermore, considering that the decline of farming involves complex and even unexpected processes of changes in land use other than simple forest recovery (Gutiérrez Barrios et al.

[171] As Arias (2005: 127) states, this trend is an indicator of deeper changes in jobs and production activities within communities and regions (see Chapter 3).

2009), this study has further sought to discover whether a consequent forest recovery is taking place and, if so, whether this shift can indeed be identified as forest transition.

I found that farming gave way to a differentiated change in land values depending on location: namely, on proximity to the main town and access to water. Cost depreciation of land in remote areas created new and sometimes contrasting uses and appropriation of such land. Simultaneously, increasing concerns about water resources and recently formed population settlements in areas far from the *pueblo* became major reasons that Yalaltecans decided to protect their main water sources. In order to do so, Yalaltecans declared the area close to the main springs and its surroundings a forest reserve, for which they have purchased land in order to expand the area that they have historically considered communal property. Yalaltecans have also instituted norms for forest protection, including the creation of a specific committee responsible for forest protection, and have actively reforested these areas. These efforts have resulted in a clear process of forest regrowth in that area. Forest recovery around the main springs in Yalálag shows that implementation of these new norms and institutions is fruitful.

However, Yalaltecans face significant challenges, including potential conflict with people settled in an area included in the demarcated, protected area. More generally, Yalaltecans have also frequently encountered a lack of institutional support for their reforestation and forest protection efforts. This lack of support, together with the legal uncertainty they face regarding land tenure, calls into question the long-term feasibility of forest recovery in Yalálag, despite local consistent efforts to engender preservation. Hence, I argue that institutional agreements will be necessary to ensure the future of forest recovery in the protected area.

More broadly, and in contrast with the forest reserve, the lack of norms and institutions related to forest preservation in the rest of Yalálag makes forest recovery on a large scale

difficult and unlikely to meet with success. As noted above, a few young Yalaltecans have returned to farming even though their farming plots are small. Yet, the trend that raises more concern regarding forest preservation is the uneven appropriation of land in *Tierra Caliente*, as of this writing mainly concentrated in the hands of one person, and that area is projected to be soon converted to agave monoculture. This new trend has resulted in the clearing of incipient forest recovery in small areas for now. Yet, it will most likely put a halt to forest recovery in areas of *Tierra Caliente* and potentially lead to further forest deterioration, if the commercial enterprise of mezcal production goes according to plan without any further measures regarding forest protection in *Tierra Caliente* put in place.

The analysis in this chapter has pointed out that farming decline does not necessarily translate into forest recovery. The different scenarios described here demonstrate how local norms and institutions devoted to preserving and restoring forest areas are crucial to achieve forest recovery. Meanwhile, the analysis has also indicated that farming decline has certainly and unprecedentedly transformed local processes of production and consumption. In the case of Yalálag, external food dependency has increased Yalaltecans' vulnerability in the face of a continuously changing international market and drastic unanticipated meteorological events, such as the extraordinary heavy rains in 2010 that caused mudslides. Finally, I found that the recent re-emergence of self-subsistence farming among young Yalaltecans seems to be a response to increasing dependency and vulnerability. Yet, high farming costs and a lack of institutional support may make this trend untenable.

5

Regaining Communal Territories and Instituting Natural Preservation

Synopsis: In 1994, during the peak of outmigration, Yalaltecans introduced new norms for forest protection in and around their main springs located on one stretch of communal land. Later, they established an area of forest reserve that has since expanded. Yalaltecans have managed the forest preserve area under customary communal organisation and have acquired former private plots to extend communal land ownership of their forest reserve. This chapter analyses the process of establishing the forest reserve, its management, and its interrelationship with other communal institutions. It asks how communal institutions, including communal land tenure, sustained themselves and even expanded in a context of socioeconomic changes, including the decline of farming and emigration. The main goal of this chapter is to describe the processes that allowed Yalaltecans to revalue their communal institutions, as well as the challenges that communal systems of social organisation face when it comes to conflicts over resources and frictions with legal and institutional frames.

5.1 Introduction

> Ivet: How did you decide to establish this reserve?
>
> *It was agreed in communitarian assembly.*
>
> I: And how did you choose the land plots?
>
> *What happens is that because most land in Yalálag is private property, we do not have communal land except for those lands that are located on the border with other communities; those are of communal property. So then we decided to do so because it is considered better to have it as communal land.*
>
> *Comité de Agua Potable* 2011-2012, Interview Yalálag, September 25, 2011

In the last months of my fieldwork in Yalálag, I became increasingly interested in understanding how Yalaltecans had established and managed their large forest reserve. As demonstrated in the previous chapter, there is evidence of forest recovery in the reserve. Because I wanted to learn more about local management of natural resources, I requested an interview with the local Committee of Potable Water (CPW), the group in charge of managing the water system and acquiring private plots to communally own as a forest reserve. The seven members who comprise the CPW made space for this interview on a Saturday evening, when they held their

weekly meetings. When I asked the CPW about how Yalaltecans had come to the decision to establish the nature reserve, they responded in unison and clearly.

As stated in the epigraph, the CPW explained that the Communitarian Assembly (*Asamblea Comunitaria*) had decided to establish the forest reserve in that specific area because it was communal land. Although clear and accurate, their answer only indicated the very beginnings of a long, complex process of communal social organisation that has sustained forest preservation and local water management and strengthened the authority of customary institutions. According to archive records, on January 30, 1994, the local Committee of Potable Water and the municipal authority called the *Asamblea Comunitaria* to decide whether they should extend the local water system to the springs located in the far northeast side of town. During the same meeting, the committee also submitted new norms for forest use, such as the prohibition of wood cutting in areas surrounding the main springs (meeting minutes, Municipal Historical Archive of Yalálag). Yalálag was meanwhile enduring socioeconomic changes, including migration and the decline of farming (see Chapters 2 and 3). At the same time, political antagonism among local political factions pervaded, and the *Asamblea Comunitaria* was not commonly called upon to decide about implementing main infrastructure projects. Still, more than the required majority of Yalaltecans gathered in the *Asamblea Comunitaria*[172] and collectively decided to approve both proposals.

As part of the water system project, Yalaltecans established a forest reserve area on a strip of land already held as communal property. Beginning in 1994, Yalaltecans expanded the area (a total of 1,100 hectares in 2011) of forest reserve by collectively acquiring privately owned plots and converting them to communal ownership. Meanwhile, the *Asamblea Comunitaria*

[172] The assembly counted 453 citizens in attendance and only ninety-five absentees as registered in minutes of the January 30, 1994 meeting (Folder entitled "Year 1994," Municipal Historical Archive, Yalálag).

gained legitimacy as the main authority for collective decision-making and managing water and other natural resources.

In this chapter, I examine the process of establishing the forest reserve, its management, and how it relates to other communal institutions. I ask how these institutions changed amidst significant socioeconomic changes related to the decline of farming and emigration. I also ask how communal organisation and communal property expanded, despite local political antagonism and given that most land in Yalálag is held as private property.

To answer these questions, I had to analyse the history of social organisation in Yalálag and how political and socioeconomic adjustments related to emigration and the decline of farming reshaped local institutions. I used archive information, interviews, ethnographic observation, and literature reviews. As former ethnographies of Yalálag already note (Aquino Moreschi 2002, 2010; Gutiérrez Nájera 2007; Aguilar and Alatorre 2011; Cruz Manjarrez 2013), adjustments in local social organisation in Yalálag beginning in the 1960s have been shaped by political factionalism, a patron-client structure between local political leaders and state officials, and local political movements that revitalized communal institutions in the 1980s and 1990s. Those previous analyses, which informed me about internal political factionalism and processes of political disruption, made me question how Yalaltecans had been able to sustain a social organisation system based on communal institutions and even strengthen those institutions amidst socioeconomic changes and political conflict. In this analysis, I argue that, despite changes in land tenure regimes and local political antagonism, communal organisation has persisted because it is vital to building and maintaining collective infrastructure and ritual spaces. I also argue that not only Yalaltecans, but also the state relied on local communal institutions to build, sustain, and manage government developmental projects, even though the state systematically denied the authority of local communal institutions.

In the first part of the chapter, I provide historical background on social organisation in Yalálag. Then, I describe the development of the Water Committee. Finally, I look at the main achievements and new challenges related to the management of the water system and the forest reserve under communitarian institutions, including state bureaucracy, border conflicts with neighbouring towns, and internal conflicts.

5.2 Communal grounds: Social organisation in Yalálag

As the Committee of Potable Water (CPW) asserted in the epigraph, Yalaltecans now recognize the Communitarian Assembly (*Asamblea Comunitaria*) as their chief authority, but this was not always the case. For the first half of the 20th century, Yalaltecans seldom gathered in the Communitarian Assembly to decide on issues that the local municipal council passed on to collective decision (De la Fuente 1949). In 2011, however, the Communitarian Assembly held regular meetings twice per year and became regarded as the main space of collective decision-making. Hence, it also regularly gathers to tend to the town's main collective issues, such as potable water (once per year) and for urgent matters that require collective decision-making. The Communitarian Assembly comprises a representative, female or male, ages between sixteen and sixty, from the majority of permanent resident households.[173] The Communitarian Assembly is formally constituted after attendance by a majority of citizens is verified. Attendance is obligatory, and delayed arrivals and absences are fined. The amount of these fines is also fixed by the Communitarian Assembly.[174] The Communitarian Assembly is

[173] Males acquire community obligations, including attending the Communitarian Assembly, either when they start a new family or when they turn eighteen. Married women can assume their husband's obligations when he cannot comply. Single women acquire community obligations at age thirty-five. Returning migrants acquire this obligation after their first year of stay. People who are not from Yalálag acquire communal responsibilities immediately, when they marry to Yalaltecans and form a household in town. Non-Yalaltecans who reside in town for long periods (e.g., teachers at local schools who are not from Yalálag but live in town) are also obliged to comply.

[174] In 2011, for example, absentee males were fined $200, and single women and single mothers one hundred pesos. Given the subject matters treated and related decisions made in the Communitarian Assembly, meetings

where local authorities inform the town about the main collective matters (i.e., local finances, government funding programs, public works, etc.) and where everyone participates in appointing local citizens to positions of local authority that are rendered as community *servicio*[175] for a full year without economic compensation. In the Communitarian Assembly, Yalaltecans also define collective needs, prioritize public works, and outline the required number of days of *tequio,* which is also obligatory communal work like *servicio*, but shorter and specifically targeted at completing specific projects (e.g., extending the water system).

These three institutions—the Communitarian Assembly, *servicio,* and *tequio*—are, thus, intimately related, and taking part in them is required to gain and maintain membership and acceptance in Yalálag[176] (De la Fuente 1949; Jopling 1973; Aquino Moreschi 2002). Participating in community institutions is a practice that allows Yalaltecan households to build a reputation, gain insight into the town's problems, and acquire communal management skills, as Alberto, a young Yalaltecan explained:

> *Well, yes, the Assembly is the maximum that exists because it is there where decisions are taken about what [public] work will be done in the year, what* tequio *will be given, what projects exists. And everyone is invited to participate. One can raise a hand, and they give you the microphone, and you can express your point of view.*
> *Ivet: Do you do participate [with your opinion]?*
> Alberto*: No.*
> *I: Why?*
> *A: Precisely because I do not know what is [going on]. And so that is why I am accomplishing my service now, so that I can more or less learn, or at least get an idea. And*

---

are normally held at the beginning, at the end of the first half, and toward the end of the year. Extraordinary Communitarian Assemblies can also be held in specific cases.

[175] Committees of schools are elected in the *Asamblea de padres de familia* (Parents assembly) in each school. These are meetings held among parents whose children attend each respective school. Appointees to school committees carry out their posts for a year, which is also considered community service. Yet, the authority of the Communitarian Assembly is higher, and if it chooses someone already appointed to a school committee for a more relevant community service, that person has to accept that assignment.

[176] Participation is not individual. The nuclear family as the most basic unit of social organization. Under this logic, community obligations are set for new households.

then I will comply with other service, and that way will get somehow to know a bit more; thus be able to give an opinion. [Alberto, Police Officer in Barrio of Santa Catarina for 2011, Yalálag, December 11, 2011]

As Alberto noted, the assembly is the main authority that defines projects and collective work. Taking part in the Communitarian Assembly is obligatory but participation, as he pointed out, is based on the experience that one gains by accomplishing obligatory collective work, or *servicio.* Alberto was in his early 20s and single at the time of the interview. He was then about to complete his first year of *servicio* as a community police officer. Serving as a community police officer is a common obligatory entry-level duty within Yalálag system of social organisation. This system encompasses a hierarchical structure of civic and religious collective duties (see Table 4)—because Yalaltecans consider that they have collective obligations to the sacred domain (De la Fuente 1949; Cruz-Manjarrez 2013).[177] Citizens are appointed to *servicio* for one year and have the right to abstain for at least three years before being appointed again. Social responsibility including the sacred is epitomized by the collective religious festivities, which in turn include public secular events (e.g., markets, music, dances, basketball games, and shared meals) that attract locals, migrants, and regional neighbours. The

[177] Whereas religious festivities are often framed in Catholic terms, significant differences allow them to identify as indigenous Catholicism, and thus as differentiated from the religious canon and based on the Yalaltecan world view. Yalaltecans consider their territory and *la Tierra* (Earth, more broadly) as sacred, generally benign but also responsive to human actions. Hence, one can request *la Tierra* for its assistance in different sorts of human endeavors, but one should also reciprocate all the good that *la Tierra* provides. There are specific practices, such as *Darle de comer a la Tierra* (feeding the Earth) that Yalaltecans explicitly acknowledge as different from Catholicism given that they venerate *la Tierra* and not Jesus Christ. Conversely, Catholic entities are treated in this worldview in a reciprocal and convivial manner and receive offerings in a wide diversity of collective spaces that are not specific to the Catholic Church (i.e., a communal house altar). Consequently, with this reciprocal relationship with the sacred, local authorities and committees focused on maintaining public services often carry out offerings/petitions to sacred deities when there is a collective duty or it is necessary for accomplishing a specific project. The following quotation, better explains this relationship: "The earth as such—soil (*yu*)—or as world (*yez liu*) is thought as a sacred entity. In contrast with men, who are evil, the earth is essentially good: It provides livelihood, it feeds, while it also resents being hurt or being burned to build houses or to obtain certain products or crops. Earth provides, and man takes. The latter should give a part of what he takes or give it before as a tribute, or it must make amends should he commit a sin against her" (De la Fuente 1949: 265).

collective events, as joyful and attractive as they are, require great organisation that involves work and *convivencia* (conviviality).[178]

Taking part in the collective work of the local religious and civic committees sustains public infrastructure, but likewise a worldview, a sense of belonging. As Alberto synthetized, participating in customary community institutions is a learning process that allows Yalaltecans to gain knowledge and reputation, depending on their performance. Yalaltecans who display responsibility, commitment, and good collective work gain the respect and trust of other community residents.

Social organisation, as interviewees described it and as I observed in Yalálag during my fieldwork, is based on the intrinsic relationship between collective work and collective decision-making in the Communitarian Assembly. Obligatory community work (*servicio* and *tequio*), which are called simply *zin* (work) in Zapotec (De la Fuente 1949: 211), are characteristic of various indigenous communities' systems of internal organisation and governance (Medina 1995; Barabas 1999; Millán 2005; Korsbaeck 2007; Portal 2013).

[178]Taking part of festivity is not a passive relationship of mere indulgence, but involves the responsibility to help or to extend an invitation as a promise of reciprocation. However, Yalaltecans know well how to make work enjoyable with jokes, gossip, and laughing, which creates conviviality at the festivities.

Table 4. Overview of Boards and Committees in the Communitarian System of Organisation in Yalálag as in 2011

H. Ayuntamiento Municipal (Council)

Presidente municipal (Municipal president)	Alternate *presidente municipal*
Síndico	Alternate *síndico municipal*
Alcalde único constitucional	
Tesorero municipal (Treasurer)	
Regidor de hacienda (Finance councilman)	Alternate *regidor de hacienda*
Regidor de educación (Education councilman)	Alternate *regidor de educación*
Regidor de obras (Public works councilman)	Alternate *regidor de obras*
Regidor de salud (Health councilman)	Alternate *regidor de salud*

RELIGIOUS COMMITTEES

Comité de la capilla de San Antonio de Padua

Presidente (president) *Secretario* (secretary) *Tesorero* (treasurer) + 4 *mayordomos* (1 per *barrio*)

Comité de la Parroquia de San Juan Bautista

Presidente (president) *Secretario* (secretary) *Tesorero* (treasurer) + 8 *mayordomos* (2 per *barrio*)

Comisión de Alimentación (Festivity Food Commission)

Presidente (president) *Secretario* (secretary) *Tesorero* (treasurer) + 4 *Vocales* (1 per *barrio*)

CIVIC COMMITTEES

Comité de agua potable (Potable Water Committee)

Presidente (president) *Secretario* (secretary) *Tesorero* (treasurer) + 4 *Juez de llaves* (1 per *barrio*)

Comité de la clínica comunitaria (Clinic)

Presidente (president) *Secretario* (secretary) *Tesorero* (treasurer)

Consejo de vigilancia y ecología (Committee of Monitoring and Ecology)

Presidente (president) *Secretario* (secretary) *Tesorero* (treasurer)

Club deportivo (Sports)

Presidente (president) *Secretario* (secretary) *Tesorero* (treasurer)

School Committees

Pre-school

Presidente (president) *Secretario* (secretary) *Tesorero* (treasurer) + 1 vocalPrimary

Presidente (president) *Secretario* (secretary) *Tesorero* (treasurer) + 1 vocal High school

Presidente (president) *Secretario* (secretary) *Tesorero* (treasurer) + 1 vocal

Topiles: 8 *topiles* (2 per *barrio*)

Police: 32 policemen (8 per barrio)

Nevertheless, customary social organisation structures known as *usos y costumbres* in Oaxaca are not monolithic. They are as diverse and flexible as their historical and local contexts (Medina 1995; Barabas 1999; Portal 2013).[179] In Yalálag, for example, communal responsibilities and rights are restricted to Yalaltecan residents; migrants are not obligated to perform communal obligations until after their first year of living in Yalálag, or if they settle back in town or if their nuclear family live in town. Neither are communal responsibilities directly tied to access to land, as in other towns of the Sierra Norte, where land is most often held as communal property. In Yalálag, land has been most widely held as private property at least since the 19th century and parceled into small plots (see also Chapter 4). However, it is important to note that Yalaltecans restrict access to land to their community members, with the few exceptions of (mostly regional) migrants, who have settled in Yalálag and comply with obligatory communal duties. Such is the relevance of communal duties that they are obligatory also for non-Catholic Yalaltecans—who are mostly of Mixe descent—and they include taking part in the Communitarian Assembly.

The fact that the Communitarian Assembly defines and organizes communal work is rather remarkable given that the Mexican state has denied the authority of local customary institutions while recognizing state-based institutions (Oemichen 2003; Recondo 2007; Hernández Díaz 2007, 2013; Cruz Rueda 2014; Torres-Mazuera 2016; Torres-Mazuera et al. 2018). For example, the state recognizes only the municipal council as a legal entity with local political authority and the administrator of public resources. Although the state recognizes customary uses, it denies authority of customary institutions. The state does not recognize the Communitarian Assembly as a local authority or as a subject of rights, but only as a means of electing the municipal council. Hence, the

[179] Despite anthropologists' debate as to the historical origin of indigenous customary systems of organization in pre-Hispanic, colonial, or even contemporary times, my interest in this work is to underline the historical, and therefore flexible, social character of these systems.

state imposes the structure of the municipal council upon local customary and communal social organisation.[180]

However, the local system of social organization in Yalalag defies the state imposition of its own structure that denies local authority. This is clear in the fact that the Communitarian Assembly in Yalálag is the main local authority and collective space where Yalaltecans appoint people to positions of local authority (including the municipal council). Likewise, although the state recognizes the municipal council as the only legal entity with political authority and the administrator of public resources, Yalaltecans only recognize as legitimate the use of public resources that are based on collective decision made in the Communitarian Assembly. Also, the state does not recognize local committees as official government entities, nor does it consider people appointed in local committees officials. Yet, Yalaltecans understand and recognize local committees with specific communal responsibilities as part of their system of social organization. Similarly, whereas the state (at the local and federal level) sees itself as the main overseer of the use of public municipal resources, Yalaltecans expect and oblige their local authorities, including local committees, to inform them of core public matters, such as the use of public resources.[181] The legitimate elevation of the Communitarian Assembly to a local authority can be traced to the state's antagonistic reliance on those very local customary systems of organisation, which the state denies authority and which yet

[180] This situation can be even more complex than in Yalálag in municipalities that encompass several administrative subdivisions known as *agencias*. Because the municipality is the main entity that the state recognizes as a legal entity, administrator, and authority, when a municipality encompasses several *agencias*, it is the seat of the municipality that administers public resources that the federal and local state government dispense for the whole municipality, ignoring local and general communal assemblies. Such is the superposition of the state that local elections under customary uses, that are officially recognized, need to be certified by the National Electoral Institute (INE)—a state institution that is autonomous of the government.

[181] The municipal council in Yalálag and main committees are required to render public information about use and administration of public resources in the form of biannual reports during Communitarian Assemblies. However, given the daily or urgent issues that local committees and the municipal council attend to, they can (and are expected to) use loudspeakers owned by the municipal council to inform the population of main issues. This rendering of public information is common practice at all levels. *Barrio* oganizations use *barrio* loudspeakers to dispense information concerning the resources they collect, use, and keep for *barrio* festivities.

manage resources and projects that the state could not undertake alone. Such is the case for the local committees that take up specific public issues. Communal water management is a key example of how state negligence of resource management has strengthened the role of Communitarian Assembly. We can understand the prominent place of the Communitarian Assembly as the local authority in Yalálag by analysing the historical context of building, extending, and managing the water system. As Yalaltecans undertook management of the expansion of their water system, an infrastructure project of vital relevance that the state was unable to build or maintain, customary institutions were strengthened.

5.2.1 Regaining communal grounds: A historical overview of water management in Yalálag in the 20th century

When, Yalaltecans decided to extend their water system in 1994, they came to Communitarian Assembly. This was the outcome of a political movement which gained momentum in the 1970s and led to the strengthening of customary institutions. According to interviewees and scholars, for most of the 20th century and until the 1980s, the Communitarian Assembly had been neglected, and local authority was in the hands of two main political factions which fought over local power and enforced their authority by means of armed violence[182] and patron-client relations[183] (Jopling 1973;

[182] Examining the archaeology of power and violence in Yalálag is beyond the scope of this work. However, we can broadly trace the origins of the exercise of violence as a means of instituting local power in the 20th century back to the arrival of the revolution in the Sierra Norte in 1912. Yalaltecans joined the war, divided into two fierce and opposing armed groups: the *Soberanos* and the *Carrancistas*. Each group had ties to broad, opposing revolutionary factions that continued battling for local power, using armed violence in the post-revolutionary period. As result of systematic armed violence and deep factionalism, assassinations became common, affecting not only group leaders (e.g., Enrique Valle in 1935, and Alberto Sánchez and Zacarías Ruiz in 1946), and their fellow supporters, but also the whole population, which was pushed to take sides in the dispute. That schism contributed to ongoing political factionalism in Yalálag. For a case study on the relationship between armed violence, political factionalism, and family history, see: Ramos Gil (2012, 2013).

[183] Patron-client relations also included also economic (see Chapter 3), social, and emotional ties. This is best exemplified by the fact that impoverished Yalaltecans most commonly chose their bosses as godparents (mostly at baptism) of their children (De la Fuente 1949: 168–169; Jopling 1973: 36–37; Aguilar and Alatorre 2011: 151). This type of ritual kinship aimed to secure ritual and practical protection for the child, as well as reciprocal compromises of loyalty and support between parents and godparents (see De la Fuente 1949: 168). This type of reciprocal relationship was asymmetrical. Not only were godparents commonly chosen because of their better economic situation and status,

Aguilar y Alatorre 2011). These political factions were shaped during the Mexican Revolution. One built strong patronage ties with what became the ruling National Revolutionary Party (PNR), subsequently renamed the Institutional Revolution Party (PRI).[184] As the Mexican State consolidated itself early in the 20th century, the local faction in power and its allies at the national level helped each other maintain power under a façade of democracy [185] (Aquino Moreschi 2002, 2010; see also Recondo 2007). Local factional leaders, for example, registered their own appointees as PRI candidates to the local municipal council, as if actual elections happened. As Don Cándido synthetized: "Yes, that is how it used to be. When I was a boy, I saw that there were no assemblies as they are now. They were but only a small group that decided who was going to be (municipal) president" (Extract from interview, Yalálag, January 22, 2012).

For as long as the predominant political faction maintained authority in Yalálag under the PRI's patronage, the purposes and quantities of communal work were secretly decided, separate from the Communitarian Assembly.[186] Residents—including Mixe—were subject to obligatory communal work.[187] However, communal work was vertically organized: Its input depended on the vision, will, and level of responsibility of the faction in power. That vision, according to interviewees, differed

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but also because in becoming godparents, they were also considered actual and potential donors of services. Consequently, they were entitled to gratitude from the parents (De la Fuente 1949: 169).

[184] Founded in the aftermath of the Mexican Revolution in 1929 as the National Revolutionary Party (NPR), and later in 1936 renamed as the Party of the Mexican Revolution (PRM), the PRI became the predominant party in Mexico until the end of the 20th century (see Córdova 1998; Medina Peña 2014).

[185] The local council as it operated until the 1980s was at the same time the municipal committee of the PRI. Municipal inventories from 1947 until the 1960s, for example, held a seal of that committee as part of municipal stock. Meanwhile, the PRI was the only and thus the *de facto* party. Although the PRI did not directly appoint candidates—nor did locals. The group in power chose those who registered as PRI candidates as mere formality before they were appointed.

[186] Such a complex situation is best synthetized in the work of Julio De la Fuente (1949: 215):
In relation to public affairs, the outsider is troubled by situations the native does not see or does not question. When it is heard that 'the pueblo decided something' or 'agreed about something,' it is precise to differentiate if those who decided where main elders (who sometimes are requested and whose status is respected at times), traders and crafters and maybe a few farmers considered 'sharp,' or only traders and leaders in meeting with the authorities. What is clear is that, except for meetings of farmers on issues considered of small relevance, it is expected that in meetings of 'the pueblo' related to main issues, only a few people, considered capable leaders of the pueblo, assist and share input. [Original in Spanish]

[187] Everyone was compelled to comply with communal work under penalty of expulsion.

greatly. Whereas one political side was regarded as more progressive and concerned with the collective good, the other with stronger ties with the PRI is still remembered as antagonistic:

> *They truly antagonized. One side they had money, and with money, they did everything; they bought votes, and bought lawyers. . . . There was one* cacique *here whose name was Eucario Vargas, and he did not like [it] that people improved, he did not allow that. Rather, he was against the growth of local institutions; why? Because then someone would grow and surpass him. Hence, he was against schools here. But the people of that other side always supported the school. And they contributed with money, with work. I saw that when I attended secondary school. I felt it because when we had to request any sort of support at the municipal council for the school: "No, there is no money. We do not have money," they bluntly used to respond. That was the main difference, the education; one side supported it, and the other did not.* (Don Enrique, Yalálag, February 4, 2012)

Despite conflicting priorities between disputing political factions in Yalálag, the faction in power at any given time depended on communal work to keep up the festivities and public infrastructure. Management and maintenance of the Yalálag water supply system constitutes a paradigmatic example of heavy reliance on communal work. Although the Mexican state aimed to control water use throughout the country, Yalálag remained marginal to state infrastructural and institutional developments. In 1910, the state legislated the first specific law related to water management in which water was designated as belonging to the *national* domain. Then, water was declared national property in the Mexican constitution in 1917. In the state's perspective, water was conceived as a source for development. Then, in 1946, the Mexican state created the Secreataría de Recursos Hidráulicos (SRH) as the federal body with the responsibility for administrating the country's water supply.[188] However, because all those legal and institutional arrangements prioritized urban, industrial, and agro-industrial supplies, they had no immediate effect in Yalálag. For most of the 20th

[188] See cooperation agreement No. 34/71 between the *Ayuntamiento* of Villa Hidalto and the Secretaría de Recursos Hidráulicos (SRH), the Papaloapan Commission. (Folder entitled "Year 1971"; also Municipal Inventory of 1961, Municipal historical archive, Yalálag).

century, its water was marginal to the federal government's construction and extension of urban water networks, irrigation systems, and hydroelectric dams.

Yalálag's water has remained mostly local, since its management and maintenance have primarily relied on local organisation and resources, including labour (Aboites et al. 2010). For most of the 20th century, the water supply in Yalálag consisted of public water wells and wooden aqueducts that transported the vital liquid to public fountains in the main town.[189] The system was locally managed and maintained, which required work that was undertaken as *servicio* under the posts of *celador de agua* (water guard). In 1961, Yalaltecans built the first water connection to springs on the southwest side of the town; in 1971, they extended another water connection, a gravity-fed system of asbestos pipes, to carry water from springs on the northeast side to the site of *Piedra Venado*.[190] The extension of the water system was economically and technically supported by the Papaloapan Commission (1946–1984), which was one of the most ambitious, state-sponsored hydrological developmental institutions; it covered the whole Papaloapan Basin.[191] However, Yalalag's water needs were marginal to the goals of that commission, which mostly focused on expanding extensive agriculture in the lowlands and building hydrological dams to supply industry and growing urban areas with electricity (Fox 1972; Bartolomé and Barabas 1990; de Teresa Ochoa 1999; Tortajada

[189] Water wells were irregularly distributed in town with differentiated access dependent on economic differences. The Barrio of Santiago, which was the wealthiest barrio in town, had more wells than any other barrios; San Juan, the poorest barrio, had the fewest number of wells.

[190] The first pipe water system extended from springs on the site Hiego Xohiaxecgue—on the southwest side of the town—to the main town (Municipal Archive of Yalálag). The second water connection was built to the springs located on the *Piedra Venado* site.

[191] The Papaloapan Commission drew inspiration from the Tennessee Valley Authority in the U.S. (Fox 1972: 149). It was envisioned as "a technical and administrative body, with the objectives of constructing all works for flood control, irrigation, power generation, communication (water transport, ports, roads, railways, telegraphs, and telephones) and urbanization in the area, as well as to decide industrial, agricultural and settlement-related issues as part of the integrated development of the region." (Official document, cit. by Tortajada and Contreras Moreno 2005: 103). The Papaloapan Commission worked as decentralized institution with enough authority and resources to decide, build, and manage development projects, ranging from health campaigns and the construction of road networks to the construction of a hydroelectric dam (de Teresa Ochoa 1999). The scope of the Papaloapan Commission covered the whole Papaloapan Basin region, to which Yalálag belongs. The project proved to be rather controversial because it included, among other problems, violent displacement of indigenous people from their territories (see Bartolomé and Barabás 1990; Totajada and Contreras Moreno 2005).

and Contreras 2005). Thus, most of the work regarding water in Yalálag was conducted and organized locally.[192]

After the construction of the water supply system in 1961, its management became the responsibility of the federal government for a period of about fifteen years. In 1961, a mandatory Water Committee was established, in which the local council was represented but had no direct authority. The post of *celador de agua* stopped being part of local communal organisation and became a bureaucratic paid occupation (Jopling 1973: 41).

Soon after, however, in the mid-1970s, the federal government started delegating the costs and responsibilities of managing and maintaining local water systems. First, in 1975, the economic costs of maintaining water systems were passed to states and municipalities (Aboites 2009). Then in 1980, the federal government started to return water network facilities to local governments (Aboites et al. 2010).[193] The government's change in approach to water management took place within a national context of eminent economic recession and the beginning of a series of structural political adjustments that continued in the 1980s and 1990s.[194] Meanwhile, issues of water scarcity and pollution were becoming palpable and part of international discussions.[195] While discussions in international contexts regarding natural resource management underscored the potential of local

[192] As quoted in historical papers from that construction period, local residents organized and were key workforce. "*La introducción del agua potable que se llevó a cabo durante el presente año en el manantial 'Hiego Xohiaxecgue' situado hacia al Sur Oeste de esta Villa que fue construida e instalada con la ayuda de la Comisión del Alto Papaloapanresidente en la Ciudad de Oaxaca, Autoridades y vecinos de la población, teniendo instaladas, desde la toma un Estanque des-acevador, dos Estanques Amortiguadores un Estanque de Filtracion y un Estanque de almacenamiento con tuberías galvanizadas*"(Book of Municipal Inventory, Year 1961; Municipal Historical Archive).

[193] That reduction of public spending and structural shift regarding water management were responses not only to the economic crisis that the country was about to enter, but also to a new developmental role the state was adopting of decentralizing water management again.

[194] Continuing the movement towards management decentralization, in 1983, the federal government reformed Article 115 of the constitution, delegating even more responsibilities to state and municipal governments. Then, in 1989, the state instituted the Comisión Nacional del Agua (CONAGUA) (National Water Commission), a decentralized state organization responsible for designing the national policy on the management of urban water (see Perló and González 2005; Aboites et al. 2010).

[195] These topics became global issues, as expressed in the international meeting on water held in Río de la Plata, Argentina, in 1977, and the prior meeting in Stockholm in 1972, that focused on environmental issues as part of socioeconomic development (Torregosa et al. 2010).

organisations for sustainable water management, the political shift of the Mexican state of returning water responsibilities to local authorities sought mainly to reduce public spending on the construction and maintenance of water services. The state overlooked the limited capacities that municipalities had to develop and maintain local water services (Kloster Favini 2008).

Back in Yalálag, the shift in the political paradigm around water—and more specifically, the process of "reacquiring" water system responsibilities—engendered new challenges. For one, the water system had grown old and become inefficient. According to interviewees and archival records, the pipes did not reach several houses and required constant repairs and maintenance. The water system was described in 1982 as "now insufficient while it has never been able to supply potable water" [Extract of a letter signed by the municipal authority addressed to Alvaro Echeverría Zuno, April 12, 1982].

More importantly, in the early 1980s, Yalaltecans were reassessing local communal institutions. A group of Yalaltecans understood the vital role of communal institutions for attaining collective goals and sustaining public infrastructure, but also recognized and talked about the systematic disdain that their institutions encountered from government officials and state institutions. These Yalaltecans who shared common concerns and aspirations for Yalálag became a political movement, born out of the progressive political faction that had won the municipal authority over the faction associated with the PRI[196] (Aquino Moreschi 2002; Gutiérrez Nájera 2007; Juan Martínez 2007).

[196] A watershed moment and the main precedent for the political transition took place on October 5, 1971, when a first official plebiscite formally organized by the PRI to elect local authorities with two slates of candidates: one from the Municipal Committee of the PRI (the group in power) and another from the Comité Campesino gave the Grupo Comunitario a majority of votes (see Meeting Minutes dated October 5, 1971, signed by Dip. Profr. Evaristo Cruz Mendoza, special delegate; Juan Aquino Primo, Local authority representative; Aurelio Retiles Sánchez, Rep. *Comité Campesino*; Policarpo Santiago V., President of the Municipal Committee of the P.R.I.; Alberto Montellano Mazas, Municipal Secretary of the PRI). Even though that election was later disregarded, and the Municipal Committee of the PRI was able to maintain local authority, its results showed the Comité Campesino local social strength and its formal distancing from the PRI. Yet, as Alejandra Aquino Moreschi (2002) notes in her excellent study about this movement, the political success of the GC in 1980 was possible only after its formal insertion into the political state party structure as members of the PRI. It formally linked to the Confederación Nacional Campesina (CNC) (National Peasant Confederation) as the Comité Campesino Yalaltecan (see also Juan Martínez 2007: 205). The CNC was the largest

Known as *Grupo Comunitario* (GC),[197] the political movement had formed in the late 1950s and gained strength in the 1970s amidst significant socioeconomic changes in Yalálag (see Chapters 2 and 3) that contributed to destabilizing the old political elites. The GC included young former migrants who had taken part in labour and student movements in Oaxaca and Mexico City but formed their own political paradigms to tackle local problems. They reassessed their cultural heritage, language, memory, and customary institutions[198] (Aquino Moreschi 2002, 2010; Rendón 2003; Gutiérrez-Nájera 2007). Before becoming the municipal authority, the GC had started reclaiming the Communitarian Assembly as means for collective maintenance of public spaces peripheral to the local government (e.g., public schools).[199]

Having water management once more within the communal system of social organisation, and with the GC as municipal authority, the Water Committee of Yalálag sought to refurbish and extend the water system in 1982. These efforts were strongly based on communal work, albeit with two significant differences from previously. First, the local authority received remittances that were specifically meant to support refurbishing the water system. It is worth noting that participation from both Yalaltecan migrants and Mixe newcomers were part of the support base helped create that political shift. Yalaltecas in Los Angeles and in destinations in other parts of Mexico who sympathized with the GC's actions, organized and contributed to its work before and after it occupied the municipal offices. There also was direct participation among GC members, including prominent

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farmer's political wing of the PRI. This farmer's organization was instituted by the Mexican state under Lázaro Cárdenas regime in 1939, and its organization was carried on by the leader of the PNR, subsequently renamed PRI. Thus, this major political farmer's force emerged from within the party-state structure of the PRI. Still, its insertion was a strategic one that did not serve merely to achieve local power, but also served to sustain their political project that challenged former local-party structures.

[197] This political faction was interchangeably as Grupo Comunitario or Campesinos (peasants). In this thesis, I will refer to it only as Grupo Comunitario as this is the name that I found was most used in Yalálag to refer to them.

[198] It is important to underscore that this reassessment of cultural heritage and customary institutions re-contextualized in practice and analysed collective spaces in their present state. That actualization differs substantially from an idyllic nostalgic yearning of an imaginary past or ideal traditions.

[199] The arrival of the GC to power in1980s and its later rupture have been subjects of close analysis in other studies. See Aquino Moreschi (2002, 2010); Juan Martínez (2007); Gutiérrez Nájera (2007); see also Aguilar and Alatorre (2011).

ones, who were returned migrants (Aquino Moreschi 2002; also 2010: 40–62). Until the period when travel across the border with the U.S. became too risky and costly, some Yalaltecan migrants complied with tequio and services during their periods of return.

Secondly, the GC established a Communitarian Assembly to organize water management:

> *Today, November 2nd, in this municipality an unprecedented assembly took place with the purpose of approaching the problem of improving the potable water. This Communitarian Assembly was set up by the committee of the potable water service and the municipal presidency, both organisations invited all neighbours through existing sound systems [loudspeakers] in town."* [*Extract from letter dated November 2, 1981, addressed to the state governor written by the municipal president, the Committee of the Potable Water Service, the Committee of the Conasupo Store, the Committee of the School, the Yalaltecan Women's Union, the Trust Pre-construction of the technical secondary school no. 95, the Board of the Municipal Band of Music, and the Health Committee*]

As expressed in this letter, organizing the Communitarian Assembly as a means of discussing water management was regarded as an extraordinary situation. Given the relevance of water to the whole town, establishing a Communitarian Assembly on the issue was a way to bring the institution back to the center of collective decision-making. All residents were invited to the Water Assembly, and although not everyone responded positively at first, building this space became pivotal:

> *The first water assembly took place in 1982, with difficulties. Yes, there was resistance until finally we could overcome resistance and be able to advance normally. But first we had to fix the water catchment, and once that was solved, people understood. They understood that it was for the collective good. From then on, the water assemblies were peaceful.* [Don Tadeo, Yalálag, February 5, 2012]

As Don Tadeo—a prominent GC member—noted, the first water assembly had several difficulties and faced resistance from many Yalaltecans. It is important to remember that tensions among political factions persisted after the change in municipal authority. An initial priority for the

GC was to refurbish and to extend the water system,[200] which required labor and financial resources that Yalaltecans did not have locally. However, Yalaltecan migrants organized themselves to provide financial support for infrastructure projects back in their hometown:

> Don Samuel: *Yes, yes, we participated. It is because there, in the U.S., there was also a committee. They used to appoint a committee per* barrio*: San Juan, Santiago, Santa Rosa and Santa Catarina.*
> Ivet: Were you on the board of any of those committees?
> D.S.: *No, those committees used to collect the money for the works in the town. In that time, they built the municipal palace—that big one. That was because the* campesinos [the GC] *were in the [municipal] presidency at that time. And so when people from here in Oaxaca, in Mexico, and in the U.S. got to see that they were improving all that, they got very happy because it was making things better. So they used to cooperate and sent money here.*
> *And when I got [to the U.S.], they told me: "Contribute with something that we are going to send to Yalálag."*
> *"OK," I said.*
> *And there I also used to give my opinion: "We should also improve the water and the sewage."*
> *"When are you going to go?" they asked me.*
> *"Well, if I go, I will ask how to do that [improve the water supply]."*
> *And when I returned here, I talked to the [municipal] president about the water, and I explained what we had discussed amongst the community members [in the USA]. He said "Yes, we already applied for it [the refurbishment of the water system], but we need someone who can follow up with the government about our application, so that we get it." And so I said, "Well, maybe I can do it. I will do it myself." And so I went [to Oaxaca City].* [Don Samuel, Yalálag, October 6, 2011]

Although once again, and as Don Samuel states, Yalaltecans requested support from the state government in Oaxaca to obtain water ducts, the project relied most heavily on the organisation and participation of Yalaltecans in Yalálag and abroad. Migrants created the local organisation (e.g.,

[200] The transition of responsibilities from the federal to local governments should be seen as a process and not as a specific formal handover though formal agreements were signed to formally establish this "delivery." See, for example, the agreement dated August 23, 1984, between the government of the state of Oaxaca represented by the *Secretaría de Programas Paraestatales y la Comisión Coordinadora de los Sistemas de Obras y Servicios de Agua Potable y Alcantarillado del Estado* and the *Ayuntamiento* of Villa Hidalgo Yalálag about the "provisional delivery of the system of potable water of the community of Villa Hidalgo Yalálag for its administration, operation and maintenance" [Folder entitled "1984," Municipal Historical Archive, Yalálag].

committees, boards, and *servicios*) anchored in their *barrio* of origin in Yalálag, which thus replicated Yalalag's local organisation in the migrant destinations (see also Cruz-Manjarrez 2013). This is very similar to community migrant committees formed in municipalities throughout Oaxaca (see VanWey et al. 2005). Once again, communal and traditional ways of organizing allowed Yalaltecan migrants to approach collective concerns regarding Yalálag[201] and to channel their help to the community as a whole and to their *barrio* specifically. Organized migrants in various destinations gathered and sent economic support to their hometown, and their help was of great importance for improving local infrastructure.[202] Their bond to Yalálag and to local customary organizing grew still more when border conditions allowed for crossing under less-dangerous and less-expensive conditions (see Chapter 2). Thus, it was possible for some migrants, like Don Samuel who had migrated in the 1977, to temporarily return to comply with community service and complete a goal that many of them shared of helping to improve their hometown—a place to where many planned to keep returning. A local workforce and organisation were vital:

> *At the end of 1984, the trucks arrived with the pipes. They sent a lot of pipes! And when they arrived, I told my comrades, "Let's go now to talk to the people, let's hold a meeting and ask them to carry the pipes, and let's ask the plumbers to connect them."*
> *"OK!," they said. And we had an assembly and the people said, "Very well! Let's take them! Let's bring them up!" And yes, they carried them until up there! It was about two-and-a-half-hour distance. And they were carrying them; each side [of the pipe] was carried by two people. They*

[201] These meetings dealt with issues related to their specific problems in migrant destinations.
[202] Migrant economic contributions played a fundamental role in the accomplishments of infrastructure projects, such as the extension of the water system. Although I did not find a document specifying the distribution of economic contributions between locals and migrants in the specific case of the water extension in 1984, the following extract from letter addressed to the governor of the state of Oaxaca by local authorities, dated September 27, 1984, informing of the reconstruction of the municipal palace serves as a good reference regarding the sources of funding for improving Yalálag:
"The investment was $3,246,850 (three million, two hundred, forty-six thousand fifty pesos)
These contributions are as follows:
Tequio of the community: $510,000.
Tequio of the *braceros* (migrants in the U.S.): $500,000.
Tequio of Yalaltecans in Oaxaca: $200,000.
Federal government contributions: $1,709,595."

took the pipes up. It was a lot of work. And once we got there, we started connecting the pipes. [Don Samuel, Yalálag, October 6, 2011]

As Don Samuel noted, the infrastructure required a lot of work. Given the significant outmigration that had been occurring, Mixe households that settled permanently in areas that Yalaltecans had left fallow became an important workforce (see Chapters 2 and 4). Mixe households settled in Yalálag had to contribute to communal work because it was obligatory to all residents.

The success of extending the water system via communal work and organized in the Communitarian Assembly contributed to a reassessment and strengthening communal organizing. Although Don Samuel (quoted earlier) was ill and near the end of his life when I interviewed him, his voice became enthusiastic and joyful when remembering his participation in the endeavor of connecting the water pipes. Not only had the improvement of the water system allowed Yalaltecans to provide more water to the main town, but it became a pivotal moment for the reconfiguration of communal social organisation. The sense of pride over the extension of the water system was shared even among those who did not directly participate in the project. They saw the potential of collective decision-making, which they applied to other community projects in the early 1980s (e.g., restoration of the municipal palace, refurbishing and construction of public schools). That potential was underscored by the fact that such communality had been achieved, despite continuous tensions between antagonistic political factions.

In addition to reviving the Communitarian Assembly and communal work, the GC collaborated with academics at different institutions to support the development of a variety of cultural activities connected to reappraising farming, the Zapotec language, and local identity (Rendón 2003; Aguilar and Alatorre 2011). Furthermore, the GC joined other authorities of the Sierra Norte in regional organisations that together defended their rights, customary institutions, and territories (Aquino

Moreschi 2002; Merino 2004).[203] Those alliances and collaborations broadened Yalaltecans' perspectives about the value of local institutions in the management of communal projects and natural resources[204] and mobilized regional demands for state recognition of customary institutions,[205] which would end former patron-client relations that the previous authorities had established with political parties and state officials.

The successful extension of the water system within this local and regional political context became a fundamental precedent for the reconfiguration of local authority in Yalálag. It served to demonstrate the efficiency of the Communitarian Assembly in developing local water management using communal work and later informed the organisation of forest preservation in 1994. Since the expansion of the water system, the Water Committee has continued managing the water network, including maintaining the infrastructure via communal work and collecting and administering water fees. The assembly specifically focused on water issues continued to exist, consolidating its permanence in communal life and collective decision-making in the coming years.

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[203] Among these organizations were the *Asamblea de Autoridades Zapotecas* (AAZ), later the *Asamblea de Autoridades Zapotecas y Chinantecas* (AAZACHI); the *Comité* Coordinador *para la Defendsa de los Recursos Naturales, Humanos y Culturales de la Región Mixe* (CODREMI), later the *Asamblea de Autoridades Mixes* (ASAM); and the *Organización de Defensa de los recursos Naturales y Desarrollo Social de la Sierra Juárez* (ODRENASIJ). This landscape of mobilization in the Sierra Norte of Oaxaca shows the broader context of indigenous mobilization taking place during the political transition in Yalálag. Among the main indigenous activists in the Sierra Norte who converged in these associations were Floriberto Díaz Gómez (1951–1995) from Tlahuitoltepec in the Mixe District, Juan Martínez Luna from Guelatao, Joel Aquino, Juanita Vásquez, and Plutarco Aquino from Yalálag (ver Vásquez 2011). That movement gained momentum in the 1990s when the state of Oaxaca and then the federal government officially recognized traditional customary systems of authority in all its municipalities in 1995 and 1999, respectively.

[204] An example of this is the *ODRENASIJ* that formed in 1971. It was an effort to coordinate the work of all the authorities in the Sierra Juárez that opposed to the renewal of the forest concessions to the company *Fábricas de papel de Tuxtepec* (FAPATUX), reclaiming their right to community use and management of their forest (see Merino 2004).

[205] On a broad level, these alliances illustrated a move away from patron-client relations that the previous authorities had established in response to demands for self-determination. The following extract, from a letter addressed to the president of Mexico on the occasion of his visit to the Sierra Norte, signed by the municipal authorities dated May 27, 1984, synthetizes these demands: "We demand absolute respect for our right to community self-determination. That the Communitarian Assembly is the highest instance for the election of Municipal, Agrarian, and Educative Authorities" (Folder entitled "Year 1984," Municipal Historical Archive, Yalálag).

5.2.2. Rugged grounds: Expansion of communal institutions and conflict

At the end of the 20th century, the Mexican state continued retracting public spending related to water services, and at the same time, started recognizing the necessity of preserving water sources based on then-novel notions of sustainability. However, legal frameworks and public policies subjected water and environmental problems to the logic of the market, instead of envisioning water as a common good and increasing the input of civic society and local authorities in water management (Aboites 2009; Aboites et al. 2010; Torregrosa et al. 2010).[206] For example, the 1992 constitutional reforms of Article 27 set up a legal framework for the private sector to take over from the state in managing water responsibilities, including constructing infrastructure, administrating water services, distributing water, and preserving water sources (Castro et al. 2004; Kloster Favini 2008; Torregrosa et al. 2010).

However, these national political reforms collided with the rise of indigenous movements in the Sierra Norte of Oaxaca and throughout Oaxacan state and the entire country, which demanded territorial autonomy[207] (Peña de la Paz et al. 2010; Aquino Moreschi 2010). In Yalalag, the GC re-established the Communitarian Assembly. However, the socioeconomic landscape was becoming rather adverse to collective action; unprecedented outmigration and market reconfigurations in the 1980s and beginning of the 1990s caused an increasing dependency on external sources of money

[206] The Mexican approach was not an exception, but part of an international tendency to subject environmental problems to the logic of the market called "market-based green governance" (Robbins 2011: 7).

[207] In 1995, the state of Oaxaca officially recognized traditional customary systems of authority in all its municipalities; and in 1999, the federal government did so as well. In both cases, that legal acknowledgement was a result of a convergence of several political indigenous movements in different geographical locations, as well as strategic decisions by broad based political organizations, including the state. In the 1990s, long-standing indigenous movements in different regions of the country, including the Sierra Norte, gained visibility when the Ejército Zapatista de Liberación Nacional (EZLN) declared war on the Mexican government in 1994. The indigenous mobilizations had important links to each other. For example, a group of Yalaltecans maintained direct dialogue with the main regional and international indigenous organizations, including the EZLN. Yalaltecans' local political reassessment of customary institutions and their implications in the indigenous movement in the country are approached in analyses by Aquino Moreschi 2002 and 2010 (see Hernández-Díaz 2007). Also, Recondo (2007) argues that the reasoning of political actors enacting indigenous rights reforms in Oaxaca (e.g., state governors, official and opposition parties, the Catholic Church) was strategic, and his work underscores these diverse actors' interests at play in discussions of reforms.

and foods to cover local subsistence in Yalálag (see Chapters 2 and 3), which ignited feelings of burden regarding *servicio* and *tequio*, inflaming old and new political divisions. For instance, in 1986, members of the municipal brass band that had been close to the GC[208] started a new brass band, and with it, a new political faction that opposed how the GC aimed to re-establish communal institutions under communal service, free of monetary compensation.[209] Above all, the obligatory, free character of the communal social system of organisation was a subject of contention for this new political faction, especially after the federal government decided to grant economic compensation to those serving on the municipal council (see Table 1 above). While some Yalaltecans observed compensation as a "progressive" monetary shift, the GC opposed the move, arguing that it minimized the importance of the rest of the social organisation (see Table 1) and that it would corrupt the logic of *communal work* by turning it into a source of internal divisions and of external

[208] According to interviews and written sources, the setting for that rupture comprised disputing views and intransigent confrontational actions between leaders of the band and of the GC regarding musicians' duties and prerogatives. The musicians thought they did not receive sufficient economic support, and leaders of the GC considered that the musicians' work was a community service with sufficient support and privileges (see Aguilar and Alatorre 2011: 157). As the musicians walked out of the municipal band, they formed a new one: *la Banda Autóctona* (also known as *Ratones* [mice]). In response, the GC started a new band named Uken Ke Uken. Meanwhile, the old political faction also had a music band that was known as *San Juan* (most recently known as *Nueva Imagen*). That rupture seems consistent with De la Fuente's assertion (1949: 236) that, in Yalálag, disputing political parties translate into rival music bands. Those three bands still exist in Yalálag. In 2011, when I was doing fieldwork in Yalálag, a new band was formed within the Pentecostal church under the patronage of a wealthy Yalaltecan who was related to the owner of most land plots in *Tierra Caliente* (see Chapter 3) and who was also minister of that church. It is significant that since the rupture between the municipal brass band and the GC as municipal authorities, Yalálag has not had a municipal band. Instead, municipal authorities and committees are responsible for hiring bands under established rules of equal shares. The Pentecostal church band is an exception to this rule because they do not perform dance music or Catholic religious music for ceremonies (see also note 56).

[209] It is worth noting that music bands have for long been associated in Yalálag with two realms that are contradictory only to foreign eyes: festivities and politics (De la Fuente 1949). Not only do bands constitute organized groups of men, but their performance is vital for the development of individual and collective festivities. The band is a privileged space of social organization, conviviality, and in the case of religious festivities, also of petitions/offerings to the sacred. This all nourishes a sense of bonding and belonging to a group and a place. Furthermore, the association between political factions and brass bands is not exclusive to Yalálag, but rather intrinsic to the origins of brass bands in Mexico. Rival bands were encouraged by main disputing political forces in the country in the 19th century: the *Conservadores* (Conservatives) and later the *Liberales* (Liberals). They included music groups that not only were part of civic rituals that celebrated the forming nation, but also the more organic ritual and collective sense at the local level. As Münch Galindo (1996: 259) asserts: "[I]ndependently of whether villagers were inflated with some romantic and abstract notion of nationalism, with mere small-town patriotism, or with neither of the two, the fact was that the bands were deeply embedded in the local organization of politics and ceremony. Incorporating traditional and Liberal traits, they were a successful expression of a hybrid form of citizenship, which served both indigenous village interests and the nationalist aspirations of the political elite."

dependency (Aquino Moreschi 2002; Gutiérrez Nájera 2007; Hernández-Díaz 2007). Even earlier supporters of the GC joined dissident voices to favor economic compensation (Gutiérrez Nájera 2007), to which the GC responded with sanctions that ranged from denying access to public services to legal prosecution. Paradoxically, the GC was starting what became a repeating pattern of top-down control as means of accomplishing its vision of community self-determination (Juan Martínez 2007; Aguilar and Alatorre 2011), which further increased political ruptures.[210] Still, amidst a resurgence of local political conflict, Yalaltecans continued carrying on water management under communal organisation; when the Communitarian Assembly was called to address water management issues, it worked efficiently.

The Communitarian Assembly gained participation and legitimacy amidst political conflict such that in 1994, the Water Committee was able to refurbish the potable water system that tapped into springs at *Piedra Venado*. Local organisation and resources for this project were supported by contributions from the state. The GC as the local authority accessed social welfare resources from *Programa Nacional de Solidaridad* (*Pronasol*), which the Secretary of Social Development (SEDESOL) had proposed be directly managed by municipal governments of identified impoverished areas for the refurbishment of water systems (CEPAL 2003). Established in 1992, the program was emblematic of the federal government's developmental and resource management approach that began in the mid-1980s, whereby small-scale farming areas were conceived as impoverished and in need of aid (see also Chapter 3). Federal resources directly channeled to municipalities were meant to legitimize the state amidst increasing political discontent, to transfer responsibility of public infrastructure from federal institutions to local governments, and to maintain

[210] Finally, in 1999, Yalaltecans decided to accept such compensation, but it was later established that the economic compensation was not to be given to people serving in the municipal government but to be put toward public works. This decision endured, and was carried out in 2011 when I conducted fieldwork for this thesis.

a vertical political structure. Although the new social welfare approach required local organisation and participation, it maintained a top-down structure between the federal social welfare institution and municipal councils, which often perpetuated political patron-client relationships and local struggles over control of local councils.

Local political conflict in Yalálag continued to increase. However, the successful refurbishment of the water system in 1994 strengthened the authority of the Communitarian Assembly:

> *Water assembly was the biggest. Back then, despite the conflict, people had to go to the assembly. And when they saw the amount of water that was obtained, people behaved calmly in the Assembly despite differences. Because the water has the advantage that it bonds.* [Don Tadeo, Yalálag, February 5, 2012]

On the last Sunday of January 1994, a majority of Yalaltecans gathered for a meeting regarding the water system.[211] During that Communitarian Assembly, as Yalaltecans reviewed the success of their recent refurbished water system, they decided to undertake an extension of it to the springs farthest from the *pueblo* at *Piedra Blanca*.

> *So then was when this shocked the whole community, because of the amount of water we were able to obtain! There were no leaks! So then, when they were working, and saw that* Piedra Blanca *was then so close, about two-and-a-half kilometers, "Let's take the next step," they said. "We take the next step because we are already so close". Because then the community already needed more water.* [Don Tadeo, Yalálag, February 5, 2012]

The new extension of the water system was ambitious not only because of its length (*Piedra Blanca* is located two and a half kilometers from *Piedra Venado*) but because the Water Committee also proposed preserving and recovering forest around both springs. The assembly approved the

[211] The assembly counted 453 citizens in attendance and only 95 absentees, as registered in minutes of the meeting dated on January 30, 1994 (Folder entitled "Year 1994," Municipal Historical Archive, Yalálag).

project [Folder entitled "Year 1994," Municipal Historical Archive, Yalálag],[212] and it became the bedrock for establishing a communal area of forest preserve:

> *When we obtained water catchment from* Piedra Blanca*, well, the community went up there! They went up, and when they saw how the installations were, and they noticed the excessive clearcutting, and the water available. Then it was when they understood that there was no other way but to protect and to preserve. . . . [That area of town] it was already left fallow! They did not farm anymore. The families that went up, the youth, they did not know* Piedra Blanca *anymore. . . . So as they understood that it was necessary to protect it, they decided to buy it. It was bought one single plot in 1994 and then slowly. It took a lot of work that they understood why it was necessary to return to the communal property!* [Don Tadeo, Yalálag, February 5, 2012]

As Don Tadeo noted, the water extension project had brought Yalaltecans back physically to areas they had not seen for some time. Many Yalaltecans had stopped farming in those areas and therefore had also stopped journeying to those fields. As Yalaltecans returned to *Piedra Blanca* to observe the new water system, they were seeing the area through different eyes. After the water connection was extended to Piedra Blanca, the Yalaltecan authority proposed the project of creating a forest preserve area on communal land and extending communal property by collectively acquiring private plots that were left fallow. The proposal was novel in that it extended communal land as a means to preserve forest and water; it gained broad support.

A remarkable characteristic of *Piedra Blanca* is that it is located within a large area Yalaltecans have historically preserved as communal land [Municipal Archive; Historical Relation of Municipal Assets]. Even though land in Yalálag has been predominantly held as private property at least since the 19th century (see Chapter 4), strategic plots of land were preserved as communal property, including mountaintop forests, as in a letter dated July 22, 1971, wherein Yalaltecan authorities

[212] Additionally, local authority also banned the use of dynamite to fish in the Caxonos River, as had been practiced until then (Minutes of the meeting dated January 30, 1994; Folder entitled "Year 1994," Municipal Historical Archive, Yalálag).

explain this situation to the *Departamento de Asuntos Agrarios y Colonización*, the main agrarian institution at that time:

> *All the land plots we have are distributed among approximately 700 owners who have legal property titles. Likewise, we need to mention that the appointed people wanted to file the numbers in the public property registry for each small property, which range between a quarter and five hectares. Yet, this was impossible. We here testify that all of the 700 farmers we have mentioned above are currently paying taxes, leaving only a small part of the land as communal, which is mostly forested.*

The communal land where *Piedra Blanca* is located was among the most forested areas of Yalálag. Beyond this, *Piedra Blanca* is a mountain close to the border with two other towns, Betaza and Chichicaxtepec,[213] which means it is of political importance for maintaining territorial control. However, *Piedra Blanca* is also of sacred importance: for Yalaltecans, there are specific sites, such as hilltops (*cerros*) and springs that are considered very sacred (De la Fuente 1949: 265–267, 307; Alcina Franch 1993: 112; Lache Bolaños 2000: 187–188; Alonso Ortiz 2014: 51–53). The *cerro* and spring at Piedra Blanca are, even in the present day, considered sacred.[214]

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[213] There are a few communal possessions in the *pueblo*, including three small plots; two were destined as cemeteries, and only one was a farming plot, sometimes rented out, of only two *almud* (one-half hectare)

[214] *Cerros*—hilltops—are considered either inhabited by divinities or as divinities themselves, rather indistinguishably. As an example of this, on one of my field journeys, I lied down on the ground to rest for a bit, but my friends warned me not to fall asleep. They explained that the *cerros* have owners, and they could *steal* one's heart if one falls asleep. *Cerros* are sites of collective and individual petition rituals and practices, such as the one known as *Darle de comer a la Tierra* [feeding the earth]. This celebration takes an important moment on dates that coincide with Catholic events; however, Yalaltecans explicitly acknowledge that they venerate *la Tierra* and not Jesus Christ. Conversely, however, Catholic entities are treated in reciprocal and convivial manner and receive food offerings but in different spaces (i.e., church, chapel, domestic altar, communal house altar), and even different foods. Meanwhile, there are main hilltops that are named after main saints, like San Antonio. Another example of the sacred relevance of specific sites are four rocks located at different cardinal points around the town, considered the town's guardians. According to an old account, if those rocks were to fall, it would mean the end of the world. I noted that some of my collaborators showed respect to the rocks and some even poured mezcal next to them, acknowledging their sacred character. Likewise, caves, wells, and certain trees have sacred associations (De la Fuente 1949:265; see also Alcina Franch 1993: 112; Alonso Ortiz 2014: 51–53). This view of sites as sacred is deeply rooted in an ancient Zapotec worldview. Anthropologists refer to a Mesoamerican religious tradition (López Austin 1997, 1999; see also Medina 2015) such that towns located in the southern half of Mexico and most of Central America have shared a common core of religious beliefs and practices that can be traced back to 2,500 BC. Such religious traditions, different from Catholicism, remain unique and share core elements. On that note, Edith Ortiz Díaz (2002: 45) demonstrates that Zapotec towns in the Caxonos River basin maintained intense trading relationships with towns in distant parts of Mesoamerica, noting that not only subsistence, but also sumptuary goods associated with religious practices and class

Meanwhile, as farming declined, Mixe households formed dispersed small settlements in areas of Yalálag that were mostly former farming fields far from the main town. The new water connections to *Piedra Blanca* had to traverse a site named *Pozo Conejo*,[215] around which approximately 42 Mixe households[216] had settled and been carrying out agricultural activities, including farming, wood-chopping, and raising cattle. The settlement was regarded with increasing unease[217] because it was located close to the new water system. Yalaltecans worried about potential territorial conflicts with Mixe settlers. The location added tension to the already-conflictual history Yalaltecans had with their Mixe neighbours (see Chapters 2 and 3). Although the resident Mixe complied with communal work and participated in the Communitarian Assembly, their participation in collective decision-making was restricted due to language and ethnic differences. Anticipating conflict regarding access and use of local resources, or even potential territorial subdivisions, the local authority had proposed to Mixe residents of Pozo Conejo and the surrounding areas to relocate to the main town, and sought support among Yalaltecans to allocate land for this purpose. However, the proposal of assigning land for the relocation of Mixe households came to nothing (Gutiérrez Nájera 2007; Juan Martínez 2007). This decision and the failure to relocate the settlements cost the GC the support of Mixe residents.

Up to this point, I have shown how local processes of socioeconomic and demographic changes motivated forest protection as communal property. However, there were also broad shifts in public

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hierarchies, were exchanged before and after the colonial invasion. It is also worth mentioning that Zapotec settlements of the Sierra Norte were located on hilltops until the Spaniard war of colonization forced their relocation to lower sites (Ortiz Díaz 2002: 44). Ana Alonso Ortiz (2014: 53, 95, 101), who identifies the names of fourteen cerros, also notices remains of earlier settlements at many of those sites.

[215] The extension reached this point in 1995 as indicated in the following extract: "The extension of the potable water system, specifically the line of two and a half kilometers from the site 'Piedra Blanca' to 'Pozo Conejo' has been finished. It has been checked and registered in minutes." (Official letter addressed to the General Director of the National Institute of Water, dated October 4, 1995 and signed by the Municipal President of Yalálag).

[216] Data taken from record of the General Housing and Population Census, dated February 1996, in the Municipal Historical Archive, Yalálag.

[217] Mixe households settled in those areas partly because land was becoming more affordable, and they required land to continue farming, as the arriving households continued subsistence farming. Also, the site is close to the border with neighbouring Mixe towns.

policies regarding the management and commodification of natural resources that played an important role in how Yalaltecans protected the forest as communal property. The reform of Article 27 of the Mexican constitution in 1992 put an end to the post-revolutionary agrarian pact of land distribution and created conditions for the privatization and commercialization of land without relinquishing national property of water and lands. Similarly, the General Water Law of 1994 allowed private investment in the commercialization and management of this natural resource (Guerrero García Rojas et al. 2008; Aboites 2009; Altamirano-Jiménez 2013). Yalaltecans anticipated that these political and economic shifts could jeopardize their access to natural resources and territorial rights:

> *Back then, it was already suspected that the next danger was the arrival of the mining companies. So then they [Yalaltecans] were confronted with this: "Look, the great risk for the community is that the situation will worsen. There is going to come someone with a lot of money and will buy all that area. It all will be bought, and once he buys it, he will fence it and won't let you even to pass through. So you choose. "No!" They said, "We will recover [communal ownership]."* [Don Tadeo, Yalálag, February 5, 2012]

As Don Tadeo mentioned, Yalaltecans were concerned about losing their land to large private corporations. They feared mining companies, specifically, because of the mining that had occurred in Yalálag during the colonial years, and knowledge of mining companies that had operated in neighbouring towns of Natividad,[218] Calpulalpan de Méndez, and Santiago Xiadcuí in the District of Ixtlán, in the Sierra Norte. Mining in those municipalities dated back to the beginning of the 20th century and continued until the early 1990s, first operated privately until the 1930s when the industry was nationalized. However, at the end of the 1980s the state sold its mining companies to private investors following very obscure processes (Weaver et al. 2012). These investors were a select group

[218] It is worth noting that, although mining was not a dominant activity in Oaxaca, the municipality of Natividad ranked tenth among all municipalities in the country according to the number of economically active people occupied in that industry (see Sánchez Crispín 1993: 73).

of figures with close ties to the Mexican government[219] and foreign countries (Tetreault 2013; Pastrana 2015). In reaction, Yalaltecans decided it was necessary to protect communal property as a means of protecting their territory.

In the following years, after the extension of the water system was finished, Yalaltecans expanded forest protection and communal land by collectively acquiring former private plots. The idea of protecting forest as communal land was an effort to secure land tenure, but it was also a way to properly extend communitarian stewardship over water sources. The forest reserve was grounded in communal land tenure, on the one hand, and the customary system of communitarian organisation, on the other.

5.2.3. Disputing grounds: Political conflict, land disputes, and forest protection at the turn of the 21st century

After the extension of the water system to *Piedra Blanca* was completed in 1995, two new topics dominated discussion in the water assembly. The first had to do with relocating Mixe households settled in areas in and around the forest-protected area. The second topic related to disputes over the control of the municipal council and local communal organisation. The interest in relocating the Mixe settlers dated back to 1997, when local municipal authorities—still led by the GC—decided that Mixe settlers living outside the main town needed to move into it—specifically, those settled close to the main springs.[220] Local authorities thought that removing the settlers was necessary to secure water

[219] These three main private national investors who "bought" the former state-owned mining companies in the early 1990s are currently the three richest men in the country and among the richest men in the world: Carlos Slim (acquired Minería María in Sonora in 1986 and owns the owner of Frisco Co.), Germán Larfea (of Grupo México, formerly ASARCO, with mining activities in the Sierra Sur of Oaxaca), and Alberto Bailleres (owner of *Peñoles*, the company that owned the mine in Natividad in the municipality of Ixtlán). Further, most public companies were sold without transparency to "a select group of presidential friends, some of whom had connections to drug cartels" (Weaver et al. 2012: 7). This all was far from what the government had discursively promised as an open free-market dynamic that would end historical corrupt practices.

[220] In order to inform the Mixe people settled around Pozo Conejo about the decision and organize relocation, local authorities invited Mixe people in that area to several meetings. However, most of those meetings were cancelled by the Mixe in protest to the idea of relocating.

sources because their settlement was centered on the water duct that carried the vital liquid from *Piedra Blanca* (Juan Martínez 2007). The concern over the Mixe settlements was shared among opposing factions.

Although the water assemblies initially had brought political factions together to discuss protecting water sources, the fragile peace unraveled after the assemblies held in October 1997. On October 11, in a Communitarian Assembly that was initially meant to approach water issues, a group of Yalaltecans from the political faction that opposed the GC proposed holding elections during the same assembly. The group argued that the water policy required renewing local authorities, and Yalaltecans held elections then. The outcome was a council comprising members of the GC and the opposing political faction that had emerged from the brass band (Juan Martínez 2007; Gutiérrez Nájera 2007). However, leading members of the GC disputed the results because they contended that the procedure had not followed protocol. The opposing faction later adopted the name of *Coordinadora 11 de Octubre* (Coordinator October 11).

The assembly that had originally intended to focus on water issues had shifted to focus on another important collective subject: the election of authorities. The assembly had given rise to a new appointed council that was a political coalition. However, the conflict over the outcome instead nourished political factionalism that eventually permeated most aspects of life in Yalálag, dividing families and neighbours, and extending to the migrant communities abroad. Migrants from each faction viewed the same news from back home, but from different perspectives that reinforced their factionalism (see also Gutiérrez Nájera 2007). The dispute fractured migrant organisations and interrupted economic aid to the municipal authority.

Meanwhile, at the end of 1997, some residents of Pozo Conejo submitted a legal complaint to the attorney general of the state of Oaxaca regarding the local authorities' plans of relocating them. The complaint was the beginning of a long legal process that has lasted until 2012 without favorable

resolution for either of the parties. Furthermore, local authorities continued losing political support from the Mixe residents of Pozo Conejo; many of them stopped fulfilling the community obligation of working on public infrastructure projects. In the coming years, as the political conflict continued, the *Coordinadora* intermittently supported the demands of Mixe settlers depending on the interests of the *Coordinadora*.

Political factionalism in Yalálag was further nourished and used by the PRI, the recently established federal Party of the Democratic Revolution (PRD), and politicians who were shifting political parties (Juan Martínez 2007). The PRI had lost its political base in Oaxaca and the rest of the country due to recent social and economic crises and regional and national political movements, including indigenous movements protesting against the state.[221]

Violence started breaking out in Yalálag, reaching its peak in the early 2000s, when a person was killed during a confrontation between opposing factions trying to retake municipal offices. Consequently, an administrator appointed by the state governor arrived in Yalálag. However, it was clear that resolving the internal conflict was not going to come from external authorities or political parties.[222] The participation of the administrator was controversial on all sides.

Amidst the internal conflict, it did not help that the reforms of the constitution of the state of Oaxaca, as well as the Mexican constitution lacked clarity with regard to how customary systems of

[221] Political mobilization had taken place in different parts of the country and included different sectors. It was significant that, in Mexico City, urban movements had also gained momentum after the earthquake in 1985, amidst the economic crisis. Political discontent persisted, despite the temporary economic recovery in the late 1980s and the very first years of the 1990s after the arrival of the Carlos Salinas de Gortari, the PRI presidential candidate; the discontent stemmed primarily from the general perception of a fraudulent election. It was then, during his mandate, that several constitutional reforms took place, including that of Article 27 and the signing of NAFTA. Those reforms and the trade agreement were publicized as the way out of the economic crisis, while ignoring critical voices. However, three factors caused a deeper legitimacy crisis for the PRI: (1) the emergence of the Zapatista movement in January 1994; (2) the economic crisis in the country in that year; and (3) apprehension related to Carlos Salinas' brother (Raúl Salinas de Gortari), who was accused of murdering the official PRI candidate in 1995.

[222] For example, the assassination of the person during the events on March 7, 2000 was never clarified. Also, during other meetings between the opposing factions that took place in Yalálag, in the following years, local authorities presented unclear positions (see Juan Martínez 2007: 218–227).

election of indigenous authorities should take place.[223] Yalaltecans had to reach a peaceful political transition on their own, and the path was long. It was only in 2004 that peace and unity started returning to Yalalag. Yalaltecans started electing younger council members than they had previously or those who had maintained a mostly neutral position during the conflict (Juan Martínez 2007). In 2005, a Communitarian Assembly with peaceful participation by a majority of Yalaltecans—like previously, when they had initially gathered to discuss water issues—once again and finally took place, becoming the most important recent precedent for how that institution works nowadays:

> *They shouted each other, insulted each other. But there were people, too, who cooled things down, and some who aimed to dismantle the assembly . . . and it found its course, and since it took place, it [the assembly] is working. Slowly, but it is improving.* [Don Ernesto, Yalálag, January 22, 2012]

During that turbulent and divisive time, the water assembly continued working. Its function was to appoint people to serve on different committees—except the municipal council—and to organize communitarian work. Most importantly, the water assembly nourished the exercise of collective decision-making regarding main public projects and gained legitimacy. The General Communitarian Assembly would become the space to appoint the municipal council and for the municipal council to render clear reports on main public issues.[224] The Communitarian Assembly thus expanded its scope and legitimacy. Yet, it also left out the part of the Mixe population which had not complied with relocating to the main town.

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[223] It was during a political crisis of legitimacy of the PRI in 1995 that this party proposed reforming the constitution of the state of Oaxaca, which aimed to give legal recognition to the customary system of election in indigenous towns. It has been argued that the constitutional reform lacked clarity related to specific election mechanisms. Analysts and local grassroots organisers have also considered that the PRI promoted this reform to secure the perpetuation of old local mechanisms that the party had been using to co-opt local votes without truly developing open elections of authorities (see Recondo 2007).

[224] All committees, working on either religious or civic issues, have to provide records for public accountability of their work and economic funds. Most of them also provide reports through loudspeakers. Then, the school committees have specific assemblies at schools, but those meetings are attended only by pupils' parents.

Although between the end of the 1990s and in the 2000s, several Mixe households had moved to the main town (most often borrowing vacant migrant houses or building one on its outskirts), about forty-one Mixe households with a total of 179 inhabitants were reportedly settled in Pozo Conejo in 2010. At least fifty-three inhabitants of Pozo Conejo in 2010 were older than eighteen but did not attend the Communitarian Assembly; nor did they comply with other communal obligations. Meanwhile, Mixe families that had moved to the main town continued carrying on collective duties and attending the Communitarian Assembly. Notably, Mixe who did not speak Northern Sierra Zapotec—the language in which the assemblies are held—missed information.

The conflicts occurring in Yalalag during the 1990s were not limited to internal divisions. In 1999, Yalálag had border conflicts with the neighbouring town of Chichicaxtepec that belongs to the municipality of Mixistlán de la Reforma. Border demarcation is crucial to protecting the springs due to the proximity of *Piedra Blanca* to Chichicaxtepec. The precise location of the border itself has been disputed historically. Meanwhile, most people in Chichicaxtepec continued farming, and small farmers wanted to use land of Yalálag, claiming that it belonged to Chichicaxtepec, which has caused more tension regarding access to land. Hence, in 1999, Yalaltecan authorities met with authorities from Chichicaxtepec regarding the forest reserve around *Piedra Blanca* hoping to come to a mutual agreement about border delimitation. Yalaltecans proposed finding land for Chichicaxtepec farmers to use in parts of Yalálag in exchange for protecting water sources, but no formal agreement came from these conversations, and Chichicaxtepec kept disputing the limits of their land with Yalálag. In 2010, for example, people from Chichicaxtepec slashed and burned forest to farm in an area of Chichicaxtepec proximate to *Piedra Blanca*, which Yalaltecans perceived as a threat. Although authorities met with authorities of Chichicaxtepec in 2010 and 2011, they did not come to an official agreement.

5.3 Expanding communal grounds: Institutional developments

Despite internal and border conflicts, the water assembly continued working by appointing people to serve on committees and organizing community work. Moreover, it continued to extend the size of the forest reserve at *Piedra Blanca*. At the end of the 1990s, local authorities had encouraged landowners[225] located in and around the main springs to sell their plots to the Water Committee, which represented the whole town. It was determined that the money needed to buy those plots should come from the fees that the Water Committee had been collecting:

> *The assembly determined that the money to buy those plots that are added to the ecological reserve should come from the treasury of the Water Committee. And so that is where we get involved; we have to pay for the land that is bought.* [Potable Water Committee, Yalálag, September 25, 2011]

The landowners responded favorably to the request, and the Water Committee has since been able to acquire several plots. At the beginning of this process, the committee supervised the protected area on top of their responsibility of ensuring the proper functioning of the water supply. The Water Committee's expanded role was recognized by it being renamed the Water and Ecology Committee (Minutes of Community General Assembly on December 27, 2001, in Historical Municipal Archive, Yalálag).

By 2008, the Water Committee had acquired approximately 490 hectares, making for a total area of 1,100 hectares of protected land. Considering the reserve's size and the fact that it was not necessarily a continuous single plot, the work of protecting and reforesting the reserve had exceeded the capacities of the Water Committee. Hence, in 2008, the Communitarian Assembly decided that it was necessary to appoint a new board that they named the Ecology Committee (*Consejo de*

[225] This included both Yalaltecan and Mixe owners.

Vigilancia y Ecología). The Ecology Committee, which started work in 2009, is also organized under the local customary system of communitarian service.

Since the appointment of an ecology committee, the Water Committee has focused only on maintaining the water supply, although it still is responsible for purchasing plots to add to the reserve. The Water Committee does this in coordination with the municipal council and the Ecology Committee:

> *For example, right now, we are planning to buy all private plots in the area of the water catchment. Therefore, the* alcalde *and the* Comité de Vigilancia *should come. They are going to measure the plots, and we do that, too.* [Potable Water Committee, Yalálag, September 25, 2011]

Both the Water and the Ecology Committees give reports on their work in the Communitarian Assembly that meets twice a year specifically to discuss water issues, where likewise major decisions related to their work are taken, and new members are appointed to both committees. Currently, the Water Committee consists of seven members, a three-person board, and four *jueces de llave* (key judges), who describe their tasks as the following:

> *We have to take care of the water [ensuring] we have water at all times. If something happens, we have to be there. . . .*
> *Ivet: What are your main activities?*
> *From the beginning, organizing the committee to monitor and clean the water supply—catchment tanks, storage tanks, and pipes, for example; we check that they are in good condition. We check. And we go every week—a* juez *is responsible for doing that. For instance, the* juez *of San Juan goes the first week of January. At the beginning of January, we use two days to take office and related material, everything that belongs to the committee. We have to check it. And thus the first week, it is the turn of San Juan—for a whole week, each of the seven days, he has to go check the water in the morning and in the afternoon every day. And in between days, he has to wash the tanks, go to the water intake, and wash it all really well. And that is what the* juez *of San Juan does or whichever* juez *has a turn. But [he does so] together with one member of the main board. For example, amongst the three of us [president, secretary, treasurer], it can be the turn of any of us.*

The first week it is the president's turn, the second the treasurer's, or we can change, but we always take turns.
We as main board are three: president, treasurer, and secretary. And they, as vocales *[or* jueces*] are four: San Juan, Santa Catalina, Santa Rosa, and Santiago. So then we have to take turns the three of us with the four of them. We always work in twos to do this work.* [Potable Water Committee, Yalálag, September 25, 2011]

As members of the Water Committee stated, they distributed their work among all committee members, rotating and taking turns equally. In 2011, the committee instituted weekly meetings to keep members updated on main issues and needs, and to elaborate weekly and monthly plans. Also, the committee has differentiated hierarchical responsibilities associated with their board titles. The committee's main board (president, treasurer, and secretary) has most of the responsibility for the proper functioning of the water supply and must be always available. To maintain the water system, the water board collects and administers fees[226] and fines.[227] Its financial records are made public at the Communitarian Assembly. The Water Committee's board coordinates with the municipal council, which the state still considers as legally responsible for water management. Thus, the council interacts with the National Water Commission (CONAGUA) and the State of Oaxaca Water Commission. The bureaucratic work is economically burdensome (e.g., travel costs to government offices) and is slow, even in emergency cases. For example, in 2012, the Water Committee was still waiting for state funding to repair water pipes damaged during the mudslide of 2010 (see Images 31 and 32). Meanwhile, the Water Committee had provisionally mended the water system, using PVC pipes to keep it working.

[226] Except for students, all citizens are subjected to paying water fees, which includes migrant Yalaltecans who own a house in town. There are also differentiated fees related to domestic and commercial use of water (i.e., *huarache* makers, tanners, and butchers). Defaulting on payment can be sanctioned by turning off a water connection. However, according to the committee, 99% of citizens paid their water fees in 2011.
[227] Fines are mostly related to water waste. According to members of the committee, water waste (due to damaged domestic water tanks, water leaks, and negligence) is not uncommon. It is also often reported by neighbours. In 2011, fines were set up in one hundred pesos (the average daily salary in Yalálag).

Image 31. *Partial view of mudslide and damaged road in Yalálag, 2010.* (Photo, *Asociación de Yalaltecans en Oaxaca*)

Image 32. *Water committee assessing and temporarily repairing damaged water network in 2010.* (Photo, Leonardo Ávalos Bis)

In contrast, the Ecology Committee is responsible of managing the ecological reserve. Their work requires constant journeys to the protected area to check for illegal activity (e.g., wood-cutting or hunting), monitoring the replanted forest and secondary vegetation, and reforesting areas that were recently cleared for agriculture (see Images 33-35). The Ecology Committee also makes sure to check that woodcutting occurs outside the protected area and with a valid permit, which is issued by local authorities.

Image 33*. The Ecology Committee transporting trees to plant in communal ecological reserve. Yalalag, September 2011.*

Given the size of the reserve and its distance from the *pueblo*, the Ecology Committee's ability to render services was challenging for those who were not used to hiking:

> *Yes, there are some who are not used to walking. The* huaracheros*, for example, there are those who work at home and are not used to going to the countryside or so. But in this matter, we have to do it. It is obligatory, so to speak.* [Ecology Committee, Yalálag, September 26, 2011]

Likewise, the committee's duty to visit the reserve brought members of the Ecology Committee back

to the countryside. The service became, for some, an opportunity to learn or revisit those distant places (see Images 34 and 35).

Image 34. *This partial view from one of the reforesting areas toward* Piedra Blanca *shows contrasting forest cover across different plots. Many of them are now protected areas of communal land. September 2011.*

Image 35. *This partial view from one of the reforesting areas toward other protected areas of communal land shows contrasting forest dynamic across different plots. September 2011.*

To accomplish their supervising and reforesting tasks, the Ecology Committee often required technical advice from public institutions: for example, regarding the best way to reproduce large amounts of seedlings of local vegetation and trees for reforestation. The committee has to coordinate with the municipal authority to submit applications to the appropriate government institutions to request their resources and services. Accessing appropriate support has required perseverance and learning about institutional procedures. However, given bureaucratic obstacles, it was often simpler to undertake new projects locally and without support. For example, the Ecology Committee constructed its own plant nursery to grow seedlings from local trees (see Chapter 4). Occasionally, when the committee has found appropriate advice and support, it has been valuable. For example, in 2011, an enthusiastic engineer at the National Forest Commission (CONAFOR) helped the town apply for the funds necessary to build the nursery.[228] He also facilitated regional meetings of agrarian

[228] "We went to submit applications to several agencies. The only one to respond was CONAFOR. They said they would give us 10,000 small trees" (Ecology Committee, September 26, 2011, Yalálag).

authorities, during which multiple towns shared and analysed common environmental issues and exchanged strategies for best preserving natural resources in their towns. The meetings led to a formal union—the *Unión de Comunidades Indígenas Zapotecas Bene Chhap Shi Ya'Yeo* (see Image 36)—of nine *comisariados de bienes comunales* (official agrarian authorities from each town, as representatives of land held communally) from the sector of Caxonos and the Yalálag Ecology Committee. During the meeting in which the new regional union was formed, regional agrarian representatives had proposed that the Yalálag Ecology Committee become its head . They had come to such a decision because of Yalálag's good reputation in the region for being well-organized and having hard-working people. Yet, they noted that the state does not consider local committees, such as the Yalaltecan Ecology Committee, as legal entities, and that would create potential bureaucratic problems. Hence, they appointed an officially recognized authority, the *Comisariado de Bienes Comunales* (agrarian authority), from another town head of the board and gave the Yalaltecan committee a secondary position in the union's board instead.

Image 36. *Group picture after meeting of the* Unión de Comunidades Indígenas Zapotecas Bene Chhap Shi Ya'Yeo*.* October 2011.

One of the lessons that the Ecology Committee learned from the meetings was the need to create a *Comisariado de Bienes Comunales* for Yalálag. Even though Yalálag had recovered and expanded its communal land to create the ecological reserve, it had not created that legal entity. There were several reasons for this, including the fact that Yalaltecans are still learning about the implications of formally instituting communal property and a communal agrarian authority. However, by 2011, Yalaltecans discussed the need to strengthen their work in forest and water preservation. They were concerned about land conflicts with Mixe settlers and border contentions with the neighbouring town of Chichicaxtepec. Such was the context that, in 2011, Yalaltecans discussed in the Communitarian Assembly the possibility of formally instituting a *Comisariado de bienes comunales*. However, the social and legal process of creating such agrarian authority were still ongoing as of 2021.

5.3.1 Emerging institutions of nature preservation: Old disputes, present work, and new challenges

The Ecology Committee's work is costly. Attending regional meetings and submitting applications requires money for traveling. The economic cost is most often absorbed by the community. An obligatory fee for reforestation was set up in the Communitarian Assembly. The Ecology Committee collects and administers fees and informs the population as to the status of the forest reserve and their funds during the Communitarian Assembly.

One of the challenges the Ecology Committee faces is persuading local households to pay their fees.[229] With the expansion of reforested areas, the work of this committee has increased, and with it, its economic needs. Paradoxically, though, the assembly has recently cut the fees assigned to support the committee's work:

> *There is a fee that is set in assembly, and everyone cooperates. And there is a census of the community. For many years, they have to contribute the amount of one hundred pesos. But now*

[229] By September 2011, only about eighty percent of the population had paid their fees.

they reduced the amount to fifty. And we are realizing now that that money is not going to be enough to clear out [weeds] in the area we reforested. We are clearing out [weeds] now, and what we are observing is that the money we have is not going to be enough.
Ivet: And do people living elsewhere contribute, too?
No.
Some people are very conscientious, and they want to cooperate, and they contribute.

For the festivities, they all contribute, and fast. [Ecology Committee, Yalálag, September 26, 2011]

As members of the Ecology Committee noted, the reduction of economic funds has been challenging. They also note that this fee is not obligatory for Yalaltecan migrants, not even those who own property in Yalálag, as is the case for water fees. Further, economic support from migrants seemed almost nonexistent compared with the amount of money migrants put toward the celebration of festivities.

In 2010 and 2011, historical disputes on the territorial limits between Yalálag and the neighbouring town of Chichicaxtepec re-emerged when farmers from the latter cleared some of their forest close to the springs of Yalálag to farm. This conflict was of direct concern to both the Ecology and Water Committees because of the potential threat to the forest reserve and its water sources. However, because the state does not recognize local committees as legal authorities, the municipal council—specifically, the municipal president—was the only person with the legal capacity to follow up on disputes on behalf of state institutions.

In September 2011, at a Communitarian Assembly to discuss the water system, the municipal president proposed transforming the Ecology Committee into the *Comisariado* as a way to make official in the state's eyes its job of managing the forest reserve. The president argued that the state would recognize the *Comisariado* as an authority. In fact, the *Comisariados* are considered to be a representative entity with administrative management authority under

Article 99 of the *Ley Agraria*. Thus, as a *Comisariado*, the Ecology Committee could follow up on legal procedures related to land conflicts as occurs in other towns:

> *The problem that we have now is that the* Comisariado *has more legal weight. And this* [the Ecology Committee] *is not recognized. That is why in all the [regional] meetings we attended, there were only* Comisariados*. We were the only exception. . . . And that is why we have found support with them, because they have more [legal] weight.* [Ecology Committee, Yalálag, September 26, 2011]

The idea of transforming into a C*omisariado* had already been considered by the Ecology Committee. They were aware of their limited capacities related to the administrative management of communal land. They came to that realization during regional meetings with neighbouring towns. However, the proposal to institute a *Comisarido de Bienes Comunales* caused disagreement among some Yalaltecans. Some agreed on that instituting a *Comisariado* would effectively aid in regulating and protecting their forest preserve, but others questioned the legal viability of such a transition, given that most land in Yalálag was still private property. Despite disagreements and doubts, the process of collectively analysing the communal agrarian authority had started. Yalaltecans were envisioning new institutional arrangements that could legally strengthen their communal land tenure and their work related to forest preservation.

Another way Yalaltecans started to change how they support the work of their local authorities and committees, including the Ecology and Water Committees, has been to invite organized groups of migrants to collaborate with them on priority issues. This invitation was formally extended by the municipal presidency in 2011. The precedent for the invitation was the self-organized help that Yalaltecan migrants provided to their community members after the landslides of 2010. Yalaltecan migrants had for once ignored their political divisions and collectively organized to send financial and physical help to those who had been most affected. Yalaltecan migrants who had provided support in 2010 responded enthusiastically to the invitation from the municipal presidency in 2011.

They created a special commission made up of prominent Yalaltecan migrants. The commission attended the Communitarian Assembly held in October 2011. The commission was updated on the work happening in town and asked to collaborate with local authorities on administering the rehabilitation of the damaged water system and following up on the formalization of land tenure procedures.

Meanwhile, negotiations with Chichicaxtepec continued into 2013. After years of on-and-off conversations, Yalaltecans finally signed a formal agreement with Chichicaxtepec allowing their farmers to exchange their land near *Piedra Blanca* with farming plots inside Yalálag so that the forest reserve could be expanded. Implementation of this agreement was still in progress at the time of writing. In recent years, previous political local conflicts have lost their intensity, even though different political factions and old desires for retaliation against rivals persist. Nevertheless, most Yalaltecans share a common opinion of the need to work together and get over old grudges:

> *It is quieter now. There are people, of course, who still have long-standing resentment and hatred. But that is not going to lead us to any good because we already had the experience and know this does not bring anything good. It is not convenient.* [Don Ernesto, Yalállag, January 22, 2012]

Most Yalaltecans now seek to resolve their disagreements in peaceful ways. It is one of the reasons why the Communitarian Assembly prevailed and has gained such strong legitimacy: It has demonstrated itself as a place to share opinions and to discuss differences. In short, the customary system of organisation has thrived amidst local conflict, socioeconomic adjustments, and shifting state developmental programs.

5.4 Conclusions

This chapter discusses the process of instituting an area of protected land in Yalálag. The analysis describes how the process was grounded in local social organisation: specifically, communal

management of the water system. In Yalálag, the Communitarian Assembly was reinstituted as the main town authority beginning in the 1980s. This reshaped local water management. The re-emergence of the authority of the Communitarian Assembly coincided with socioeconomic changes related to migration, economics, and state policies that transferred water management to municipal governments and the private sector. Instituting a protected area was a response to these structural and institutional changes and an effort to ensure long-term access to land and water sources.

In the 1990s, when Yalaltecans decided to establish a protected area, the decline of farming that had begun in the late 1970s had allowed plots on the outskirts of town go fallow, which opened them up for new potential uses. The settlement of some Mixe households was one such new use. At the same time, migration and economic change led to houses being refurbished and the expansion of manufacturing, which caused water demand to increase.

The conflict with Mixe farmers also extended to the neighbouring town of Chichicaxtepec, which further motivated Yalaltecans' desire to effectively manage the forest reserve. As a result, local communal institutions, based on collective work, became essential for managing, accessing, and preserving natural resources. These institutions are rooted in a worldview that conceives of the earth as alive and sacred, recognises a local structure anchored in the town's *barrios*, and stipulates that collective work is the means for Yalaltecans to learn and recognize the town, their problems, and their resources. Furthermore, the structure and process of collective work sustain and nurture local conviviality.

However, the fact that Communitarian Assembly in Yalálag is the main authority and basis for communal social organisation is not to be taken for granted. Communal work and assembly had previously been used to sustain partisan factional interests and favored a patron-client vertical political structure, with the needs of state authorities and political parties privileged over those of the

collective. However, in the last decades of the 20th century, the Communitarian Group revitalized and strengthened the Communitarian Assembly, making it as the main authority.

The work of the GC opened spaces for collective decision-making and reassessing collective work, which expanded communal land and the Communitarian Assembly. The close support of Yalaltecan migrants, especially in the 1980s and 1990s, in undertaking collective projects also contributed to strengthening the authority and legitimacy of Communitarian Assembly. The fact that migrants could physically return, but also be part of communal institutions in their migrant destinations, was also fundamental to sustaining communal social organisations in Yalalag and to nourishing collective decision-making in the Communitarian Assembly.

However, maintaining communal social organisation continues to face significant challenges, including increasing economic burdens, border enforcement policies that prevent circular movement of Yalaltecan migrants, and current legal frameworks that deny the authority of communal institutions, which often leads to local political antagonisms. Although the state continues to rely on the municipal government to manage its water, current political policies have not nourished the agency of local authorities. Rather, public policies of resource management have set up a series of bureaucratic hurdles for local authorities and enhanced the power of the private sector by favoring the privatization and commodification of water, among other trends. Similarly, it remains to be seen whether the communal organisation of Yalalag can become the main locus for analysing and solving local conflicts. Yalaltecans have to figure out effective ways to include the voices and participation of Mixe settlers in the Communitarian Assembly and to negotiate land tenure with their Mixe neighbours. Partly in response to these challenges, Yalaltecans have envisioned instituting a *Comisariado de Bienes Comunales* as the official authority responsible for managing communal land. Another important initiative has been to invite Yalaltecan migrants to collaborate with local authorities, assessing and advising the authorities with regard to community needs. Such ideas, and

the broader question of creating formal arrangements to include migrant participation in community issues, make clear that Yalaltecans are well aware of the capacities of their migrant community members and of how people in Yalálag have been able to make decisions grounded in historically effective, local communal institutions.

APPENDIX. Historical Overview of Land and Water Management in Yalálag

Year	State Land and Water Management Approaches	Political Situation	Local Land and Water Management
1709		Colonial period	Land entitlement under communal regime
1856		Independent period. Enactment of Laws of Desamortization (*Ley Lerdo*)	Addition to Laws of Reform; shift to predominantly private property regime. Yalálag, however, preserves a few sites of communal property. Most and the best parcels are in hands of affluent Yalaltecans.
1900–1920s	Water as of national domain. Enactment of the *Ley de aprovechamiento de aguas de jurisdicción federal* 1917: Water management as national domain in Article 27, Mexican Constitution	War of Revolution Yalaltecans join opposing factions during war of revolution; onset of local political factionalism	Rustic water infrastructure. Water access is unequally distributed among *barrios*. Water management: locally organized under customary organisation; posts of *celadores de agua* (water guards) carried out as community service.
1930s–1980	Water management centralized; state continues several infrastructural projects. The Ministry of Hydrological Resources (SHR) centralizes water management. 1975: Decentralization of water management begins.	Post-revolutionary period Institutionalization of the PNR, later the PRI. as state party Local authority disputed by political factions, which maintain close ties with the state party and control decision-making.	1961: Construction of first water network in Yalálag for domestic use. Maintenance of water service temporary changes from community responsibility to a bureaucratic paid job.

		Institution of *Asamblea Comunitaria* persists but is used rather as secondary space for collective decision-making.	
		1982: Economic crisis; end of the Mexican Miracle	1984: Yalálag resumes management responsibility over its water network.
		Political transition; the GC becomes local authority.	Refurbishing and extension of water system to springs in *Piedra Venado*.
Early 1980s	Continued decentralization of water management responsibilities	Reassessment of customary institutions Reinstatement of *Asamblea Comunitaria*	Water management and works become largely based on customary organisation; the *Asamblea Comunitaria* becomes main space for collective decision-making for this project.
		Networking of local authorities with broader indigenous organisations in the region and the country working on the defense of their natural resources and the reassessment of their identities and customary resources	Close (economic and logistic) participation of Yalaltecan migrants in Mexico and the U.S. in the development of this project.
Late 1980s	1989: Instituting the *Comisión Nacional del Agua* (National Water Commission)	Neoliberal swing in state policies	Water Committee and Water Assembly continue functioning.

		Ruptures within the GC; emergence of new political factions	
		International emigration increases; loss of workforce needed for customary traditional organisation	
		Crisis of legitimacy of the PRI	1993: Agreement of relocation of Mixe settlers is enacted but not implemented.
		1994: Emergence of the Zapatista Movement	1994: New extension and refurbishing of the water network to *Piedra Blanca*
Early 1990s	Federal state continues reducing public funding for the maintenance of water infrastructure while increasing water fees	1994: NAFTA is enacted; political conflicts among disputing political factions increases.	Institution of Forest Protected Area in *Piedra Blanca* to protect both main springs. Forest protection starts in the area of communal land. Further decision of expanding the area of forest protection acquisition and conversion of former private plots into communal land.
	Constitutional Reform of Article 27	Organized migrant participation fractured and diminished	
	Enactment of the *Ley de Aguas Nacionales* (Law of National Water)		
Late 1990s		Fracture of the GC with some Mixe settlers	Open conflict with Mixe dwellers settled in and around Pozo Conejo

	State privatizes former state-owned companies, including mining companies, some of which are located in the *Sierra Norte*	Intensification of political conflict, reaching its highest point in 2000 with the death of a person	Beginning of legal process brought by Mixe settlers against Yalaltecan authorities
		Social division encouraged and used by political parties and local factions	Water assemblies continue.
			Topic of relay of authorities (election of new authorities) becomes an issue in the Water Assembly.
			1999: Conflict with Chichicaxtepec regarding protected land in the area of springs that neighbouring Mixe farmers use. Negotiations start but are discontinued.
2000–2009	Legal frameworks encourage and facilitate incursion of private sector in water management and of water commodification.	External administrator appointed in Yalálag; conflict resolution not reached	2001: Water Committee renamed Water and Ecology Committee
		2004: Appointment of authorities from a younger generation	Conflicts with neighbours from Chichicaxtepec re-emerge regarding land use in protected areas.
		2005: First working *Asamblea Comunitaria*	Water Committee continues acquiring land.

		2008: Total acquisition of 1,100 hectares
		2009: Separate Ecology Committee starts working also under customary communitarian service.
		Water Committee continues acquiring plots.
2010–2013	2010: Migrant Yalaltecans organize to help their community members after damages caused by heavy rains.	2010: Heavy rains cause mudslides in Yalálag; as a consequence, water network is damaged. Also, roads are closed and several houses are damaged.
	Local authority invites organized migrants to collaborate in establishment of a *Mesa Coordinadora* (Coordinate Board)	2010: National Water Commission assigns Yalálag specific funds to repair their water network; 2012: funds had not arrived.
	2011: The idea of establishing the institution of *Comisariado de Bienes Comunales* is addressed in *Asamblea Comunitaria*. Yalaltecans start debating this idea.	Yalaltecans continue relying heavily on communitarian work and service to maintain their water system.
		2011: Conflicts with Chichicaxtepec re-emerge. The *Mesa Coordinadora* collaborates with local authorities to follow up on this issue. 2013: Formal agreement is reached.

2011: Ecology Committee networks with other regional authorities (*Comisariados de Bienes Comunales*) to form a regional organisation to focus on natural resources protection.

2011: Ecology Committee builds a nursery to grow local seeds.

2013: Official agreement is reached to end conflict with neighbours and communal farmers from Chihicaxtepec.

Conflict with Mixe settlers in Pozo Conejo continues. Legal disputes have not been solved in favor of either party.

6

Conclusions

In this thesis, I address the socioenvironmental transformation of the Zapotec town of Yalálag, in the Sierra Norte of Oaxaca, Mexico. Specifically, I ask how the accelerating decline of farming and emigration at the turn of the 21st century converged to reshape the town. In Yalálag, small-scale farming was the basis for local subsistence and the economy early in the 20th century. In the late 20th century, Yalálag became dependent on external sources of foods and income. During this period, Yalaltecans faced increasingly unequal conditions. Not only did Yalaltecan small-scale farmers encounter unfair competition in the form of domestic and international large agricultural producers, but Yalaltecan migrants also encountered a precarious job market in other parts of Mexico. Meanwhile, border enforcement policies and shifts in production in the U.S. exposed them to increasing risks.

I argue that this rapid socioeconomic transformation was the result of a long process of uneven integration of Yalálag into global markets that can be traced back to the colonial period (Chance 1989). My focus, however, in this research project is on the process of industrialization and market expansion that started in the late 20th century. Following a diachronic approach, my analysis encompasses the period starting in the late 1950s and ending in 2011, the year I conducted the fieldwork that is central to this thesis.

As in many other studies of rural areas in Mexico, I found that the expansion of neoliberalism in the 1980s has had a profound influence on Yalalag. I underscore that state-led industrialization set the stage for the sorts of changes that neoliberalism catalyzed. My analysis reveals two models of economic development at play in Yalalag that, although different in their extent of state regulation, have contributed to expanding the market economy.

Under the first economic model of industrialization--roughly inspired by the import substitution industrialization (ISI)--, the incorporation of workforce from rural to growing urban and industrial areas, is an important example of the uneven expansion of the market economy. The influence of infrastructural projects and developmental policies, such as the National Company of Popular Subsistence (CONASUPO), that took place under that same economic model, helps illustrate my argument. I explain how CONASUPO, a state-owned government enterprise that provided primary inputs into the government's food supply system, arrived in Yalálag as a state-owned store in the 1970s, as well as how it contributed to integrating local and regional farming into the national market of maize and food staples. The arrival of CONASUPO flooded the local market with nonlocal maize varieties and led to the pollution of local maize with nonlocal pests that impeded crop storage. On top of this contamination, which damaged local farming, the glut of inexpensive, nonlocal maize made small-scale farming unprofitable, a problem that has only grown worse since the late 1980s, as CONASUPO became the main supplier of imported maize.

The second influence comprised the structural reforms the Mexican government underwent beginning in 1982 after the economic crisis, which occurred simultaneously with changing border enforcement policies in the U.S. and accelerated outmigration of workers from Mexican small towns to the U.S. The expansion of global markets required and relied on having a vulnerable, flexible, growing—and, thus, inexpensive—workforce.

Recognizing the importance of neoliberalism as a force makes Yalalag a case that fits into a global pattern that some scholars call "new rurality" (see Delgado Campos 1999; De Grammont 2004; Ávila Sánchez 2005; Arias 2005; Pérez et al. 2008; Rosas-Baños 2013; see also Hecht 2010). However, I argue that the term "new" obscures the deep history that precedes neoliberalism and includes socioeconomic processes that started under a protectionist regime that nonetheless have shaped current rural societies. New rurality emphasizes how structural economic and political

reforms have generated to economic activities that yield cash, along with remittances from migration replacing small-scale farming. However, in my analysis, I found that the integration of Yalálag into global markets pre-dates neoliberalism. The long history of Yalaltecans diversifying their economy shows that local, rural, indigenous populations have been engaging in processes of market expansion before and even outside of neoliberalism. For example, Yalalag was pivotal in the coffee trade early in the 20th century, when the town served as a transit point between coffee-growing regions in Oaxaca and the capital city. However, my thesis highlights that, despite being able to profit from the commodification of regional goods such as coffee, Yalaltecans were merely intermediaries within a larger market chain, which they did not have capacity to shape over, and which they had no control when it changed. Likewise, Yalaltecans consistently demanded state support for infrastructural and institutional improvements that would meet their needs and desires, but these did not receive adequate responses from the state. Specifically, I revealed two processes that disrupted Yalaltecan-directed development. The first was the reshaping of trading routes that occurred when roads were constructed in the Sierra Norte as part of state developmental projects, which diminished the need for intermediary towns like Yalalag. The second process was the shift in agricultural and food policy that included the arrival of the CONASUPO store in town.

Socioenvironmental changes in towns like Yalálag can be described as a production of nature (Smith 2008). I use Smith's notion to acknowledge the shifting relationship between nature and society in the context of the expansion of the global market economy, in which the production of surplus value prevails. Because the market economy inevitably relies on the extraction of natural resources, including its workforce as a natural resource, to produce surplus value, it generates unbalanced socioeconomic outcomes. As rural localities, such as Yalálag, become integrated into global markets, the relationship between nature and society inevitably reshapes itself. Not only is food production inserted into global markets, but the very logic of farming, production strategies,

and using and conceiving natural resources change. These socioenvironmental adjustments are ones we still need to understand.

To further shed light on how the expansion of the market economy connects to socioenvironmental change at the local scale, I use the methods outline in Forest Transition Theory (FTT) (Mather et al. 1999; Klooster 2003; Rudel et al. 2005). Specifically, studies emerging from FTT demonstrate that forest dynamics reflect how local demography, economy, and institutions adjust to developments in the market. Following studies of forest transition in the Global South, (Bray and Klepeis 2005; Lambin et al. 2001; Schmook and Radel 2008; Lambin and Meyfroidt 2010), my thesis questions FTT's main hypothesis, which is that forest recovery is directly linked to the expansion of industrialization and the market economy. Instead, I argue that FTT needs to account for the inequalities which the market economy produces. Considering the social and economic inequalities that the market economy produces revealed that forest changes do not necessarily translate into forest recovery. Rather, forest and land use changes vary depending on how local demographic, production, and institutional adjustments affect uses and management of forest and other natural resources.

Among the main demographic adjustments in Yalálag, I found a slow increase in international migration in the 1960s after roads were constructed in the Sierra Norte. The rate of migration accelerated in the 1980s, reached its peak in the 1990s, and then slowed in the first decade of the 21st century. Amidst the outflow of Yalaltecans, Yalaltecans also farmed less than they had previously due to increasing production costs and unequal market conditions vis-à-vis industrial producers. As migration increased and farming fields were left fallow, Yalálag experienced an inflow of Mixe households from neighbouring towns. Despite pervasive emigration, Yalálag did not experienced a drastic population decline, and its population remained steady at approximately 2,000 inhabitants. The stability has been due to the substantial internal demographic adjustments that

occurred starting in the late 20th century. Not only did some settlers arrived from neighbouring Mixe towns, but other settlers also moved to Yalálag from Zapotec towns. Yet, Mixe settlers stood out due to their noticeable cultural differences and economic disparities. At the peak of outmigration in the 1990s, Yalálag's population included at least 300 Mixe residents from neighbouring towns. Although many arrived as temporary day labourers to replace the workforce that had outmigrated, some stayed permanently, settling in areas that the Zapotec left fallow.

Until the late 1970s, migration from Yalálag to different destinations had helped maintained farming because Yalaltecan migrants sent money—remittances—that local households used to purchase fertilizers and hire labour. Similarly important was the fact that agricultural resources such as fertilizer were state-subsidized, and the prices of staples such as maize were state regulated. At that time, Yalaltecan farmers were living the last moments of an economic model in Mexico that used state intervention and a closed market to increase development and improve food security in rural regions.

The economic crisis in Mexico in 1982 caused a fall in salaries and job opportunities within the country at a time when demand for a flexible and cheap workforce in the U.S. increased. However, the U.S. also implemented new border enforcement strategies that made migration more deadly and costly than before. Consequently, migrants chose to stay in the U.S. permanently, as opposed to making repeated border crossings as it was common before U.S. border enforcement began to endanger their lives. Although the risks related to border crossing continued increasing, especially after September 11, 2001, the population outflow from Yalálag lagged only after the economic crisis of 2008. During 2011–2012, when I conducted fieldwork in Yalálag, I found that fewer Yalaltecans were migrating to the U.S. than before. Also, I noticed that the local population of Yalálag included returning migrants from different generations of migration. Yalaltecan migrant returnees had varied reasons for returning, though only a few returned to stay permanently. Most

returning international and domestic migrants preferred living in Oaxaca City. Even though international migration had slowed in 2011, I met young adult Yalaltecans who were planning to leave. However, this time, they were not going to Los Angeles, which had historically been the destination of nearly all migrants, but instead to new locations, such as Houston, Columbus (Ohio), and North Carolina. Meanwhile, domestic migration, principally to urban centers like Oaxaca and Mexico City, continued at the same rate as in the previous decade.

Although the Mixe households farmed small parcels of land and also worked as paid workers in Yalaltecan's farming fields, outmigration increased production costs. Costs increments, together with the arrival of inexpensive imported maize, incentivized a broad production shift from small-scale farming to secondary and tertiary activities. In short, there was a net loss of farming in Yalálag with a subsequent increasing dependence on external labour and food supplies. The decline of farming and emigration both accelerated and converged in the 1980s. Yet, unlike previously, migrant remittances were no longer channeled to support farming. Because Yalaltecan small-scale farmers had lost their regional market and economic capacity, farming was no longer sustainable, and it lost its high social status.

During the increase in migration, with the arrival of migrant remittances, construction boomed in Yalálag for a period of time. Many Yalaltecan migrant households built or refurbished their houses, mostly in urban styles (e.g., two-story cement rather than single-story adobe houses). Construction and refurbishment of private infrastructure, including private homes, became another source of employment, although construction diminished drastically after 2009. Similarly, several households used their remittances to open small retail stores that have multiplied in town, which mostly sell imported packaged and canned foods and household items. Likewise, migrants have contributed with remittances to the improvement of public local infrastructure.

Meanwhile, Yalaltecans also face significant challenges related to the shifts in production that have occurred over the past sixty years. The secondary and tertiary economies of Yalalag provide the principal incomes for young Yalaltecans. However, surviving on such wages has proven to be difficult. Workers and owners of local *huarache* or clothing workshops do not have full control over their income because it depends on fluctuating market demand. They are likewise increasingly dependent on imported foods, without any capacity to control their prices or quality. The implementation of public monetary aid and welfare programs (i.e., *Oportunidades*, *Adulto Mayor*) has led but to increasing dependency on external monetary resources and goods, which according to Yalaltecans, have been detrimental to local farming.

Local dependency on external food and money has also proved harmful for local health. Local health workers at the public clinic in Yalálag have reported an increase in incidences of diseases related to diet changes (i.e., diabetes and hypertension). Yalaltecans have also realized that dependency on externally produced foods makes them more vulnerable to natural disasters than they were when they used to farm. In November 2010, devastating mudslides cut off the town from receiving food from the outside world. Without a robust local food supply, the town experienced a shortage of foodstuffs. Similar disasters are expected to become more frequent in the future as consequence of climate change (Mearns and Norton 2010; Castro et al. 2012; Nawrotzki et al. 2016). Despite local awareness of increasing health, climate vulnerability, and individual efforts to return to small-scale farming to improve Yalaltecans' food security, there is not yet a clear path to collectively respond to such issues.

Vulnerability related to food dependency and to climate change are topics that deserve a more extensive treatment than I provide here. Similarly, the question of how climate change affects ongoing local farming requires further analysis. An in-depth examination based on additional

research on these issues is needed not only in Yalálag, but also in other rural areas where migration and farming decline pervade.

The drastic experience of food shortage after the mudslide and an increasing awareness of the low quality of inexpensive foods from elsewhere has moved a few young Yalaltecan adults to start or to return to farming. However, most former farm fields are still undergoing a "spontaneous" reforestation, conversion to agave plantations, or have become the sites of newly established, dispersed small settlements. Yalalag is thus a heterogenous landscape that includes diverse emerging land uses, which reflect internal demographic and social changes. In this heterogenous landscape, I found that Yalaltecans react collectively and individually to secure their natural resources and subsistence opportunities. They have continued to face great socioeconomic inequalities, despite being key actors in securing the preservation of natural resources.

Regardless of possessing only a limited political voice within the state and national governments, Yalaltecans have sought ways to define how their town's production activities are integrated into global markets. Local intellectuals formed a political movement called *Grupo Comunitario* (Communitarian Group [GC]) that gained momentum in the 1980s and helped regain some capacity for local communal decision-making by reinstating the Communitarian Assembly, the previous local governing authority, and other communal institutions, such as *tequio* (obligatory labour on community projects) and communal service to fill positions within the local social organisation. Through my study, I found that the political movement the CG led in the 1980s was also fundamental to building the infrastructure needed to manage water resources and helped with reassessing communal institutions, including maintaining and extending land under communal ownership.

Specifically, Yalaltecans expanded communal ownership to 1,100 hectares of former privately held farmland in the *Piedra Blanca*, where a small parcel had historically been preserved

as communal. Yalaltecans bought the land that had been left fallow and established a communally run forest reserve that allowed for access to a main water source. The establishment of the reserve emerged from concern regarding the number of Mixe households that had settled close to the water source, but also coincided with federal reforms of water management that delegated related responsibilities to local governments. These reforms, however, also favored the privatization of land and water management.

Studying the development of the forest reserve shows how forest recovery in Yalalag is not due to the abandonment of farming in itself, as most studies of FTT claim, but instead is a collective and political response to preserving territorial rights. Yalaltecans face potential land conflicts in a critical context of increasing commodification of land and water tenure. The fact that many Yalaltecans stopped farming in the 1980s had caused the price of land to drop in the vicinity of the town, but their concerns about potential commodification and privatization in the hands of external people (i.e., Mixes) stimulated Yalaltecans to collectively acquire land, preserve forest, and secure access to water sources.

Collective ownership is just a first step toward strengthening communal institutions and securing territorial rights. Yalaltecans have still to face the disparities between their local institutions and the legal frameworks governing current land tenure arrangements. For example, the Yalálag *Asamblea Comunitaria* has no legal authority under Mexico's national Agrarian Law. Likewise, the state has implemented obstacles that make it difficult for Yalaltecans to secure access to water, such as having to periodically reapply for licenses to access water on their own land.

Although local institutions can effectively generate forest recovery, my study shows that these local institutions face increasing pressures. The Mexican state has not paired government deregulation with institutional support for local governments, much less for local forms of authority. Rather, the government has favored privatization and commodification of water and land.

The strengthening of local communal institutions, the expansion of communal land, and forest recovery are intertwined in terms of how they affect local water management. As I discovered, water management in Yalálag has been the responsibility of the local people or *aguas pueblerinas* (*sensu* Aboites 2010) and thus of community organisation. The committees that the CG formed were responsible for extending the water system in 1984 amidst cuts to public funding due to the national economic crisis. It was in this context that communal work and migrant economic support was organised under *Asamblea Comunitaria*, which has since become the most important communal institution of governance. Because of the effectiveness of *Asamblea Comunitaria* as a space for collective decision-making, the institution gained a new vitality and communal institutions gained legitimacy, despite long-standing local political conflicts.

The improvement of the public potable water system not only motivated social participation in the life of the town, but also became a primary natural source of local economic activity. The construction of the pipes in 1961 and the expansion of water distribution in the 1980s benefitted new production activities, such as *huaraches* (sandals) and "traditional" clothing- making industries that require water. These secondary activities occupy a good portion of the local workforce. The local system of organisation, as this thesis has demonstrated, has helped Yalaltecans preserve their natural resources.

Moreover, local governance has been an important means for migrants to be able to voice local demands to the state and federal governments. During the 1980s, migrants were still returning to Yalálag to partake in local communal duties. However, as emigration accelerated, and many left Yalálag permanently, that participation shifted. Migrants are not obliged to fulfill communal services unless they subsequently settle in town. Hence, migrants' participation has not been cohesively integrated in the local system of organisation. It is instead generally voluntary and most visible in religious festivities. Their support is however still relevant in terms of other communal needs, most

recently recognized as a potential aide to the *Asamblea Comunitaria* upon invitation to support specific needs. Hence, migrants continue providing help when it comes to collective urgent matters.

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