View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by YorkSpace

What does it mean to be peasant in the Alexander Skutch Biological Corridor?

"Struggles and hopes of the ASBC peasant communities"

by

Mburucuyá Marcela Ortiz Imlach

A Major Paper submitted to the Faculty of Environmental Studies

in partial fulfillment of the requirements for the degree of

Master in Environmental Studies

York University

North York, Ontario, Canada

October 8, 2014

Signature of student: ____________________________

Mburucuya Marcela Ortiz Imlach

Signature of Supervisor ____________________________

Felipe Montoya Greenheck

Abstract

One of the major challenges we face is how to reconcile economic growth under a neoliberal paradigm, with environmental conservation as proposed within a sustainable development paradigm. Peasants around the world are especially vulnerable to this contradiction. The peasants in the Alexander Skutch Biological Corridor in southern Costa Rica are no exception to this dilemma. Despite the fact that Costa Rica is well known for its commitment to environmental issues and for its history of having an effective social welfare state, its adoption of neoliberal policies is in contradiction with its commitment to sustainable development. This contradiction produces the social, economic, political and ideological context in which the peasants of the ASBC are embedded. In this context, this paper explores what it means to have a peasant identity, how they maintain their livelihoods as coffee growers, what level of environmental awareness they have, and how they navigate the complex current challenges of a neoliberal political economy.

Foreword

As a Master's student at the Faculty of Environmental Studies at York University, I focused my first year of studies on the economic and social impacts of genetically modified organisms (GMOs). GMOs represent the latest expression of a model of agricultural production that threatens the environment.

The implementation of this type of agriculture has also resulted in disturbing social consequences. The commodification of food leading to the destruction of many local economies has affected peasants and small farmers' livelihood (Altieri, 2009). The results are a lack of food security and loss of food sovereignty as well as mass migration to urban centers. The gravity of this issue is clearly reflected by the 2 billion people living in famine and poverty worldwide (Rosset, 2009).

The Alexander Skutch Biological Corridor (ASBC) is a conservation initiative in southern Costa Rica where traditionally small farmers and peasants grow coffee. Like the rest of the world, the peasants and small farmers here have been greatly affected by the current economic situation that reinforces the commodification of food production. This critical situation as well as the increase of industrial pineapple production in the area led me to become very interested in exploring the ways the ASBC peasants are navigating their challenging new reality.

Looking to satisfy the learning objectives of my Plan of Study to complete my Master's in Environmental Studies, I decided to conduct my research in the context of the Las Nubes project (York University). I focused my major paper research on aiming to understand the

challenges and the possibilities associated with the practice of sustainable agriculture by these communities of the ASBC.

It is worth mentioning that this investigation comes from a personal interest in learning about the transformations and challenges that contemporary peasants have to face. For me, these peasants represent a source of hope in tackling the challenges associated with healthy food production and reversing the scale of industrial production that has been wreaking havoc at the ecological as well as social levels. The people in the ASBC shared with me the most sacred parts of their lives and I am both honoured and blessed for having had this unique opportunity.

Dedication

This work was conceived with a love and a profound respect for all the peasants of the rural communities of the world. These rural communities represent to me a real hope that we can be modern and still rely on these communities for the production of our food in a way that sustains communities and preserves natural resources. I see in the rural communities the possibility that food could be produced with respect for social and environmental capital rather than being reduced to a source of capital accumulation.

My beautiful grandparents, Eloisa, Adan, and my mother whom I deeply love, shared with me the knowledge that nature gave to them. Their wisdom illuminated every step and every page of this work.

Acknowledgments

I am deeply grateful to Felipe Montoya for providing all the emotional and material resources that allowed me to work with such an incredible rural community as the ASBC people in Las Nubes. I thank him for walking with me through the long process of conducting this research and writing this paper with patience and dedication. Additionally, I need to express my immense gratitude to the Las Nubes Committee and to those who wrote the recommendation letters that allowed me to obtain the generous Lambert family Scholarship to travel and afford the undertaking of this work.

I would like to thank Martin Bunch for the original invitation to work for Las Nubes in 2011. Thanks also to all the professors that helped me on my journey as a MES student: Rod, Ray, Deborah, Tim, Anna, Chris, Ravi, Leesa, Jhon, and Beth. I will always value your knowledge and generosity, and I know that you gave me your best.

Thanks to the OSAS and the administrative people who were always willing to help me: Krystal, Josephine, Peggy, Joseph, and Gwendolyn.

And finally, thanks so much to my supportive family (Susana y Crispin) who travelled from Argentina to Costa Rica to help me with the adorable Clementina, and to my irreplaceable and so much loved friends from Buenos Aires and Toronto, who were there always ready to read, edit, make comments, and listen to my infinite passionate stories about the ASBC peasants: Tomas, Anne, Vanessa, Juan Jose, Miguel Teubal, Norma Giarraca, Gery, Patricia, Hanna, Victoria, Ricardo, Thomas, Dina, and Coralie. Finally, I would like to thank you so much Martin and his family for taking care of Clementina while I was fully dedicated to this work.

Table of Contents

Abstract ii

Foreword iii

Dedication v

Acknowledgments vi

Table of Contents 7

List of Figures 8

List of tables 8

Abbreviations and Acronyms 10

Chapter 1: Introduction 12

Chapter 2: Geography and Socio-Political History of Costa Rica 19

Chapter 3: Methodology 33

Chapter 4: Theoretical & Historical framework 40

- 4.1. Literature Review Theoretical Framework of Peasant Identity 40
- 4.2. Literature Review and Framework for Environmental Awareness 46
- 4.3. Historical Frame of Economic and Conservation Models in Costa Rica 53

Chapter 5: Results and Discussion 66

- 5.1. Peasant Identity in the ASBC 66
- 5.2. Environmental Awareness and Sustainability in the ASBC 82
- 5.3. Political Economy of Production and Conservation in the ASBC 96

Chapter 6: Conclusions and Recommendations 112

Bibliography 115

Appendix A: Research Proposal 131

Appendix B: Questionnaire 132

Appendix C: Maps 137

Appendix D: Tables and Figures 138

List of Tables

Table 1. Age breakdown…………………………………………………………………139
Table 2. Land ownership……………………………………………………………………139
Table 3. Land use……………………………………………………………………….. 139
Table 4. Agricultural production…………………………………………………….…….. 140
Table 5. Food production for self-provision…………………………………………………..140
Table 6. Breakdown of food production…………………………………………..…..140
Table 7. Peasant identity…………………………………………………………..…..140
Table 8. Occupation……………………………………………………………………141
Table 9. Intent to continue working in agriculture……………………………...…………..141
Table 10. Factors driving peasant self-identification……………………………...……..142
Table 11. Importance of agriculture…………………………………….……………..143
Table 12. Environmentally damaging behaviours……………………………………………..143
Table 13a. Reasons provided for engaging in damaging behaviours …………..……………...144
Table 13b. Reasons provided for engaging in damaging behaviours (M/F combined)..………144
Table 14. Involvement in activities related to conservation……………………………………144
Table 15. Reasons for not participating in activities related to conservation…………………...144
Table 16. Reported knowledge of the ASBC……………………………………………..145
Table 17. Perceived effect of the ASBC on the community……………………………….…..145
Table 18. Reported knowledge of the ASBC……………………………………………..145
Table 19. Activities that could be implemented in the ASBC to protect nature………………145

List of Figures

Figure 1. (I-1) Peasant identity…………………………………………………………146
Figure 2. (I-2)Why do you consider yourself a *campesino*?...147
Figure. 3 (S-3) Do you know the corridor?..147
Figure. 4. (S-4) How do you think the ASBC is affecting the community?...............................148
Figure. 5. (S-5) Why is the corridor important?...148

Figure. 6. (S-6) Reasons for engaging in environmentally damaging behaviours……………..149
Figure. 7. (S-7) Key players in the ASBC…………………………………………………...149

Abbreviations and Acronyms

ACPC	Association of Coffee Producing Countries
ACORDE	Association of Costa Rican Development
ACTUAR	Costa Rican Association of Rural Community Tourism
ASBC	Alexander Skutch Biological Corridor
CACM	Central America Common Market
CATIE	Tropical Agronomic Centre for Research & Teaching
CEC	Commission for Environmental Cooperation
CINDE	Coalition to Promote National Development and Exports
CODESA	Development Corporation of Costa Rica
COOPEAGRI	Agro-Industrial Cooperative of Pérez Zeledón
CST	Certification for Sustainable Tourism
DR-CAFTA	U.S.-Dominican Republic-Central American Free Trade Agreement
ECLAC	Economic Commission for Latin America and the Caribbean
FSC	Forest Stewardship Council
FDI	Foreign direct investment
FONAFIFO	National Fund for Forestry Financing
FTA	Free trade agreement
GPD	Gross domestic product
ICAFE	National Coffee Institute of Costa Rica
ICT	Institute of Costa Rican Tourism
IDB	Inter-American Development Bank

IMF	International Monetary Fund
ISI	Import substitution industrialization
ISO	International Organization for Standarization
NGO	Non-governmental organization
MAG	Ministry of Agriculture and Livestock
MINAE	Ministry of Environment and Energy
MNC	Multi-national Corporation
OECD	Organization for Economic Cooperation and Development
SAL	Structural Adjustment Loan
SAP	Structural Adjustment Program
SBN	National Banking System
SINAC	National System of Conservation Areas
TIES	The International Ecotourism Society
TSC	Tropical Science Centre
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WB	World Bank

Chapter 1: Introduction

During the last forty years, environmental degradation has been recognized as an urgent issue that needs to be addressed. From this recognition the concept of sustainable development emerged and evolved. While the 1960s and 70s were characterized by a global drive for economic growth and development, the late 1980s and 1990s saw a growing ecological consciousness as a reaction to the environmental consequences of the economic growth model of the previous decades. In 1987, the Brundtland report defined the concept of sustainable development as a way of meeting the needs of the present without compromising future generations from satisfying their needs. A few years later in 1992 at the Earth Summit in Rio de Janeiro, sustainable development was internationally accepted as the ideal model of development to follow (Quarrie, 1992). Costa Rica was one of the first countries to align itself with the sustainable development model set in Rio de Janeiro. In this paper, I examine the link between agricultural practices and conservation efforts in a small community of coffee producers in southern Costa Rica.

It is important to note that even before the global community came together to call for change, Costa Rica had already a strong tradition of ecological awareness. Beginning in the 1800s, the country had created many laws safeguarding the environment (Fournier-Origgi, 1991). Costa Rica's history of conservation and its contemporary concern for the economic, social, and ecological development of the country meant the sustainable development model quickly gained public support in the country (Evans, 1999).

By the time the Sustainable Development discourse with its preoccupation over the conservation of natural resources became internationally accepted, already in Costa Rica during the 1970s numerous National Parks had been created, such as the Chirripó National Park. Protected areas eventually covered 25 percent of the territory. These types of initiatives were originally created to guarantee the conservation of natural resources. In later decades the state promoted the creation of biological corridors with the participation of local communities to provide ecological connectivity between protected areas and to offer livelihood alternatives to the local populations (SINAC, 2014).

The Alexander Skutch Biological Corridor in Costa Rica, the site of this study, was created as part of this wider Mesoamerican initiative. The Mesoamerican Biological Corridor (MBC) is a large habitat corridor that connects a number of national parks, wild land and nature reserves that reach as far north as Mexico and travel south through Central America. The MBC was established in 1998 in an effort to protect the biological diversity of the region by creating links between various protected areas. This protected area in particular evolved from a growing concern for the potential extinction of a large number of endangered species. The MBC is divided into four distinct areas: a core area where human activities are strictly prohibited; buffer zones; corridor areas that help movement and migration of wildlife; and multiple use areas where activities such as agriculture, fisheries, forest management may be practiced (Graham, 2011). The Alexander Skutch Biological Corridor initiative was founded with the intention of preserving nature while improving the quality of life of people who live within and in the surrounding areas (Canet-Desanti, 2005).

The majority of those who live in the Alexander Skutch Biological Corridor are devoted to small-scale coffee production for the international market. Yet, they are also living in a protected area where they, along with a number of organizations, support conservation efforts. Given that this is the central challenge of the Sustainable Development model, to reconcile production and conservation, it becomes interesting to examine the contradictions that may emerge out of their agriculture practices and their conservation efforts, as well as the options of sustainable economic development that are available within this protected area and model of conservation.

When these peasants (*campesinos)* and rural communities are looking to satisfy ecological and economic demands in the biological corridor under the current economic conditions, are they able to implement sustainable practices while guaranteeing their livelihoods? The purpose of this paper is to address this question by studying the relationship between agricultural production and conservation demands in the corridor. This relationship is examined by looking at how the identity and the environmental awareness of the members of the ASBC inform the tensions between economic survival and sustainability demands in the Alexander Skutch Biological Corridor in southern Costa Rica.

In this paper, I will examine a set of main guiding questions by organizing them in three different components. The first component will cover the following questions: How do these people identify themselves? How does the identity of these people determine the way in which they practice agriculture? And how do they engage with the conservation initiatives in the ASBC area?

The second component will focus on the environmental awareness of members of the ASBC and how it informs the practices of conservation efforts in the area. I will explore how the members of the communities understand the value of agriculture and its relationship with conservation efforts.

Finally, the last component of this paper will analyze how the requirements of production from the dominant economic system and the sustainability demands of the ASBC set a frame within which agricultural practices and conservation efforts clash.

The area of study

The Alexander Skutch Biological Corridor (ASBC) is an area of 2,304 hectares of primary and secondary forest that is located in the south area of the Chirripó National Park, a protected area of 501 km^2 that belongs to the La Amistad Biosphere Reserve. This is a trans-boundary project that connects natural areas of Panama and Costa Rica that intersects the *canton*[1] of Pérez Zeledón in the province of San Jose, Costa Rica (TSC, 2003).

The area of the ASBC underwent intensified logging from 1930 to 1992 (Durán Barrantes, 2005). This logging was in part encouraged by a national initiative to expand the agricultural frontier for export purposes that resulted in the loss of 50,000 hectares per year in Costa Rica between 1950 and 1984 (Durán Barrantes, 2005). This logging caused the disconnection between patches of forest provoking a negative impact on biodiversity and wildlife migration (1997 interview of Alexander Skutch, cited by Znajda, 2000).

York University acquired through a private donation by Woody Fisher, 132 hectares of land in 1998. The property, thereafter named the Las Nubes Biological Reserve, is home to the

[1] Canton refers to historical and administrative division similar to a county in the USA.

Las Nubes Project. The main purpose of the project has been to help improve the livelihood of the communities within the area, while contributing to wider conservation efforts. The donation of this property was fundamental to the establishment of the Alexander Skutch Biological Corridor (Daugherty, n.d.)

The Alexander Skutch Biological Corridor was created in 2004 as a conservation initiative by the Tropical Science Centre[2], the members of the local communities, and York University in Canada (Canet-Desanti, 2005). It was intended to recover and maintain the connection among patches of forest from the Chirripó National Park, the Las Nubes Reserve, the Los Cusingos Neotropical Bird Sanctuary (former farm of renowned naturalist Alexander Skutch), and the forest remaining from the buffer zone of the La Amistad Biosphere Reserve (Canet-Desanti, 2005).

Coffee production as the main economic activity in the ASBC

Coffee production has been historically the main source of income for most communities within the ASBC since they first settled in this area in the 1930s, according to the accounts of many of the older residents. Due to the volatility of the coffee market in the late twentieth century[3], peasants in the ASBC began to look for other sources of income: for example, cultivation of sugar cane, supplementing income with temporary or part-time work in urban areas, and an incipient development of rural tourism. Coffee production has also been affected by the gradual move towards agro-industrial methods of production in neighboring areas, such as extensive monocrop production of pineapples for the export market, which has led to issues of

[2] The tropical Science Centre is a non-profit organization involved in research that has been in working in Costa Rica since the 1960s.
[3] See Section 5.3 for the evolution of the coffee market in the corridor.

land degradation, severe erosion, air and water pollution, and the amalgamation of large areas of land under foreign ownership (Hansen-Kuhn, 1993).

About the communities and their livelihoods

Today, around two thousand people live within or close to the ASBC; the communities of Quizarrá, Santa Elena, Montecarlo, and San Francisco are the main towns in the area. These communities settled at the beginning of the 20th century as a result of the international financial crisis of 1930 that triggered internal migrations within the country (Hall, 1976). Costa Rica suffered directly as a result of the crisis due to its dependency on its export of coffee and bananas (Molina Jiménez, 2006). Until the 1980's farming in the ASBC was a combination of export-oriented coffee and cane sugar production, alongside smaller subsistence farming and agriculture for the internal market (Znajda, 2000). Small scale coffee production complemented with sugar cane production in the ASBC has continued into the present, with the small farmers navigating the diverse challenges that campesinos continually face.

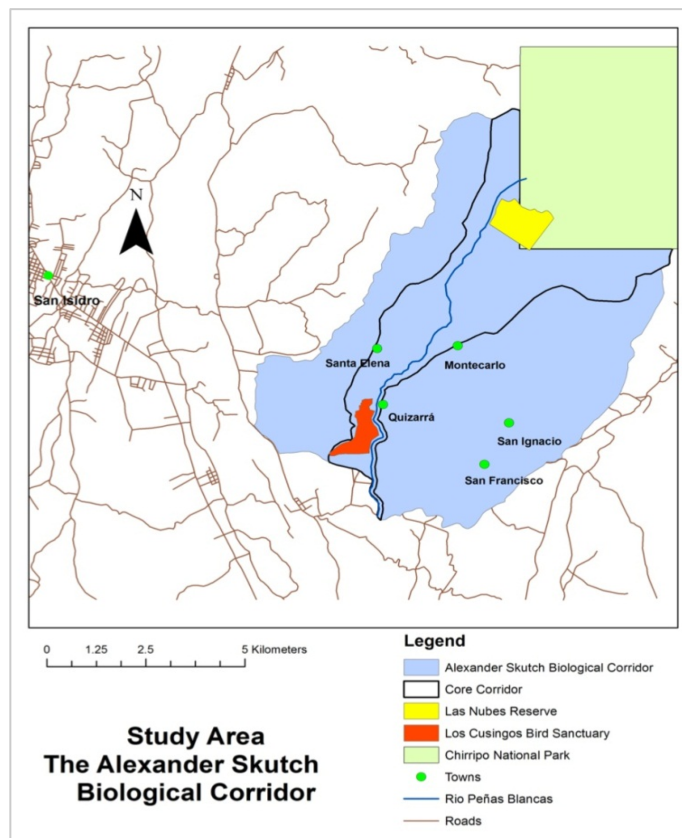
The Las Nubes project in the ASBC

One of the main purposes of the Las Nubes Project has been to contribute to improving the livelihoods of the local people. During recent years, the Las Nubes Project has been carried out primarily through efforts of environmental education, graduate student research, collaborative research projects involving the Tropical Science Center and the University of Costa Rica, as well as some community outreach initiatives, such as providing support in the area of the ASBC by connecting the farmers and peasants to coffee merchandisers in Canada.

As suggested above, it becomes crucial for this project to understand the challenges faced by people trying to keep agriculture as their main source of income within a protected area. This

quandary has been recognized by many scholars as an immense challenge for peasants and small farmers in the current global context. (Altieri, 2009; Bartra 2008; Ven der Ploeg, 2009).

This research was conducted with the aim of contributing to the Las Nubes Project. An analysis of the current situation of the members of the ASBC was undertaken through an ethnographic study that looked at their sense of identity, their environmental awareness, and the challenges to survive in the current global economic context.



Map of the Alexander Skutch Biological Corridor. Source: TSC

Chapter 2: Geography and Socio-Political History of Costa Rica

This chapter will present a brief survey of the socio-political history that contextualizes the current situation of peasants in Costa Rica, and in the ASBC, in particular, made up mostly of small scale coffee growers. They are inheritors of a Colonial history and a later history of insertion into the international coffee markets. The 20th Century is marked by the establishment of a welfare state, that later succumbs to neoliberal transformations. The discourse of sustainable development with roots that go back to what has been called a Green Tradition in Costa Rica also form part of the context of Costa Rican peasants today.

The Costa Rican landscape

The Republic of Costa Rica is situated in the lower portion of the Central American isthmus, covering an area from 8 to 12 degrees north of the Equator. It borders Nicaragua on the north, Panama on the south, the Pacific Ocean on the west, and the Caribbean Sea on the east. This country supports a population of 4,301,712 inhabitants living in an area of more than 51,100 square kilometres (Programa Estado de la Nacion, 2013).

This small country has the highest GDP per capita in the region US$ 9, 945, with an annual economic growth of 3.5% in 2013 (Banco Central de Costa Rica, 2014). Its exports accounted for US$11.6 billion in 2013, in which agriculture accounted for 6.26% of GDP while manufacturing, industry and services sector reported 19.5% and 66.99% of the GDP respectively (Banco Central de Costa Rica, 2014). Tourism generated US$2.2 billion in 2012 (Leitón, 2012)

Costa Rica has three mountain ranges that traverse its length: The Guanacaste, Central, and Talamanca mountains. There are several valleys between these ranges, with the Central

Valley where the capital of Costa Rica, San Jose is located (between the Central Mountains in the north and Talamanca Mountains in the south). As Hall describes, this valley was the epicenter of coffee production at the beginning of the coffee industry era (1991). The other valley is the General Valley (surrounded by the Talamanca Mountains), which is the most extensive (Hall, 1976) began with coffee production in the 1940s. This is where the ASBC is located.

The presence of these large mountain ranges and valleys creates wide variations in climate and landscapes (Hall, 1976), with microclimates that are very distinct from one another. These variations allowed for the formation of diverse ecosystems that, towards the end of the 19th century, attracted the attention of natural scientists from the United States and Europe (Evans, 1999). Costa Rica possesses one of the highest levels of biodiversity on the planet (Mc Dermott, 2005), which continues to attract renowned naturalists to this day and drives the ecological tourism industry (Rankin, 2012).

Some aspects of the colonial history of Costa Rica

Costa Rica's colonial history began with the first explorations in the south of the country in the early16th century, marking the start point of the Spanish conquest in Central America. In 1502, Christopher Columbus landed in what is today Limón. Assuming the land held gold, he initiated the myth of the rich coast (Rankin, 2012). There were several attempts to establish settlements, but it was not until 1562 that the first successful colonial establishment was founded in Costa Rica by Juan Vasquez de Coronado (Solórzano Fonseca, 2012). In 1568, Perafán de Rivera implemented measures to gain control of the region and subdue the indigenous population (Rankin, 2012). However, by the end of the 16th century, two-thirds of the Central America had

yet to be materially dominated since most of the indigenous people were still living in their original territories (Solórzano Fonseca, 2012).

Early settlers arrived looking to benefit from the Spanish Crown's encomienda system[4]. However, the settlers in what is now Costa Rica would not be able to accumulate the wealth that the elites of countries like Mexico and Guatemala did, where settlers had access to immense mineral resources and the use of a large indigenous population as forced labour (Seligman & Booth, 1993). The Spanish had a harder time subjugating the indigenous population in Costa Rica and the encomienda was only granted to few people (approximately 38 families) in the Central Valley (Sibaja, 1983). The result of not achieving a total subjugation of the indigenous population meant that many indigenous groups could survive and keep their cultural traditions alive (Bonfil, Ibarra, Varese, Verissimo, Tumiri, et al. 1982).

By the end of the 17th century, the continuous indigenous rebellion in Talamanca, combined with a reduction of the indigenous population in the interior of the country and low demand of goods exported to Panama, caused the undoing of the encomienda system (Solórzano Fonseca, 1991) in Costa Rica.

The lack of success of the encomienda, compared to other colonies, created a unique social structure (Soto Quirós & Díaz Arias, 2007). In the Central Valley, there were small and medium farms, with people –mostly mestizos– forming small villages (Soto Quirós & Díaz

[4]The *encomienda* was a system established by the Spanish Crown as a form of incentive or reward for Spanish conquistadores. The system allowed them to exact tribute from natives or use them as forced labour, as well as to exact tribute from natives. While being very close to slavery, the encomienda system had some differences, with the Spanish Crown imposing some conditions on those who received the encomienda grants ("encomenderos") (Rankin, 2012; Yeager, 1995).

Arias, 2007). This is a structure that was maintained until the beginning of the coffee growing sector.

Booth (2008) argues that Costa Rica's geographical isolation and the unattractiveness of its resources during colonial times, combined with fewer natives to use as forced labour, set the conditions for a society with more equality than in other colonies. This forms part of a commonly held belief. However, Sibaja (1983) believes that the distribution of encomienda did produce a small group of very rich people in the Central Valley.

While, as the authors above argue, Costa Rica did experience a society of more equality than other colonies in Central America, it also did have a group of settlers that achieved more success and would form an elite (Fonseca Corrales, Alvarenga Venutolo & Solórzano Fonseca, 2001). These settlers exploited the encomienda system and later took advantage of African slaves, which were brought in the 17th century to work on cacao plantations (Fonseca et al., 2001). This elite further consolidated in the 18th century, when they were able to trade agricultural products for imports with other elites in the rest of Central America. This period saw an increase in the number of peasants and rural workers. The manufacture and use of *trapiches* (sugar mills) helped improve production (Corrales, et al., 2001). The descendants of this early elite would form the coffee elite in the 1800's (Fonseca et al., 2001).

By the turn of the 19th century, Costa Rica had a population of 50,000 people and most of its land was not cultivated. The landscape in 1821, when Costa Rica achieved its independence, was not much different than in the 16th century. Commercial agriculture was insignificant and, from the lands that were cultivated during that period, 40,000 people (80% of the population at the time) produced foods for local consumption (Hall, 1976). In the 1820s and 30s, the only

planned agricultural initiative was a mandate set by municipal governments that forced peasants to produced corn and beans, as staples for local consumption (Hall, 1976).

Costa Rica's transition to becoming the country of coffee

It is estimated that the first *Arabica Coffea* beans were brought to the American continent in 1720 and that the first berries were sowed in Costa Rica in the early 18th century. There was initial success with the cultivation of coffee in the country and Costa Rica became the first country to support and promote the development of a coffee industry. Some of the initiatives to promote the cultivation of coffee included the distribution of free coffee plants in 1821; the exemption of tithe payments on coffee in 1825; and granting land ownership to those who cultivated coffee in public lands (Instituto del Café, 2014).

In 1830, Costa Rica started to export small quantities of coffee and the industry quickly expanded, contributing to a great social, economic and political transformation (Rankin, 2012). A decade later, coffee exports had grown substantially and Costa Rica was exporting coffee to Europe (Molina Jiménez & Palmer, 2004). By 1950, coffee was dominating Costa Rica's economy (Rankin, 2012) and influencing politics (Molina Jiménez, 2006).

The success of coffee facilitated the institution of an agro-export model (Booth, 1999). While the coffee model generated economic growth, it also contributed to increasing economic inequalities (Booth, 1999). A "coffee elite" emerged and it would dominate the political scene until the first few decades of the 20th century (Molina Jiménez & Palmer, 2004).

Between 1870 and 1882, Colonel Tomás Guardia ran a modernizing dictatorship that brought important changes to the country: The constitution was revised, establishing a unicameral legislature and a strong executive branch; government institutions and armed forces

were strengthened; primary education became compulsory; and the construction of railways lines was initiated (Booth, 1998). Guardia regularly violated the constitution and human rights and repressed opponents of his government. Interestingly, though, his dictatorship decreased the political influence of the coffee elite (Booth, 1998). This is the first time in the history of Costa Rica where the elite was affected. This process could be seen as a destabilizing event that contributed to political upheaval (Booth, 1998). This process will provide to other political sectors the possibility to build the social and political conditions to reach a more egalitarian society four decades later.

The economic power of the coffee elite helped them become the main lender to small producers (Molina Jiménez & Palmer, 2004). Through a mechanism by which the elite offered loans and the small farmer could not afford the payments, the elite was able to acquire or expropriate the land of those who were unable to repay the loans (Molina Jiménez & Palmer, 2004). As a consequence, many small producers became peasants without land that survived as rural proletarians (Booth, 1998; Samper, 1990). Until the 1880s, these new proletarians were able to make a living without falling into extreme poverty, but a new process of land concentration by the coffee elite was beginning to unfold and it would enlarge the economic gap between classes (Aguilar Hernández, 2004).

With the inauguration of the first railway line in 1890, the consolidation of the coffee production, and the booming of banana plantations, the middle class expanded and new labour classes were formed within the existing class of rural workers (Molina Jiménez & Palmer, 2004; Aguilar Hernández, 2004*)* The consolidation of the country as an exporter and the modernization

of the country and use of technologies applied to the production were shaping the profile of the proletarian of Costa Rica and increasing the numbers of them (Samper, 1990).

The great depression, communist ideology, and social welfare

The first decades of the 20th century, brought political turbulence. Immigration from Europe brought many anarchists, communists, and socialists that contributed to the organization of the working class, which was adopting many of their ideologies (Oliva Medina, 2006). As a result, between 1910 and 1920, workers created unions and organizations such as the General Conference of Workers (Confederación General del Trabajo). These new organizations led a process of many improvements for the workers, such as the labour claims (8 hours labour-journey) and demands for better salaries, along with the aim for the recognition for the workers' rights to access to free education and healthcare (Oliva Medina, 2006).

The economic struggles after the World War I brought high levels of underemployment and the fall of the salaries among other economic complications that made evident old popular demands for a social change (Ulloa, 1979). Then, the Great Depression in 1929, deeply affected nations involved in international trade and Costa Rica experienced a severe drop in revenues due to the loss of exports (Rankin, 2012). The labor disputes and the cycles of economic crisis at the beginning of the 20th century generated class conflicts and set the beginning of an era in Costa Rica in which the working and middle class would progressively gain a strong political influence against the political influence of the coffee elite (Aguilar Hernández*,* 2004). For Sanchez de Ancochea (2006), the permanent struggle for the control of the political power between the coffee elite and the worker and middle class, defined the kind of politic, economic, and social

projects that would dominate the different political scenarios of Costa Rica along the 20th century.

In the midst of these conflicts, the communist ideology gained support and the Costa Rican Communist Party was founded in 1931 (Rankin, 2012). The crisis also prompted the reunion of the Social Christians and the organized workers. It was the first time in the history of Latin America that the Church, represented though social Christians, and the communist party became allies in fighting for a deep social reform (Molina Jiménez, 2006).

As Costa Ricans were questioning their political and economic system, leaders realized they needed to implement measures to manage the economy (Rankin, 2012). The government began to put into effect regulations and policies to stabilize the economy and throughout the 1930s several "social justice" reforms were implemented (Rankin, 2012).

The welfare state

In 1940, President Rafael Ángel Calderón Guardia began his administration and launched a historical social reform that gave birth to the Costa Rican Welfare State, which would last four decades (Rankin, 2012). He restructured the Ministry of Public Health, founded the University of Costa Rica, and created a social security program that included healthcare, aid for the poor, and the protection of workers' rights (Rankin, 2012).

Calderón finished his term in 1944 and was succeeded by Teodoro Picado Michalski, whom he supported (Rankin, 2012). Picado's presidency would see the formation of a strong opposition, with José "Pepe" Figueres rising as a key figure (Rankin, 2012). After the elections of 1948, amid reports of fraud, Congress voted to void results and Calderón is appointed to the presidency by decree (Rankin, 2012). Calderon's appointment prompted Figueres, who was a

staunch anti-communist and disliked Calderon's ideas, and his Army of National Liberation to launch a civil war (Rankin, 2012).

The war only lasted 40 days. The end of the conflict was resolved when, mediated by U.S. Ambassador Davis, Picado and Figures reached an agreement under which Santos León Herrera would assume an interim presidency and the social security measures implemented in the prior two presidencies would be maintained (Rankin, 2012). Then a pact was signed establishing a revolutionary junta –which Figueres would lead– that would rule for eighteen months and draft a new constitution, after which Otilio Ulate Blanco would become president (Rankin, 2012). This was the birth of the Second Republic (Rankin, 2012).

Edelman (2005) emphasized that few countries in Latin America present the particularities of a stable democracy that defined Costa Rica most of the 20th century. Additionally, he point outs that there are two very important aspects of the social welfare model of Costa Rica, the first being the high level of interference of the state's role on economy and the second is the inclusive mechanisms that were designed to meet the demands of all social groups (Edelman, 1999). Robson (2011) argues, reinforcing Edelman's concepts, that the majority of Costa Ricans in the welfare state period were deeply attached to ideals of solidarity and inclusiveness that constructed a project at a national level and that built a strong sense of identity linked to such ideals.

Additional reforms that were made during the welfare period and important to mention are the expansion of public enterprise in utilities and social needs, the nationalization of the banking system, and the implementation of an Import substitution Industrialization (ISI) model (Rodríguez, 1980). Additionally, from 1950 until 1985 Costa Rica experience a successful

growth record with unusual good performance at the socio-economic indicators. Sanchez Ancochea (2006) argues that Costa Rica, in contrast to other welfare state economies in Latin America, was the only country that produced a high level of employment. In terms of differences in social classes, during the welfare state period there was moderate income inequality along with a substantial alleviation of poverty, sustained political stability, and strong democratic institutions (Rottenberg, 1993).

As evidenced above, in spite of the success of Figueres and his anti-communist sentiment, the strong role of the state was maintained as Ulate and then Figueres led their respective administrations (Figueres ran for president and won in 1953) (Rankin, 2012). Figueres created several public institutions and his policies moved into a more nationalistic approach as his term progressed (Rankin, 2012).

Debt, default, and the rise of neoliberalism

The import substitution industrialization model along with other state-led development programs, including CODESA (a government agency that would provide financial assistance in joint ventures with private companies) created a situation in which, by the mid-70s, the Costa Rican government found itself heavily in debt and dealing with the aftermath of the first oil crisis (Rankin, 2012). The second oil crisis in 1978 further complicated matters. Unfavourable terms of trade, rising interest rates, and a stronger dollar made it impossible for Costa Rica to meet debt obligations and, in 1981, Carazo, the president of Costa Rica at the time, formally declared that the government would default on its external debt obligations (Marois, 2005). In order to overcome the critical situation, the Government of Costa Rica entered into agreements with the

Agency for the International Development, the International Monetary Fund, the World Bank, and the Club of Paris (Hidalgo Capitan, 1997).

These international institutions intervened Costa Rica by offering a several cross-conditional loans and grants, such as the structural adjustment loans (SALs) in 1983, 1989, and 1993 respectively (Rottenberg, 1993). In order to obtain these loans Costa Rica committed to opening up the markets to imports, to privatize the several public institutions and to initiate a severe reduction of the government spending (Robson, 2006).

The strong social-democratic values and the ideals of justice and equality that were held by the Costa Rican people for many decades triggered an intense internal social and political resistance to the changes required by the SALs in the 1980's and 1990's (Robson, 2006). The ample disapproval from the rural sector was reflected in the several and energetic protests during the 1980s (Edelman, 1999).

The neoliberal model and its impact on Costa Rica is covered in more detailed in Chapter 4.3, but I will close this section by saying that while the implementation of the neoliberal model allowed Costa Rica to overcome the financial crisis of the 80s and contributed to its economy, it did so in a way that benefitted the elites and marginalized 30% of the population, including the peasantry (Hansen-Kuhn, 1993; Marois, 2005; Edelman, 1999).

The green tradition and the adoption of the sustainable development model

Over the past 150 years, the diverse and incredible beauty of Costa Rica, its commercial trades with Europe at the end of the 19th century and then the U.S., along with the stable socio-political climate, attracted the attention of many foreigners with research and conservation purposes (Evans, 1999).

Costa Rica's biodiversity was highly valued by many renowned scientists who were prominent figures in their fields of study, such as Alfred Wallace. Researchers, including the famous ornithologist Alexander Skutch, settled in Costa Rica and dedicated their lives to conducting fieldwork there and, at times, teaching in higher education (Mc Dermott, 2005).

The legacy of early scientific investigation in Costa Rica is understood by Evans (1999) as an important seed of environmental ethics in Costa Rica. Additionally, Mc Dermott (2006) argues that a close relationship of foreign and local researchers with the government was a fundamental pillar to obtaining a strong commitment of the state to the conservation of the environment.

Rankin (2012) observes that by the late 18th century the Costa Rican government had passed laws to regulate soil usage and limit the level of deforestation, demonstrating an early concern for the environment. Evans (1999) reinforces Rankin's idea by arguing that the green tradition of Costa Rica dates back from 1833. According to him, in the last century the environmental awareness in Costa Rica is the result of the influence of three forces: key scholars of the natural sciences establishing themselves in the country in the 19th and 20th centuries; an active government role in the promotion of environmental awareness through educational campaigns and in the enforcement of environmental laws; and more recently, the arrival of NGOs focused on environmental issues.

On the other hand, scholars like Mc Dermott (2005) believe that the early government commitment to environmental goals was the result of political and economic interests of the state over the country's natural resources. He further states that the ascending importance of the role of science in the political realm of Costa Rica at the very beginning of the 20th century would

bring to the country a clear understanding of the detrimental effects associated with the massive exploitation of the natural resources by agriculture, livestock, and forest clearing (Mc Dermott, 2005).

Costa Rica's green tradition found expression in government policies and in the creation of protected areas. In 1942, the government passed the Water Law in order to regulate the use of surface water as a resource (Global Water Partnership, 2014). In 1955, the government revamped the National Tourism Commission (founded in 1931), renaming it Institute of Costa Rican Tourism (Instituto Costarricence del Turismo). The Institute would be tasked with establishing policies for national parks and positioning Costa Rica as a travel destination (Molina Jiménez & Palmer, 2004). A year later, the Wildlife Conservation Law, included fauna as part of the natural resources to be protected (Rankin, 2012).

Continuing to take steps to protect its natural resources, in 1969, the Costa Rican congress passed a Forestry Law that regulated logging, created a Forestry Department, and established an initial plan to launch reforestation incentives, which would later evolve into an internationally recognized forestry regeneration project to offset carbon emissions (UNFCCC, 2006). The National Parks Service was also created in 1977 (Rankin, 2012).

Costa Rica reaffirmed its commitment to the environment by signing the Convention on International Trade in Endangered Species in 1974, and the Convention for the Protection of Flora, Fauna, and Places of Natural Scenic Beauty in the Countries of the America, in 1976 (Rankin, 2012).

By the end of the 1970s, numerous national parks had been created covering a significant portion of the country's territory. This catapulted Costa Rica into a leadership position of what

would later become the sustainable development paradigm, and fueled a growing tourism industry based on the country's image as an eco-destination. (This will be discussed in more detail in Chapter 4.3)

Costa Rica's social and political history has inevitably impacted its rural communities in diverse ways, creating material conditions, as well as ideological relationships that today influence peasant worldviews and livelihood options. As we have seen, these milestones form the context and will have great relevance in the ASBC.

Chapter 3: Methodology

Introduction

The purpose of my research was to explore the links between sustainable agriculture, identity (as a component of community wellbeing), and environmental conservation in the Alexander Skutch Biological Corridor (ASBC), in Costa Rica. To explore these relationships I carried out my fieldwork in the corridor between March and April 2013.

Very soon after I arrived to Costa Rica in March, 2013, I travelled by car from the capital of Costa Rica, San Jose, to the area of study which is located in the south of this province in the "*canton"* of Pérez Zeledón. Close to the main town of this canton is located San Isidro (see map in page) where I met Luis Angel Rojas, the Las Nubes local contact of York University.

After meeting Mr. Luis Ángel Rojas in San Isidro, we started to visit different coffee producers on our way to his home. Luckily, I could stay at Luis Ángel's home. He owns a small "*finca*"[5] where he had available two small cabins and where I could live during my entire stay in Costa Rica.

Immediately after my first visits, I felt very welcomed by the people of the ASBC. This encouraged me to spend my first two weeks in the corridor establishing a relationship of trust and familiarity with the local communities, by visiting and engaging in informal conversations until I received my permission from York University to conduct the interviews.

Luis Ángel Rojas was a very important facilitator for me in the corridor. He has been working for the Las Nubes Project for the last 10-15 years and through him, I was able to have

[5] A finca is a country estate, sometimes a ranch or farm. In this case, the finca did not have animals for commercial purposes.

access to many habitants from the different villages of the corridor. Luis Angel Rojas is a very well known and much appreciated by most of the members of the community of Quizarrá, a little village where his *finca* is located. He also is very popular in all the other communities that surround the ASBC.

The first two weeks of approaching the communities permitted me to establish a bond of trust with many of the local people that facilitated my conversations and the more formal interviews that followed. These two weeks also allowed me to refine my research question because I quickly realized an important contradiction existed between the environmental values that are part of the narratives of many of the peasants in the corridor, and their agricultural practices. Interestingly, although they are living in the ASBC or the areas surrounding it, they use chemicals that polluted their lands when growing coffee and sugar cane.

After this realization, my research question became: "Why do these people who clearly care for the environment, and whose identity narratives directly inform their love for nature, still engage in practices that contribute to the degradation of their environment, contaminating their soils?"

To address this question, I focused on exploring the concept of identity and environmental awareness among the ASBC peasants to better comprehend their relationship to nature, specifically to their land and to the Biological Corridor where most of them live. Then, I used this exploration to examine the contradiction that these peasants carry out when polluting what they really appreciate, their land. I situated this contradiction within the conflict that emerges in the corridor where the sustainable development and dominant economic models clash.

My research as a case study

The case study method was defined by Yin (1984) as *"an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used."*

According to Ritchie, Lewis, Mc Naughton Nicholls & Ormston, (2013), the case study seeks to explore multiple perspectives that are related and conditioned by the context of participants; that is why techniques that incorporate the greatest quantity and diversity of participants are favoured when trying to collect varied perspectives. Ritchie et al. clearly establish that the sampling of the case study be based on the context to be analyzed or the institutions or localities considered, rather than on a group of individuals chosen at random (2013).

Using the qualitative method

I decided to use a qualitative approach, such as semi-structured interviews and field observations, since I find the qualitative methodology to be appropriate for investigations that seek to answer "how" and "why" questions (Ritchie et al., 2013). An investigator uses this approach when suspecting that the answers to these questions may be linked to a given context in which the investigation is immersed (Ritchie et al., 2013).

Qualitative investigation is contextual, interpretative, and provides a window to personal experience. These characteristics allow the researcher to delve into the subjects' perceptions. The understanding of these perceptions and their context provide tools for a deeper examination of the phenomena being investigated.

For this particular study, the qualitative approach makes evident the environmental knowledge acquired by the respondents through their perceptions and their life and agricultural experiences. Moreover, since this is a comprehensive methodology, it serves to reveal some features of the identity of the ASBC peasants, their environmental awareness and the pressures they face that prevent them from adopting the ecological aspects of sustainable agriculture[6] in the production of the coffee in the corridor.

From an ethnographic point-of-view, the case study allowed me to become deeply acquainted with the respondents' experiences and gain a profound understanding of their production activities and the relationships they have established with the biological corridor. My objective was to investigate the relationship between these last two elements, without losing sight of the connection they have to a larger reality.

Design, resources or methods and epistemological position

This section explains the principles followed in the methodological design of the investigation, the different methodological resources used for data collection, and the epistemological position taken in interpreting them.

The responses of the people I interviewed contributed enormously to this investigation. Since their perceptions are the base of the researcher's interpretation, I conceive their narratives as a source of knowledge. In this sense, the qualitative method was chosen for this study with the

[6] Sustainable agriculture is an ecological paradigm in which agricultural practices are considered part of a broader ecosystem. The goal of sustainable agriculture is to establish the necessary conditions for a healthy and sustainable mode of food production (MacRae, Hill, Henning, & Mehuys, 1989).

objective of compiling those experiences from the particular perspective of each respondent. The researcher's observations and interpretations were oriented within a dialogue shared with participants. The data collection techniques captured the validity of the subjects' narrative as a way to access their personal and life experience, their reality.

The data collection methods employed for this investigation included (structured interviews with open ended answers), semi-structured interviews and field observations (details on the field work are provided later in this chapter). Respondents were adult peasants: 60 men and 44 women, between 25 and 80 years of age, living in the communities of Quizarrá, Santa Elena, and San Francisco, which are located along the Alexander Skutch Biological Corridor. A large proportion of the interviewed subjects are dedicated to primarily growing coffee (72%) and sugar cane (23%), with the remainder of participants engaged in other occupations, other than agriculture.

Data collection methods

I chose to collect information via semi-structured interviews because they could create a space for dialogue oriented towards the subjects of interest of this investigation. The first group of people interviewed were recruited by a York University contact in the area in the initial phase of the project. As the interviews started, the respondents themselves suggested names of other people that, according to their point of view, could enrich the diversity of the information obtained in the interviews. In total, I interviewed 104 people from the different communities in the Corridor.

Interview characteristics

The semi-structured interview contained forty questions separated in three different sections. The first section surveyed land ownership and the use of land for commercial or self-provision purposes. The second section sought to explore how coffee was produced in the region. The focus of the last section was on the perceptions and values of the people about the corridor, along with their perceptions on the obstacles and potential for improvement of this particular conservation initiative. (A copy of the questionnaire is included in the appendix.)

The interviews were conducted during the last two weeks of a field stay that lasted from March 22nd through May 23rd, 2013 and were conducted with the assistance of an anthropologist from the University of Costa Rica. Some of the respondents felt the need to expand on their answers, enriching my research. From some of the questions, I was able to quantify the answers and build some tables that I include in the body of this work as well as in the appendix (see pages 139 to 145 in the appendix B).

In order to protect the identity of the people who I interviewed, I chose to use pseudonyms for them.

The observations were collected by attending and participating in public meetings between community leaders and informal conversations with different community members. These observations provided information regarding the context of the activities realized by the participating subjects, as well as of the relationships they establish and ways of social interaction.

In summary as a final reflection, I believe that the selected methodology as described above allowed me to establish a connection with peasants and farmers in the corridor that gave me unique insights into their experiences, the barriers they face in implementing sustainable practices, and what could be done to help effect change.

Chapter 4: Theoretical and Historical Framework

The objective of this theoretical and historical framework is to provide the concepts that are necessary to understand the analysis and results of the three central axes of this major paper. To that end, I will first define concepts related to the identity of peasants (campesinos) in the 21st century (4.1), and later introduce the key notions of environmental awareness, environmental behaviour, and sustainability, and their interrelation (4.2). It is considered that environmental awareness provides the basis to change behaviours towards the environment, so that sustainability can be achieved, but we must also understand the impact of economic and social politics that can deter or impede the adoption of environmental behaviours. Lastly, I will further explore the economic and sustainability models in Costa Rica (4.3).

It is important to clarify that with the purpose of having a foundational theory from where I could understand my results, I wrote three brief literature reviews focusing on the sources that I found were the most relevant to the main themes of my investigation. Although these literature reviews might not be considered strictly as a theoretical framework, their content was fundamental in my writing process.

Chapter 4 – Section 1: Theoretical Framework of Peasant Identity

Understanding the ASBC communities through the concept of identity

I consider the concept of identity as a good starting point to understand the communities of the ASBC. I share with Max-Neef the belief that the concept of identity is one of the fundamental human needs, which are the same through time and in all cultures (Max- Neef, 1994). Identity is also central to understanding social groups and their interests, desires, and motivations (Wetherell & Mohanty, 2010).

With regards to practices that aim for sustainability, individual and collective behaviours have consequences on the environment (Clayton & Opotow, 2003). According to Bonaiuto et al. (2008), "the extent to which people identify with their local community is then a potentially important factor in determining the shift from a self- to a collective-interest in human behaviour."

In the context of this research, understanding peasant identity can inform diverse economic and social alternatives to reach sustainable livelihoods while reinforcing lasting conservation efforts (West, Igoe, & Brockington, 2006).

Peasant identity in the 21st Century

This section is organized first by defining some of the main characteristics of the peasantry of the 21st century, and then examines some social, cultural, and philosophical aspects.

While I use some traditional definitions of peasants and categories that have enriched the field of peasant studies, I chose to better examine peasant identity through an interdisciplinary approach as those provided by authors such as Bartra, Escobar, Edelman, Van der Ploeg and

Berger. These authors provide a better understanding of peasants as people driven not just by economic incentives, but by particular values and social practices. Peasants are viewed as people immersed in the social, economic and political contexts that permanently threatens their way of life and their very existence.

Economic and political aspects of peasantry

The definition of peasantry has been complex and controversial since its emergence as a distinct social group (Edelman, 2013). It was predicted that the peasantry would disappear with the development and consolidation of capitalism (Araghi, 2005). However, as Vander Ploeg (2009) argues, peasants not only still exist, but there is a re-emergence of them, and they currently account for two fifths of humanity.

Looking for a contemporary definition of peasantry, Van der Ploeg (2009) states that peasants need to be understood not as a remnant from the past, but as part of a process in which they are being constantly reshaped. I consider that a recurrent vision of peasants as fixed social entities denies not only the evolving knowledge they have gained from their relationship with their land, but also their ability to adapt and survive in the face of constant economic pressures and adversity.

Among the challenges peasants face is the modernization of agriculture, which over the last half century has radically modified the relationship between themselves and their land. This relationship was also further affected by the technologization of agriculture, the use of pesticides associated with industrialization and capital accumulation, and more recently the inclusion of GMOs (Altieri, 2008; Rosset, 2011). Finally, as Friedman (2005) states the "integration of agriculture into the global economy is also accompanied by lack of regulations and protective

laws that could preserve peasants' livelihoods and guarantee their survival" (Van der Ploeg, 2009; Martinez Allier et al., 2010; Via Campesina by Martinez Torres & Rosset, 2010; Teubal, 2006).

This new global order affects agriculture in significant ways that, in turn, affect the peasantry. There is a difficulty for many to hold on to the land as they compete with transnationals; this has created massive migration to urban areas by those who have lost their land (Rosset, 2011). Some Latin American peasants have migrated to other countries to earn a living that would allow them to send money to their countries of origin to keep their land and then return to be a peasant again (Hellman, 2008). Another mechanism by which peasants attempt to overcome rural poverty in Latin America has been to diversify economic activities by engaging in multiple occupations (De Grammont & Martinez Valle, 2009). While there is a return to the land by some peasants, there are many that remain in urban areas living in poverty and without the resources to return to their original homes. This movement from rural areas to the cities has been one of the main causes of global famine in the last twenty years (Rosset, 2011; Via Campesina, 2013).

While land possession is a key characteristic of the peasantry that provides them with autonomy and the opportunity to earn a living (Van Der Ploeg, 2009), there are peasants that maintain their traditional lifestyle, in spite of not owning land. The work and unique relationship with the land makes peasants a group and productive force that is vulnerable not only to economic forces, but also –and particularly so– to climate change, pests, and other environmental actors (Bartra 2008; Boltvinik, 2005).

Scholars such as Silverman have distinguished peasants from farmers by the final economic purposes of their production (1979). The main difference between both categories relies on the belief that peasants primarily produce for survival or subsistence or to maintain their social status, while farmers pursue expansion of their scales of operation (Wolf, 1955). Van der Ploeg (2009) argues that this concept of peasants constrains them to narrow terms of subsistence. Van der Ploeg maintains that the classical peasant household essentially produced to guarantee their basic food requirements while the excess production was sold in the market. Shanin (2008) provides a complementary approach stating that being a peasant is, above all, a way of life. He points out the following characteristics of the peasantry: a unity of social organization that is multi-functional, involving as its main economic activities land cultivation and animal rearing; a particular cultural tradition that is linked with a way of life that is characteristic of small rural communities, and community obligations with external forces (Shanin, 2008).

In this sense, the peasantry has historically maintained a relationship of duality, where on the one hand they are able to sustain themselves, gaining certain independence, but on the other hand, they are also dependent on the rules of the larger economic system. For Berger (1992), this duality has been a unique characteristic of what he understands as a social class.

Many scholars such as Krantz (1977) have approached the study of peasants as an analytical category looking at specific subcategories such as the economic ways in which they reproduce themselves, the social particularities in which peasants interact within communities and with the rest of society, and their permanent social readjustments to the evolving capitalism.

Symbolic aspects of the land and peasant identity

We have discussed the economic aspects of peasantry, but to truly understand peasants, we have to explore their relationship with the land, which transcends material or economic aspects.

For Gonzalez de Molina, "the peasant's relationship with the land has a matriarchal character; it is a relationship that is founded on respect, love, and gratitude" since the land "represents the roots, the source of survival, and his final destiny" (Berger, 1992, p. 240). The deep connection to land and nature goes beyond the tangible to provide a source of spiritual fulfillment. A disruption of this connection results in a lack of sense of place (Sabrini, 2012).The attachment to the land is so strong that even when peasants cannot produce enough from the land to make a living, they find alternative sources of income that will allow them to keep their land. The land is what gives them a place in the world and a sense of community, and community is one of the pillars of their existence.

Albrecht (2010, p. 219) states that "one of the most powerful relationships we have as humans is to our home environment." He goes on to beautifully express the impact of this relationship:

> "Our sense of place is the outcome of the intersecting ecologies of home, head and the heart. Our physical and mental health is tied to this vital relationship and when it is threatened, we can become distressed; when it is broken, we become 'dis-eased'. The changes to home environments that can be the source of threats to our mental health and sense of well-being are often the result of developments impacts and now, anthropogenic global warming" (p. 222).

Peasant identity and resistance

In recent years, as a result of constant economic and social pressures imposed by neoliberalism, peasants have organized themselves in some political transnational organizations such as Via Campesina (Desmarais, 2007). They are claiming to be recognized as a particular social group, building upon their identity to resist the changes caused by the globalization of the economy (Edelman, 2013).

As the neoliberal economic model gained strength in Latin America and other parts of the world, peasants around the world shared similar struggles (Martinez Torres & Rosset, 2010). Globalization clashes with the peasants' way of life, threatening their very existence. This threat has unified peasants around the world and reinforced their sense of identity. In this regard, Spicer argues that:

> "The oppositional process frequently produces intense collective consciousness and high degree of internal solidarity. This is accompanied by a motivation for individuals to continue the kind of experience that is stored in the identity system in symbolic form" (Spicer, 1971, p. 797).

As I touch upon in section 4.3, the implementation of the neoliberal model in Costa Rica has had a great impact on the peasantry and resulted in the emergence of a peasant resistance movement such as the National Union of Small and Mid-Size Agricultural Producers (Unión Nacional de Pequeños y Medianos Productores Agropecuarios). While strong, this movement was eventually forced to engage in negotiations with the economic and political powers.

The peasants of the 21st Century face conditions that threaten their continued existence. However, we find that in order to survive peasants have had to continually reinvent themselves,

adjusting to the changing times, continually finding ways to keep their identity and their way of life linked to the land.

Chapter 4 – Section 2: Literature Review and Framework for Environmental Awareness

In this section of the theoretical framework, I will provide a brief introduction to the broad concept of sustainability and how it is linked to the concepts of environmental awareness and behaviour. As stated in the Brundtland report (1987), sustainability can be understood as the daily practices for which the main objective is to preserve natural resources to satisfy our current needs without jeopardizing these resources for the future generations. Consequently, to achieve real sustainability, it is necessary to not only be concerned about the environment, but also to find concrete ways to take action.

An examination of the concepts of environmental awareness and behaviour are important because they can be considered as ways to reach sustainability in production and consumption practices (UNESCO, 1997). Stets and Biga (2003) argue that environmental behaviour results from awareness of the environmental issues and leads to sustainability. However, environmental awareness that is not reflected in practice can never lead to change and sustainability. Therefore, it is important to understand the internal (awareness beliefs, values) and external forces (economic, historical, social pressures) that can influence and shape environmental behaviour.

This section is organized first by exploring the definitions of key concepts that help to understand environmental awareness. Then, I present environmental indicators based on a model developed by Chuliá (1995), which I take as a reference to explore the environmental awareness of these ASBC communities. I also adjust Chuliá's work to incorporate some of my points of interest particular to this research.

Authors like Ballesteros (1985), McCord (2008), and Pierri (2005) agree that the concept of “environmental awareness” is a relatively new term that appeared toward the end of the 1960s as people become aware of the ecological crises affecting our planet at that time. For Pierri (2005), the economic and social changes that take place in that period, along with the consciousness of ecological issues, propelled the emergence of contemporary environmentalism: a body or collection of ideas and movements that develop around the care and protection of the environment.

According to Pierri (2005), the crises affecting the environment resulted from a very particular phase in the development of capitalism that created a historical, social, economic transformative phenomenon. In the first decades of the 20th century, capitalism is transformed by the expansion of mass production, based on the Taylorism-Fordism model, and mass consumption (Pierri, 2005; Jessop, 1997). This production model relies on the use of oil and electricity as energy sources, resulting in the large-scale use of natural resources and generating an important deterioration of the environment. For Pierri (2005), this change created an environmental crisis unlike anything seen up to that point.

It is within this context that the concepts of sustainability and environmental awareness emerge. From this historic moment, there is a recognition that the model of production and consumption would endanger the survival of humanity and that it was necessary to find new mechanisms to integrate the conservation of natural resources with economic development at a global level (Lele, 2000).

Similarly, Ballesteros (1985) defines environmental awareness as the awareness of the crisis that modernity experienced regarding the limits of economic development and finite

natural resources. Jimenez and Lafuente (2006) consider that environmental awareness shaped the way of interpreting the environment and the behaviours towards it. This definition implies an existing relationship between environmental understanding and acting accordingly. Many practical approaches of this concept have been based on this relationship, considering environmental awareness as an indispensable tool for environmental education and for the creation of a new environmental ethic. Authors such as Morejón (2011) believe that environmental education as well as the acquisition of environmental ethics would have the potential of materializing sustainability practices in our daily lives. The assumption that environmental awareness is sufficient to modify behaviour in order to achieve changes in the environment can be found in Morejón's understanding of the concept of environmental awareness (2011, p.34):

> "The knowledge or notion of the environmental problem, the inner sentiment by which we appreciate our actions towards the environment, is not innate, it is not found in a judicious manner in all individuals, having this as a result, the need to form a new man, a man made aware of the environmental problems presented by the planet, generated by his behaviour and attitude, being indispensable the formation of a new value system where solidarity and responsibility with society and its surroundings predominate".

Another approach to the concept of environmental awareness that has often been explored has linked awareness with actions towards the environment with the purpose of predicting environmental behaviour (Dunlap 2008; Stern, 2000).

The common and main objective of these models is to be able to establish a hierarchy of factors, or the combination of them, that could effectively alter environmental behaviour of individuals, with the ultimate aim of predicting significant behaviours towards the environment (Stern, 2000).

Berenger, Corraliza, Moreno, & Rodríguez (2002) argue that environmental awareness and the concepts that are derived from it, such as environmental identity, the concern and behaviour towards the environment, could improve the understanding and determination of the key factors that facilitate favourable environmental actions. Among the factors that determine environmentally-friendly acts are attitudes, concerns, moral and religious values, as well as the identity and the being of individuals towards nature (Stet & Biga, 2003).

These approaches combine behavioural and social psychology and sociology, and emphasize three central issues. The first is to determine what factors would have the greatest influence on environmental behaviour –understood as the propensity towards acts that have a positive impact on the environment. The second issue is to understand the hierarchy in which these factors operate. And the third is to know what factors would activate pro-environmental behaviour according to the external conditions in which individuals are immersed.

The premise of these perspectives is that changes in individuals' decisions about the environment can result in important changes on the environment because the cooperative pro-environmental actions could have a very significant environmental impact at the global level (Vlek & Steg, 2007; Stets & Biga, 2003; Stern, 2000; Dunlap, 2008). Even though these authors also acknowledge that these issues can and must be dealt with from many angles in a multidisciplinary fashion.

The relationship between environmental awareness and sustainability is linked through concrete actions towards the environment. Stern (2000) defines significant environmental behaviours as certain acts that have an impact on the environment and that are able to generate changes in the availability of the environment's matter and energy or the actions that can alter

the structure or dynamics of the ecosystem or biosphere. Stern (2000) defines three types of significant environmental behaviours: 1) Environmental activism, which refers to the participation or commitment with environmental organizations or social movements. 2) Non-activist public environmental behaviour at the citizen level, such as the practice of contributing to or supporting environmental organizations. 3) Private sphere environmentalism, which is associated with consumption decisions that affect the environment.

Defining environmental awareness and sustainability

If I consider a wide definition of environmental awareness that ranges from the perceptions towards nature to pro-environmental actions or behaviors, it can be seen that, sometimes there are very clear perceptions about the environment, but without any pro-environmental actions (Stern, 2000). It makes sense that this happens, as having the knowledge that something should be done does not always translate to acting according to that knowledge.

To further understand why sometimes there is awareness or concern about the environment, but no pro-environmental behaviours, it is necessary to utilize an environmental awareness concept that can operate in real life (Jiménez & Lafuente, 2006). Operationalization allows us to link environmental awareness to closely related concepts, such as environmental behaviour and environmental identity. Through the construction of environmental awareness indicators, it is possible to determine whether subjects are aware of their environment or not. (Chuliá, 1995; Jiménez & Lafuente, 2006).

With the goal of operationalizing the definition of environmental awareness, Jiménez and Lafuente (2006) utilize some theoretical results from the models previously discussed and define

"environmental awareness as all those processes associated to actions that try to reduce the impact of human activity on the environment."

Making use of this last definition, Chuliá (1995) characterizes environmental awareness indicators that join environmental perceptions with acts towards the environment. These indicators, then, allow us to know the environmental awareness of any given community.

Jiménez and Lafuente (2006) consider that environmental awareness involves processes of interpretation and behaviour towards the environment that are the result of the activation of several psychological constructs. These constructs include combinations of elements that they denominate *"dimensions of environmental awareness."* These dimensions would be the beliefs, opinions, values, attitudes, intentions, and behaviours towards the environment. Chuliá (1995) defines four dimensions linked to this definition of environmental awareness:

A. **Affective dimension:** This dimension is related to the feelings of concern for the state of the environment and the grade of attachment to cultural values that favour the protection of nature. He distinguishes two facets of this dimension: The sensibility or receptivity towards environmental problems and the perception of their gravity (Chuliá, 1995). There are different indicators associated to this dimension, such as the value judgments on the environmental situation and its evolution in time; concern for the state of the environment in relationship to other social problems; and the attachment to pro-environmental values.

B. **Cognitive dimension:** This refers to the degree of information regarding environmental problems, as well as to the institutions that work on them. There are three indicators associated to this dimension, which are the degree of information on

environmental problems, awareness of the causes and agents responsible for these problems, and knowledge about environmental politics and their principal programs and authorities (Gómez, 1999, cited by Jiménez & Lafuente, 2006).

C. **Conative dimension:** According to Chuliá, this is the disposition to act with ecological criteria and to be willing to make the necessary sacrifices to respect the norms that are legally imposed by institutions dealing with environmental issues. The indicators associated to this dimension are the perception of individual action as something that is efficient and an individual responsibility, and the willingness to carry out pro-environmental conducts and to assume the costs associated with respecting environmental norms (Chuliá 1995; Jiménez and Lafuente, 2006; Stern, 2000).

D. **Active dimension:** This dimension includes both the individual and collective facets of activities and practices related to the defence and protection of the environment. This dimension includes behaviours such as ecological consumption, energy conservation, and recycling of waste, which have an associated cost that implies changes affecting lifestyle at different levels (Jiménez & Lafuente, 2006).

Chuliá's model results are especially appropriate to have as a reference and through it build the environmental awareness indicators that may emerge in the analysis of the results of my work. In Section 5.2, I will make use of this model with some modifications pertinent to the ASBC, using them as indicators of the environmental awareness of its inhabitants.

Chapter 4 - Section 3: Historical Framework of Economic and Conservation Models in Costa Rica

The welfare state before the arrival of the neoliberal model

Prior to the implementation of neoliberal policies, Costa Rica's economic and political model between 1940 and 1978 was based on a social-democratic welfare state (Edelman, 2005). The state played a significant role in supporting both the economy and the social programs (Hidalgo Capitan, 1998). This was evidenced by the more than two hundred public institutions that were created during this period (Robson, 2009). The state adopted an import-substitution industrialization development model that included the implementation of protectionist barriers (Hidalgo Capitan, 1998). The adherence to the Central American Common Market in 1963 aimed to strengthen this early strategy (Rottenberg, 1993).

During this period, the state implemented a free education plan and expanded social security at the national level. Costa Rica nationalized its banking system, favouring loans to small food producers, and invested in the public sector by executing one of the most outstanding processes of job creation in Latin America, in terms of both quality and quantity (Sánchez de Ancochea, 2006).

In spite of these achievements, the import substitution industrialization model led Costa Rica to spend more than it could generate (Robson, 2009), incurring a large amount of external debt as a result (Hidalgo Capitan, 1998).

The arrival of neoliberalism by the late 1970s

The late 70s presented a perfect storm of circumstances that would plunge Costa Rica into a deep financial crisis: there was a deterioration in the terms of trade brought on by the oil crisis of 1978, as well as a drop in demand for export products; international interest rates went up and the U.S. dollar gained strength, exacerbating the national debt; and violence in neighbouring Central American countries contributed to the flight of capital and a drop in investments (Hidalgo Capitan, 1998). The external debt rose from 23.6% of the GDP in 1978 to 120.8% in 1982 (Hidalgo Capitan, 1998).

Unable to meet its debt obligations, Costa Rica declared a default in July of 1981 (Edelman, 2005). In 1982, the administration of Alberto Monge took power in the midst of one of the worst economic crises the country had experienced and he was forced to initiate negotiations with the political opposition, as well as with international players (Hidalgo Capitan, 1998). Monge entered into agreements with the World Bank, the International Monetary Fund, the Paris Club, the International Development Bank, USAID, and international private investors (Hidalgo Capitan, 1998; Marois, 2005), and the process of neoliberal transformation was initiated.

The goal of these agreements was to help Costa Rica overcome its economic crisis through a significant restructuring that was based on economic liberalization (Marois, 2005). Honey (1994) cites U.S. Ambassador Curtin Winsor's remarks, which underline that Costa Rica had to make many concessions in order to receive aid.

> "… [W]hat we created was a cascading conditionality where we got the Costa Ricans to agree to do what the World Bank wanted, with what the IMF wanted, and with what commercial banks wanted. And we coordinated the whole thing so that they got a loan

package… and they in turn did what was necessary to make what all of us wanted to see done, work" (p. 66).

USAID played a significant role in advancing neoliberal reform in Costa Rica. The agency encouraged the implementation of "market-based principles to restructure the developing countries" policies and institutions (USAID, 2014). In Costa Rica, the import substitution model was replaced by an export-driven growth plan (Montanye, Vargas & Hall, 2000).

A crucial move to advance the neoliberal model was the privatization of the Costa Rican National Banking System (SBN) in the early 1980s as a result of tremendous pressure from the United States (Honey, 1994; Marois, 2005). The privatization process was initiated with the formation of BANEX, an agro-industrial and export bank (Honey, 1994; Marois, 2005). BANEX was formed by a neoliberal Costa Rican coalition that included private bankers, industrialists, and coffee exporters. USAID offered loans with attractive terms to BANEX and other private banks that were set up later, viewing them as partners in expanding reforms and the export-driven agenda (Honey, 1994; Marois, 2005).

In 1988, the Modernization of the National Banking System Act allowed for further deregulation. A key change that would have implications for peasants was the removal of the Minister of Planning and the Minister of the Economy from the Board of Directors of the Central Bank. The presence of these Ministers had ensured social development was considered when making monetary decisions; their removal meant most of the seats would be taken by the private sector (Marois, 2005).

Following these changes, there was a redistribution of support and credit to different social and economic sectors (Aguilera Morató, 2013). For example, the economic resources that

during the social welfare state were invested in small and medium size farmers were now reassigned to producers of non-traditional exports (Robson, 2009).

The agriculture of change

The export strategy promoted by the World Bank, IMF, and USAID continued to be the focus as Oscar Arias began his presidency in 1986. The Structural Adjustment Loan (SAL) II required a more extensive reorientation of the agricultural sector and President Arias launched a policy known as the "Agriculture of Change" (Robson, 2006). Under this policy, the government further incentivized non-traditional exports such as macadamia, melon, cut flowers, African palm, cassava, etc., and reduced or eliminated subsidies and support for local grains (Robson, 2006; Hansen-Kuhn, 1993). To incentivize exports, the state also introduced bonds (Certificados de Abono Tributario) that could be used by exporters to reduce tax liability or traded for cash. However, these bonds were available only to the final exporter, not the producer and, thus the state was mostly helping transnational corporations (Hansen-Kuhn, 1993).

While the policies implemented under the Agriculture of Change helped Costa Rica meet the requirements under the SAL II and benefited certain sectors of society and foreign investors, it had detrimental effects on small producers, as well as on the environment (Hansen-Kuhn, 1993). Small producers faced serious obstacles in the production of non-traditional crops. From not having the knowledge and infrastructure to embark on the cultivation of a new crop, to lacking access to credit, many small producers saw themselves stuck having to continue producing the crops they knew, but without any support from the state or protection from imports. The small producers that were able to go into non-traditional crops usually did so through contracts with corporate agribusinesses which forced peasants to relinquish control of

their land and production (Hansen-Kuhn, 1993). Hansen-Kuhn provides an incisive summary regarding the impact on small producers:

> “For Costa Rica's small domestic-market producers, the "Agriculture of Change" has been a disaster. According to farmers' organizations, the emphasis on export production has led to a deepening dependence on imported food, including subsidized U.S. food aid that competes with local production. Since the early 1980s Costa Rica has gone from near self-sufficiency in food production to importing over one half of all cereals consumed. Corn and beans imported under USAID's P.L.480 food assistance program have undercut national production, and wheat imports, though not in competition with local crops, have altered consumer tastes. The result of adjustment measures imposed by the World Bank and the food aid administered by USAID in Costa Rica has been greater debt and a loss of food security” (1993, p.2).

While USAID tried to implement programs to avoid resistance, peasant movements formed to protest the unfair conditions they were facing and to defend their livelihoods (Edelman, 1998; Marois, 2005). After several confrontations peasants were able to obtain some additional access to credit, but there was also increased government repression (Marois, 2005). Eventually, the strategies implemented by USAID cornered peasants forcing them to either negotiate or give up (Edelman, 1998 and 1999, quoted by Marois, 2005).

The environmental impact of a non-traditional agricultural export strategy was also severe as large amounts of agrochemicals were needed in the cultivation of the new crops (Montanye et al., 2000). Botella-Rodriguez (2014) states that the non-traditional agricultural export strategy made the country dependent on imported agrochemicals, machineries, and other agricultural technologies.

Interestingly, USAID also had a hand in altering one of Costa Rica’s traditional crops through a program to modernize and intensify coffee production. This program encouraged the use of coffee varieties that could grow in the sun, but while these varieties could produce a

higher yield, they also needed fertilizers and pesticides (this is further detailed in section 5.3) (Perfecto, Vandermeer & Wright, 2009).

Central American Free Trade Agreement

The neoliberal approach was further consolidated with the entry of Costa Rica in the Central American Free Trade Agreement in 2007. This was a key event that cemented the adoption of the neoliberal model. The treaty was passed after 51.6% of Costa Ricans voted in favor of joining CAFTA in a public referendum. The narrow win reflected the continued polarization of the population. There had been several years of internal struggles as well as important protests against the treaty in 2006 and 2007 (Robson, 2009; Spalding, 2014). CAFTA eliminated or drastically reduced tariffs on agricultural products and a variety of other goods. The agreement also limited the government's ability to apply protectionist measures (Robson, 2009).

CAFTA also solidified Costa Rica's relationship with the United States, with the U.S. becoming Costa Rica's primary trade partner: approximately 47% of Costa Rica's imports originate from the United States. There has also been heavy investment by American companies, including Intel, Procter & Gamble, Hewlett-Packard, Boston Scientific, Allergan, and Baxter Healthcare, among other industries. This investment is reflected in the diversification of exports in Costa Rica, which now include computer processors and medical supplies. Costa Rica now accounts for 40% of CAFTA exports to the U.S. (Dyer, 2013).

Just as the other measures implemented in Costa Rica to support the export-driven development model, joining the CAFTA contributed to increasing the wealth of the certain sectors but it did not present favourable conditions for peasants (Robson, 2009; Morató, 2013).

In a study published by USAID, this agency recognized the challenges that peasants and small farmers would face:

> "While a number of studies have shown that small-scale producers of basic grains and other sensitive products will find it increasingly difficult to compete as applied tariffs on imports of those products from the United States decline or disappear under the treaty, these effects on particular producers are likely to be outweighed by the anticipated positive benefits generated by trade liberalization—including lower prices for food and other products consumed by the poor. However, those small farmers who face new challenges resulting from the Agreement will need help in making the adjustment to more productive economic activities, within or outside the agricultural sector" (Bathrick, 2008, p. 10).

The results of 30 years of neoliberal policies

The last thirty years of neoliberal reform have had a profound effect on Costa Rica. In spite of the continued resistance by diverse sectors of the population, the neoliberal model persists (Robson, 2009). While Costa Rica's economy did show an important improvement since the implementation of the neoliberal model, it is imperative to underline that neither all production nor social sectors profited from the changes (Aguilera Morató, 2013). Key consequences of the policies implemented include:

- The dismantling or privatization of several public institutions (Robson, 2009) and the resulting disappearance of jobs in the public sector, which predominantly affected women, and decline in social services (Hansen-Kuhn, 1993).
- An increase in income inequality, as corporations benefited from liberalization policies while small producers suffered (Hansen-Kuhn, 1993; Montanye et al., 2000).
- High fluctuations in GDP growth rates, reflecting instability (Marois, 2005).
- A loss in food sovereignty with an increased dependency on imports and higher exposure to risk (Hansen-Kuhn, 1993; Montanye et al., 2000).

- The environmental degradation caused by increased agricultural production and the associated use of agrochemicals (Hansen-Kuhn, 1993; Montanye et al., 2000).

The sustainable development model

As described in chapter two, starting in the mid-1800s Costa Rica had already recognized the need for environmental conservation, creating many laws regarding the environment and implementing many policies to guarantee its care (Evans, 1999). In contrast, for most of the countries in the world, the realization of environmental problems resulted from several crises affecting natural resources in the mid to late 20th century (Pierri, 2005). This brought environmental issues to the forefront of the political arena in the 1970s and the discussions on how to address these crises crystallized in the Sustainable Development project in Rio Summit in 1992 (Pierri, 2005).

Sustainable development, as a conceptual model, in part evolved from and contains some elements of the three most important environmental currents that coexisted previously to its emergence (Pierri, 2005). These currents are the ecological conservationist, the moderate environmentalism, and the critical humanist.

The ecological conservationist current has its origins in the naturalist conservationist movement of the 19th century and on Leopold's (1949) ideas of bioethics (Pierri, 2005, Rodriguez & Govea, 2006). The moderate environmentalism or 'weak sustainability' was a more recent trend with an anthropocentric perspective that was the most influential to the Sustainable Development model as expressed in the Brundtland Report (Pierri, 2005). The other most important current was the critical humanist current that was represented in the 1970s with the eco-development project, conceived under the premise that the environmental problem is not an

issue that is the result of “physical limits external to society,” but to the “dominance of capitalism and its intrinsic nature: an expansionist force that creates problems of contamination, environmental degradation and income inequality” (Pierri, 2005).

Costa Rica was one of the first nations to align itself with the sustainable development model set forth by the international Earth Summit Conference of Rio de Janeiro in 1992 (Rankin, 2012). This model quickly gained public support since Costa Rica had a strong and lasting “green tradition” (Evans, 1999) that provided fertile ground for the consolidation of this project. This model would later be incorporated into the country’s national goals and embraced by the Costa Rican people.

Picado Umaña (2011) provides an illustrative example of how fast the sustainable development paradigm became part of the Costa Rican discourse by pointing out that President Figueres addressed sustainable development in his inaugural speech in 1994. Figures included terms of social equity, political participation, and environmental sustainability as key elements of sustainable development, prioritizing the latter as one of the main objectives of his mandate (Picado Umaña, 2011).

During this time important institutions were also created to address environmental issues. The Ministry of Environment (MINAE) was created in 1992, the National System of Conservation Areas (SINAC) which includes over 25% of the national territory under diverse protection regimes such as national parks, forest reserves and wildlife refuges was created in 1998. In 1996, the National Fund for Forestry Financing (FONAFIFO) was created to direct international monies, especially Carbon Bonds, to payments of environmental services, by promoting reforestation and forest conservation.

As stated in the Brundtland Report (1987), sustainable development implies the satisfaction of current needs without compromising the ability to satisfy the needs of future generations. In this sense, as Pierri (2005) argues, conservation and development become highly intrinsically related to one another.

In the last 40 years, Costa Rica's government has ratified its alignment with sustainable development through several international agreements. For example, the Strategic Partnership for Cooperation and Sustainable Development with the Netherlands, the Republic of Benin and the Kingdom of Bhutan, a ten million dollar project that lasted for five years, was one of several projects that Costa Rica implemented. Additionally, international collaboration in conservation issues is also seen in the numerous NGOs (non-governmental organizations) that have been working in Costa Rica since the 1980s (Edelman, 2005).

The commitment to this model at the national level is further exemplified by the introduction of the sustainable development discourse and related projects into the National Development Plans drawn up by the different Administrations since 1992. These plans embrace sustainable development as a central theme, informing of the economic activities linked to conservation that have been prioritized during different mandates (The National Plan for Development, 2011- 2014). However, in its narrative the fundamental relationship between the protection of environmental assets and economic growth makes the first an essential motor of the latter. For instance, the 2004 modification of the law on water management, aimed to guarantee that this specific natural resource would be allocated to prioritizing economic development projects, negatively affecting local populations when there were water shortages. Such a conflict occurred between locals of the town of Sardinal and the corporate tourism project in Playa de

Coco when water was diverted to irrigate golf courses (Cover-Ruiz, Reilly-Brown, Saavedra, 2009).

Conflicts of interest in which the government of Costa Rica prioritizes development over the needs of the local population and conservation efforts are not isolated events (Cover-Ruiz, Reilly Brown, Saavedra, 2009). Another example of the clash between economic growth and conservation interests is exemplified by the recent push to build hydroelectric plants (Corella, 2014).

Tourism and ecotourism

The interest in leveraging Costa Rica's natural beauty to generate tourism-related activities gained forced in the mid-1950s with the founding of the Institute for Costa Rican Tourism (ICT) (Molina Jiménez & Palmer, 2004). In 1985, the Tourism Incentives Law was passed with the goal of encouraging investment to expand the tourism industry by providing financial incentives and tax breaks for tourism-based enterprises (Rankin, 2012). By 1992 tourism had become a major industry and earner of foreign currencies.

The rapid growth of the tourism industry caused concern regarding its impact on the environment and the Costa Rican government developed plans to continue to leverage tourism, while reducing its impact on the environment. In line with other international certifications, such as ISO 14000, the FSC, and others, a Sustainable Tourism Certification program was implemented and the ICT began to monitor the activities of the tourist industry with regard to the environment (Rankin, 2012). Its biodiversity and natural beauty combined with sustainable practices made Costa Rica a great destination for ecotourism (Rankin, 2012).

The International Ecotourism Society describes ecotourism as 'responsible travel to natural areas that conserves the environment and improves the well-being of local people (TIES, 1990).' Those in favour of ecotourism position it as a market-based activity that can bring revenues to local communities while at the same time caring for the environment and promoting conservation (Horton, 2009), situating ecotourism within the sustainable development model.

For many rural people, ecotourism has emerged as a possible way to improve their livelihoods without damaging the environment while at the same time maintaining their agricultural practices. In order to help peasants benefit from ecotourism, the Alianza Comunitaria Conservacionista de Turismo Alternativo Rural (the Costa Rican Association of Rural Community Tourism, ACTUAR), was created in 2001 by grassroots conservation organizations (ACTUAR, 2014). ACTUAR is an umbrella organization that helps small rural producers to take part in the tourism industry with small scale rural tourism projects.

Tourism increased and by 1992 tourism (including ecotourism) had surpassed coffee and banana exports as income generators (Molina Jimenez & Palmer, 2004). In 2009, Costa Rica became the number one tourist destination in Central America and ranked 42nd worldwide (Rankin, 2012). In 2012, Costa Rica received 2.4 million tourists (EFE, 2013) and in 2013, tourism and ecotourism accounted for 4.6% of Costa Rica's GDP (Vindas Quirós, 2014).

Sustainability and neoliberalism

While the model of sustainable development, which mainly includes ecotourism and investment in carbon neutrality, has been supported by Costa Rican governments since 1992, the dominance of the neoliberal model over the past three decades has made it difficult for sustainability to be implemented in many areas of production, as I believe Robson implies in his

work (2009). It has also eroded the contributions that had been made by welfare state of Costa Rica that provided the peasants with some minimal financial and social support. Sustainability goals clash with the neoliberal model that is in place in Costa Rica, whose overarching goal is increasing revenues and economic growth. Unless changes are made, the implementation of a truly sustainable development model will remain elusive.

Chapter 5: Results and Conclusions

Section 1: Peasant Identity in the ASBC

Introduction

In this chapter, I will provide a brief description of the inhabitants of the Alexander Skutch Biological Corridor (ASBC) showing some of the results of my research. Considering identity as a fundamental human need (Max-Neef, 1994), the specific objective of this chapter is to provide a better understanding about some social and cultural aspects that characterize the identity of these self-ascribed peasants, and how this is related to the tensions that emerge from trying to survive under the current economic pressures and required conservation efforts in the corridor.

Land Tenure in the Corridor

Most of the inhabitants of the Alexander Skutch Biological Corridor were born in Costa Rica and the majority of the people I interviewed were white-mestizo. The first settlers arrived in this area between 1930 and 1950 as a result of an internal migration from the Central Valley (San José) and from the northern region of the country that was aimed to expand the agricultural frontier (Varela Jara y Gonzales Calvo, 1987).

During the first decades of the 20th century, the government of Costa Rica was looking to expand the production of coffee, the main source of economic income (Hall, 1991). The Costa Rican Government offered urban labourers and landless peasants the chance to settle in this area. From accounts of local peasants, the homesteading laws of the day allowed new settlers to clear

the forest and in this way take ownership of the land based on their ability to manage their agricultural production.

Most of these first settlers decided to leave the Central Valley where the living conditions were getting more difficult and the chance to own a piece of land was becoming harder as a result of economic and political instabilities (Samper, 1990).

Most of the current members of the ASBC own a piece of land (between 0.5-10 hectares) in the corridor or in the surrounding area of this conservation initiative. Table 1 shows the small percentage of people who rent or borrow a house in this area. Based on my observations, there are also a few foreign and local people who have come recently to the community (2013).

TABLE 1: Land Ownership

	Females	Males
Owns	86%	92%
Borrows	7%	3%
Rents	7%	3%
Other (provided to worker by owner)	0%	2%
Total	100%	100%

Gutierrez Espeleta (1981) argues that during the decades of 1970s and 1980s, the agrarian reforms conducted by the state of Costa Rica led to a change in the distribution of land that resulted in the formation of larger farms concentrated in fewer hands at the expense of the loss of smaller farms. Foreign investors to the area, both of national and international origin, became

owners of larger pieces of land. Some members of the community that I interviewed are currently working as employees of these bigger farms. Some peasants have expressed the concern that foreign people own the larger pieces of land, for example, when talking about the things they dislike the most about where they live…Julio Chavez explains…"*well, truly, what I like the least, to be honest with you, is that North Americans, gringos, they buy up the land and become like landlords and they give nothing.....they don't provide jobs*"……. (Julio Chavez).

In a similar vein, another peasant stated that the government should be more in control over those who own larger parcels of land because of the threat that large foreign owners can pose for small businesses in the area. As this peasant stated "*I don't think it's good for us that foreign people own most of our land, the government should care about this*" (Elias Morato).

Education and religious orientation

The majority of people that I interviewed stated that their families have been living in this area since 1935-1970 (2013). Table 2 shows that the 104 interviewees were between 20 and 87 years old and they accounted for 5% of the total population of the communities of the ASBC of approximately 2100 people (Canet-Desanti, 2005). Although Costa Rica enjoys a good standard of education, most of the people I interviewed who were between 45 and 80 years old achieved only primary school level of education. However, the few young people living in the area that I was able to interview finished secondary school level and some are attending University[7] (National University of Heredia).

[7] National University is located in the city of Heredia, near the capital San Jose.

Table 2: Age breakdown (104 respondents)

	Females	Males
> 20 years of age	0	1
21-30	4	5
31-40	12	15
41-50	14	14
51-60	7	12
> 60	7	13
Total	**44**	**60**

Although my interview did not include any questions about the religious orientation of the people in the corridor, their narratives always alluded to God and "God's will". I observed that on the weekends all the small churches were highly attended (Personal observations, 2013). The church also plays a strong role in the community organizational structure. As I mentioned in chapter 2, the historical political position that the Church has played in Costa Rica was notable for trying to build a social welfare state (Molina Jimenez & Palmer, 2004). In the corridor, based on my observations, the Church is still very influential, since it holds many community activities related to education, traditional cultural practices, and activities that are related to the conservation of natural resources. In general, people participate and engage in these activities giving to this institution a central social role.

The importance of faith in the peasants' lives is illustrated by a comment about God and its relationship to the peasants. Julio Chavez started answering the interview by saying the following: "*the peasant is someone who is born, grows, gets old, and dies in the field (country)…..many times he is the only one who can feel the struggles of life…..ever since*

peasants exist, God has been supporting them, God knows peasants have to deal with many struggles" (Julio Chavez).

Agricultural production

Most of the men I interviewed were small producers of coffee and sugar cane while the women were mainly housewives who are highly involved in the production of food for the family. However, there are people in the community with different occupations. These occupations include students, some of them attending the Universidad Nacional, teachers of primary and secondary school, construction workers, owners or employees of local businesses, and trades people. All the young people I interviewed were direct relatives of the first settlers of the area, some of whom are working with their parents producing coffee and sugar cane and some of whom are involved in other mentioned activities. Table 3 shows the main occupations of respondents.

After settling into the area, these small producers have mainly cultivated coffee. In order to offset the fluctuations of the price of the coffee, they have diversified their crops by adding the production of sugar cane, and some of them also have a few livestock animals. However, when it becomes necessary, they supplement the income of the production of their farms with temporary jobs. This ability to diversify agricultural activities and to engage in other economic activities is one of the characteristics that they share with one of the main definitions of peasants provided by Van der Ploeg (2008) and Grammorts & Martinez Valle (2006).

"Diversity (What Vander Ploeg, 2008 defines as diversification) *has allowed me to survive as a peasant"* (Jacinto Delgado).

TABLE 3: Occupations

Described Occupation	Females	Males
Farmer ("Agricultor")	9%	47%
Other	12%	12%
Business Owner	0%	8%
Peasant ("Campesino")	2%	8%
Construction Worker	0%	7%
Rural worker (trabajador de finca/peones)	0%	7%
Educator	2%	5%
Retired	2%	3%
Student	7%	3%
Baker	9%	0%
Housewife	57%	0%
Total	**100%**	**100%**

"*The fundamental thing that has helped me to live here and from my land is that I know that I should never be only dependent on one single thing*" (referring to just relying on coffee to make her living) (Juana Molina).

Nevertheless, some young men who are living in the corridor who don't work the land, but who identify as peasants, expressed a high level of discomfort with the inability to survive from agriculture. For example, a construction worker shared with me the experience of feeling frustrated and disappointed for not finding the way to feed his family through agriculture. Pedro de las Casas pointed out his deep pain regarding what is wrongly perceived by his father as a lack of sense of family commitment and disengagement from the tradition to grow coffee:

"My father thinks that I go to work outside because I don't like agriculture, I know how much he wants us all to be together, but I cannot accept him helping me out economically because I cannot make ends meet with what he is able to pay for my work with coffee. Coffee is everything to me, it's memories of my childhood, it is the time when the entire family gets together… But I cannot do that because, unlike the aboriginals who come to work during harvest season, I cannot live with those salaries… They don't send their kids to school, I cannot accept my children not having an education when things are getting so tough" (Pedro de las Casas).

Another peasant argued that they wished to continue with agriculture as he says "*although agriculture is depicted as a backward way of life"* (Jose Escobar).

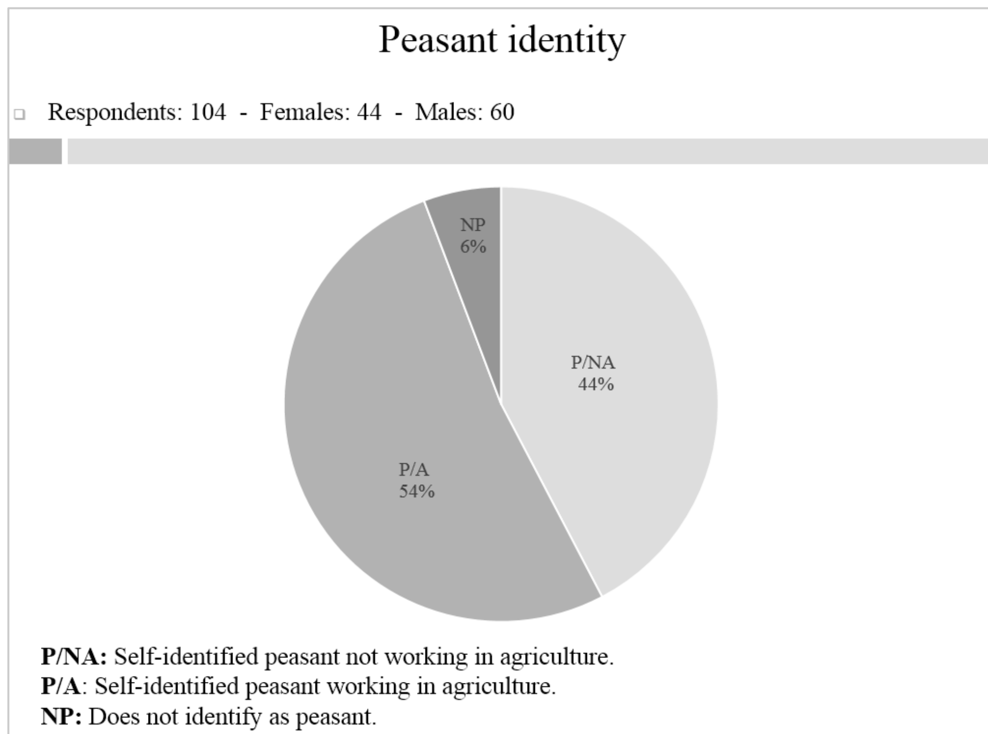
Following the same vein, Francisco Lopez claimed: "*No matter whether we peasants are believed to carry a backward way of life, I cannot afford to lose tradition*."

Self- ascription as Campesinos (Peasants/Farmers)

One of the most remarkable findings from my interviews is that the majority of the ASBC people refer to themselves as peasants even when they do not practice agriculture. As shown in figure 3, a majority of respondents define themselves as peasants although they are not involved in agriculture or livestock production. This doesn't fully match some traditional definitions in which an inherent characteristic of peasantry is to produce from the land (Van Der Ploeg, 2008; Silverman, 1979; Wolf, 1955). In this regard, the way that the peasants use to define their own identity is closer to Shanin's (2008) idea that 'being a peasant is, above all, a way of life'.

Interestingly, even those who have agriculture as their main economic activity make a distinction between being a peasant (*campesino*) and an agricultor[8].

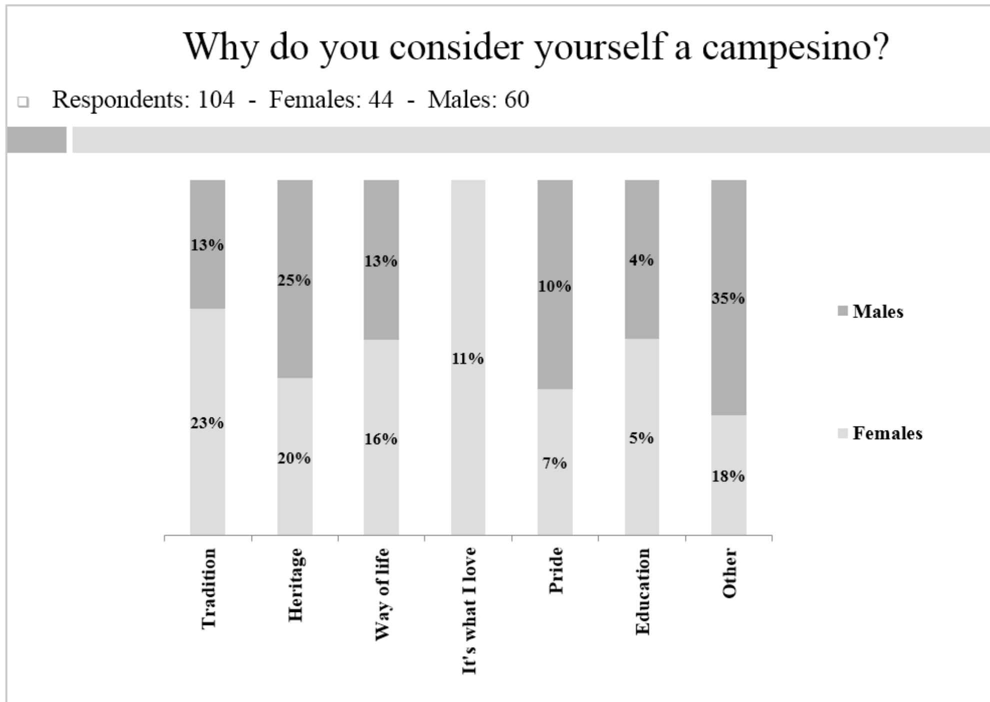
Figure I-1



In order to understand this trend, I asked all the people I interviewed what made them describe themselves in this way. The members of the ASBC provided me with a wide range of answers that I summarized in figure I-2.

Figure I-2

[8] Footnote: Agricultor is the term for which the closest translation in English would be farmer whereas the most common translation for the term campesino is peasant.



Tradition refers to repeated activities that form part of one's culture; Heritage has to do with family linage; and Way of Life refers to a philosophical paradigm with a specific set of values. The "Other' category refers to those who did not answer or whose answers were a mix of several categories.

These people believe that being a peasant is related to tradition, education, upbringing, love, pride, occupation or subsistence, a sense of place, connection to land or family ancestry. For instance, with respect to family ancestry, they argue that the fact that they were born in the field or were raised by parents or grandparents who were peasants also makes them peasants independent of how they currently make their living.

The distinction between *campesinos* and *agricultores*

During my interviews I heard frequently many commentaries about the difference between *campesino* and *agricultor*. I found this distinction interesting, so I examined other variables such as the respondent's age and gender to determine if these variables are connected to how these people identify themselves. The only significant variable I found important was age; the older the people are the less they prefer to use the term *agricultor*. Additionally, I did not find a substantial difference analyzing both genders. However, I observed that there is a tendency for women to use the term *campesino* more often than men. I think this point it worth exploring in future research in this area since it can provide relevant information about the different physical spaces and roles that men and women hold in the corridor.

I asked these people if they could expand on the differences between these two terms. Interestingly, for a minority, both terms have the same meaning, while for the majority, especially among older residents, being a peasant means to work the land or belong to the field while being an *agricultor* means to be a professional, to be able to sell what it is produced.

> "*A peasant is someone who works the land and lives happily in the field. While a farmer is more sophisticated…being a peasant comes from my ancestors….here people prefer to say I am a peasant instead of a farmer; they don't want to say, I am a merchant or whatever other word…" (Arnaldo Moreno).*

Nevertheless, for some peasants this distinction has a political connotation. They express that the modernization of the country brings new meaning to the term peasant, a term that has been related to ignorance and cultural backwardness. They say that the term peasant is undervalued while *agricultor* is a safer description. However, they argue that they prefer the use

of the word *campesino* because this term expresses more accurately the pride that they feel in the way they decide to live their lives. In relation to this political distinction, one male peasant told me: "*It all depends on how you ask me. If you ask me in a kind way, I will tell you I am a peasant, otherwise I would tell you that I am an agricultor"* (Adolfo Cipriano)

This important distinction some people make between *agricultores* and *campesinos* may reflect their own perception of their vulnerability as a result of some policy changes implemented by the government of Costa Rica in the 1980s that negatively affected this social group.

These changes damage the image of the *campesino* and influence public perception of them as inefficient as they appear unwilling to adjust to the requirements of a modernizing country. This is ironic since peasants are largely considered the iconic identity of the country. Additionally, peasants were also being characterized as inefficient even though they have always been central to the economic development of the country. This is especially true because coffee production requires a high level of traditional agricultural labour, which cannot be mechanized. The peasants, as Bartra (2008) argues, were portrayed as people who are backward or resisting prosperity and modernity. The peasants' sensitivities and reflections about this portrayal were common in the interviews. For example as one peasant said "*they will understand our importance after we are gone*" (Adolfo Ballesteros). Another peasant said "*the way modernity is changing our lives is going to destroy humanity*" (Raul Cortez).

It was with a lot of anger the peasant shared this experience with me. These people feel very vulnerable and they are sensitive to the perceptions from the rest of the world. However, with all the vulnerabilities, difficulties and economic fluctuations they still feel that their role in society is fundamental and they remain proud to call themselves *campesinos.*

As one peasant said "…*peasants are the umbilical cord that connects the land to the people…you may produce tons of computers but you will not eat them…"* He reinforces this idea by adding; "*…when a baby cries, you cannot give him a computer …you have to provide the baby with a bottle filled with milk… this is what governments and urban people cannot understand…*" (Jacinto Degado).

Obstacles to their livelihoods

As Robson pointed out in 2009, the financial supports through subsidies and loans are no longer available to coffee producers. Instead these finances are allocated to transnational corporations to assure economic growth of the country without taking peasant livelihoods into account (Morato, 2012). This concept is felt by the peasants of the ASBC, "*The government wants to kill us, there is very little support from the government…everything needs to change here…it is impossible to support ourselves doing this"* (Mario Azcurra).

Among the obstacles *campesinos* face in practicing agriculture nowadays is the role of the international markets. The *campesinos* themselves argue that the low price of coffee, which is set by the international market, and the lack of government support are the main reasons they cannot improve their economic conditions. One of the peasants argued:

> "*The cause for the drop in coffee is not production, it is the price of coffee that goes down and down and on top of that we had a disease this year that attacked coffee very harshly. At the same time, the cost of living goes up a lot while coffee goes down…it's impossible to support ourselves by growing coffee*" (Benito Juarez).

As one peasant says poetically *"Entre mas lejos está uno de la mata de café, más plata, y entre más cerca, más pobre es uno.", "The further you are from the coffee plantation the more money*

you have, as soon as you get closer to the plantation, you lose money". This quote shows that they understand that the real profits from the coffee trade come at the retail end of the chain, whereas the producers receive the least economic benefits. This is proof that it is tradition not money that is driving these peasants.

Coffee producers in many areas of Costa Rica have a long tradition of trying to cope with the international fluctuations of coffee prices. The creation of cooperatives and government support were fundamental to keep these people on their land.

The presence of the cooperative COOPEAGRI

COOPEAGRI is the main cooperative that currently buys and commercializes the coffee that is grown in the ASBC areas. Based on my observations, it seems that the coffee producers are concerned about how COOPEAGRI is managing and administering the economic resources. However, the members of the corridor are very committed to the cooperative, even though they would like more control over their resources and greater influence in the decision making process.

The lack of support from the government is especially evident in the limited subsidies given to coffee producers. In addition there is also a lack of technical support. For example, last season there was an outbreak of the *Roya* rust, a disease that attacks coffee plants, which affected many coffee producers. As a result, this *Roya* outbreak is impacting the communities who have not many other alternatives to survive this huge decrease in their coffee production.

In relation to this outbreak, Adolfo Cipriano says *"… I was slow this winter. I should have done more things about the Roya so maybe I could have avoided such massive plant infections….".* I feel it is worth mentioning that they are very familiar with navigating the hurdles in their lives

with no expectation for solutions from the government. They are familiar with dealing with the many problems they face every season with their coffee production by themselves. This is why many peasants are permanently getting together to discuss how to find alternative livelihoods without abandoning the coffee plants. Their attachment to the land and the coffee plants explains why these people are able to leave but then come back and maintain their coffee crops even though they often do not benefit financially from it.

They leave and come back

The crisis that occurred when the price of coffee plummeted in the international market in 1980 forced many of these people to find another way to make their living. An important group of these small coffee producers decided to leave the country and illegally cross the US border to work in New Jersey, usually in low-wage jobs (Chaves, 2010). Most of these people were able to send money to their families at home in Costa Rica from the US. By doing this, they were able to keep their land and come back in the 1990s to continue practicing agriculture. All the interviewed people who decided to return to the area are currently growing coffee as they did in the past.

High level of involvement

An active involvement in the community is one of the main characteristics of the ASBC people. Although they perform intensive work, women as well as men are committed to various community efforts. This tradition of active community participation is explored in more detail in chapter 5.2, however, it is important to highlight that such traditions are important parts of the human capital that is found in these communities. Their human capital is reflected in the quality

of the connections among people and also in the way people collaborate together to solve the problems of the community.

This level of community involvement shows how they are accustomed to organizing and achieving what they need to get done on their own. But despite all the difficulties, they say they want to continue being independent. They argue that their attachment to the land, the knowledge acquired through working the land, the contact with nature, and the ability to be in charge of their own time cannot be replaced by any other profession.

I suggest that by calling themselves campesinos, they are standing up for their identity and refusing to accept the negative perception fostered by those who believe that peasants represent an attachment to the past and an obstacle for the present modernization of society.

My research reveals some specific characteristics of the ASBC people that I argue make them a special social group. Although they share many features with peasants around the world, their identity remains particular due to Costa Rica's **historical social foundation** that is ever present in their values and practice; which to some extent **delay the appropriation of the individualism** that is the core of the neoliberal philosophy. These people indeed are living in a country that was a pioneer in the defense of the environment. Moreover, they are immersed in a conservation initiative that the ASBC communities created to develop sustainable alternative livelihoods. Additionally, some of these self-defined peasants have left the country and returned to continue with agriculture. Although they find a lack of representation in the coffee-related cooperative, they still support the cooperative and the conservation efforts of the ASBC. All these elements give these people a singularity as a group of peasants.

The peasants of the ASBC encounter material and economic difficulties with agricultural production, stemming not only from diseases like *Roya*, but also from variable international market prices, low governmental support, and sometimes difficult relations with the coffee cooperative they belong to, such as a perception of a lack of transparency and communication. They also face ideological challenges from a generalized view of *campesinos* as backward and opposed to modernity. In spite of this, most maintain a strong identity as *campesinos* even when they have been forced by circumstances to abandon the practice of farming the land. Their identity as *campesinos* goes beyond the practice of farming and prevails oftentimes with evident pride despite the low status associated with being *campesino*. For them, to be *campesino* means much more. It includes a way of seeing the world, a series of values that make for a good life, and a love for the land. This final aspect, centered on their environmental awareness, is the focus of the following section.

Chapter 5 – Section 2: Environmental Awareness and Sustainability in the ASBC

The objective of this section is to present my research findings with regards to the relationship between the inhabitants of the ASBC and nature. I will consider to what extent this relationship is tied to sustainability efforts in the corridor by exploring the level of environmental awareness in the local population. While one objective was to better comprehend the link between agricultural practices and conservation goals, I will also consider the activities that are not directly related to conservation goals and yet affect the environment.

In this section, I will use Chuliá's model (see section 4.2) as the framework from which to undertake the exploration of the above questions. I will utilize his environmental awareness indicators as a basis from which to analyze the results of my investigation. Chuliá argues that these indicators make evident different dimensions of the concept of environmental awareness, operationalizing it. Making use of this model, I will provide the environmental awareness indicators and its dimensions that emerged in the context of this investigation, and which are specific to the ASBC communities.

In the process of analyzing the results of my work, I identified which are the environmental awareness indicators among the inhabitants of the ASBC that are related to those that are defined by Chuliá's model. However, despite the similarities identified, I did adjust Chuliá's indicators with consideration of the particularities of the ASBC context.

My main argument in this section is that peasants in the ASBC are engaged in non-sustainable practices despite the fact that they are aware of the importance and need to take care

of the environment. I will argue that they continue to engage in unsustainable practices because of the current socio-political context within which they live.

In order to provide evidence that the peasants in the corridor are aware of their environment, I will describe the ASBC environmental awareness indicators. In addition to these different indicators, other topics directly related to the indicators arose spontaneously during the interviews. The exploration of these topics facilitated the organization of the information collected in this work, and will allow me to more clearly articulate the complexity of the matters that I seek to cover in this section.

The environmental awareness indicators listed below were obtained from analysing the information of the answers provided by a set of questions in the last section of the interview (see questionnaire and related graphs in the Appendix). I am looking in the following paragraphs to demonstrate that the ASBC population presents the indicators of all the dimensions of Chuliá's framework of environmental awareness.

Environmental Awareness dimensions and its indicators in the ASBC:

A. Indicators for affective dimension under the Chuliá's model.

Chuliá (1995) believes that indicators of this dimension are: concern for the environment, the evolution of this problem over time; and the attachment to pro-environmental values which are those values that are related to the care of the environment.

I believe that the ASBC people present the indicators of the affective dimension since the majority of the population are concerned for the way in which they pollute their land when producing coffee (see 5.3 for peasants' contradiction about being environmental aware and carrying out unsustainable practices). They also have acute awareness of the damage they inflict

with the use of burning in sugar cane production, waste management and pollution and the use of detergents (see appendix). They complain about the lack of government support to better deal with waste management and in this regard, some woman tried to carry out a project to deal with this issue, but the lack of proper infrastructure made it very difficult to be continued (personal observation, 2013). Additionally, they are concerned about the consequences of using chemicals for agriculture that may end up in the rivers. Also, they know the social (health) and environmental implication of their acts. For example, Dulio Gonzales, a peasant explains:

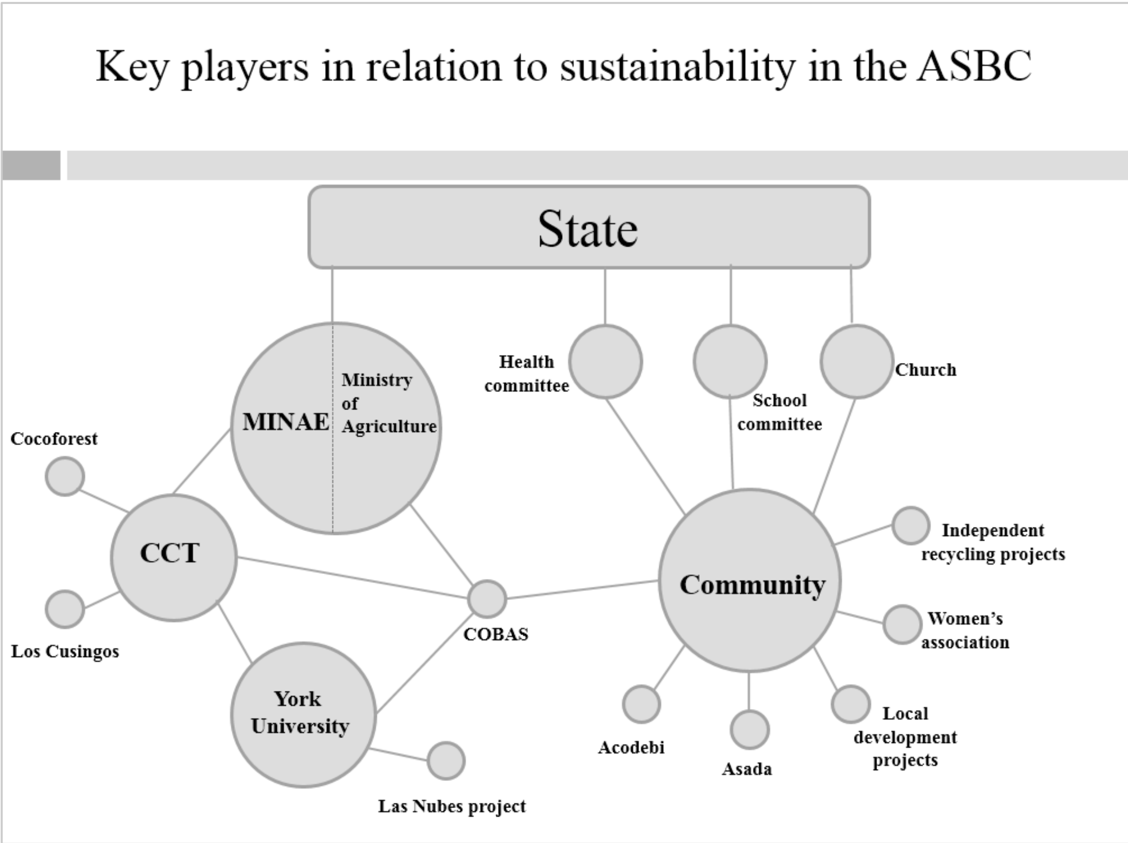
"The chemicals kill the soil, and the herbicides are really bad, sometimes to avoid hiring a worker, we need to use herbicides. However, we know that then, when it rains, all these things end up in the rivers and pollute our water." (Dulio Gonzalez). In the same vein, another peasant states: "*We should find the way to stop using chemicals because at the end, they damage the plants and also the health of the people."* (Julio Chavez).

I understand that the mode in which peasants express their concern for their acts on the environment, and how they identify their concerns is another way to make evident their sensibility or receptivity towards environmental problems and the gravity of them. While these indicators may not exactly mirror those defined by Chuliá, they are without a doubt closely related.

B. Indicators for cognitive dimension under the Chuliá's model.

Chuliá argues that the cognitive dimension of environmental awareness includes indicators such as a certain degree of information of environmental problems as well as a familiarity with the institutions that work on environmental issues and the available policies to address environmental problems (See details in last section of 4.2 and see figure of the main actors).

Figure of the main actors of the corridor



It is clear that people in the ASBC satisfied the aforementioned dimensions of Chuliá's model because:

The inhabitants of the corridor are aware of the environmental problems of the area because as it is illustrated in the graphic W: they are clear about which practices have negative impacts on the environment. They also know which institutions are working with environmental issues at the national, regional, and local levels as well as the NGOS. Costa Rica has a long tradition of dealing with environmental problems [9] and this became evident in the narratives of these people who are constantly talking about the importance of the environment. As I show in graphic S1, they know and value the influence of all the organizations that are related to conservation issues in the corridor. Nevertheless, they express the difficulty in being able to carry out sustainability practices when facing challenging conditions in maintaining their livelihoods. In this regard one of the peasants, Anastacio Lopez, states: "*Conservation by itself it is not enough, conservation should be linked to our livelihoods.*" (Anastacio Lopez)

Peasants of the ASBC are fully aware of the reasons that drive them to irremediable contamination and they also know what practices they could implement to avoid it. Inhabitants know the dangers of herbicides and fertilizers and they do not use these products when producing their own food.

Chuliá (1995) defines the awareness of the causes and agents responsible for environmental problems as one of the indicators of the cognitive dimension. The peasants have different perspectives in relation to this awareness. Some of them think that the prices of coffee and the lack of government support are the main reasons to continue with practices that damage the

[9] See chapter 2 for details on the green tradition of Costa Rica.

environment. These factors, they argue, force them to continue polluting the land and burning the sugar cane in order to avoid the need for extra labour.

They also argue that they should have been more assisted by the state of Costa Rica in looking for more sustainable ways to produce coffee. As Joaquin Fernandez says*;" there is no chance to start an organic production with some initial capital, I am following the idea of practicing agro-ecology, but it is not possible without the financial support of the government and the technical support of institutions such as the Ministry of Agriculture (Joaquin Fernandez). I am one of the few in these communities who doesn't use chemicals on my land…this is because I have my own financial resources, but this is not a practice* (referring to sustainable agriculture*) that other people can afford".*

In the same vein Alvaro Gutierrez states*; "there is very little support from the government and bad pay for our coffee."*

Based on these narratives from the peasants, I believe that they know the causes and the agents that force pollution. Maybe they can have discrepancies on the source of the causes of it, but they are aware of those factors reinforcing non sustainable practices in the corridor. This is why I defend the idea that these people present the indicators of the cognitive dimension of environmental awareness.

C. Indicators for conative dimension under the Chuliá's model.

According to Chuliá, the indicators for this dimension include the disposition to act with ecological criteria, the willingness make the sacrifices to respect the norms and policies aiming to protect the environment. Chuliá argues that the main indicators associated with this dimension, are the perception of individual actions as something that is efficient and an

individual responsibility. This indicator is the one of the central themes in section 5.3. In that section, I explore why these peasants that satisfied almost every single indicator although with some variations of the Chuliá model, still engage in growing their coffee while damaging the land. This indicator requires further analysis in order to understand how people can be aware of the environment while polluting, a contradiction that drives section 5.3.

D. The active dimension in the Chuliá's model.

Chuliá includes in this dimension all the individual and collective actions to protect the environment. In this regard, the members of the corridor practice conservation activities by getting involved with initiatives such as those carried out by the Tropical Scientific Center (TSC) or York University in the corridor, as well as by implementing their own initiatives. The latter are personal and particular ways to contribute to the conservation efforts in the area. For example, these particular modes to be environmental can be carried out in the context of a church or with their own shelter for animals that get lost from the forest.

In this first part of this section 5.2, I showed that these peasants satisfied most of the indicators that Chuliá defines as necessary for having environmental awareness. However, the peasants still pollute their land. This apparent contradiction is explored further in section 5.3. I believe that even though these peasants engage in unsustainable practices, they are still truly conscious of the environment.

In the following section, I will present some findings that are related to Chuliá's indicators of environmental awareness which I then link to the results of my research and some personal observations made in the field.

In this last part of the interview, I focused my questions around the perceptions and general knowledge of the interviewees about the ASBC. Examples of the questions from this part were: What do you think about the presence of the Corridor? Why is it important and for whom? Are there ways to improve the ASBC initiative; what would these be? These questions are oriented towards discovering the relationship between these inhabitants and the main conservation initiative in the area and to learn whether it was contributing to these peasants in any way.

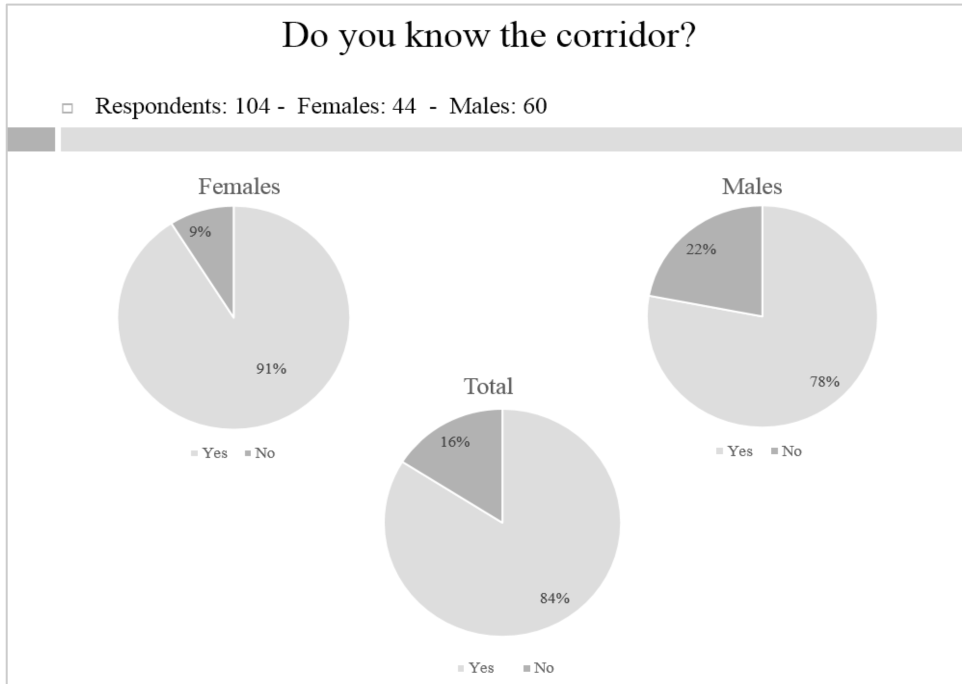
The value and appreciation of the presence of the ASBC

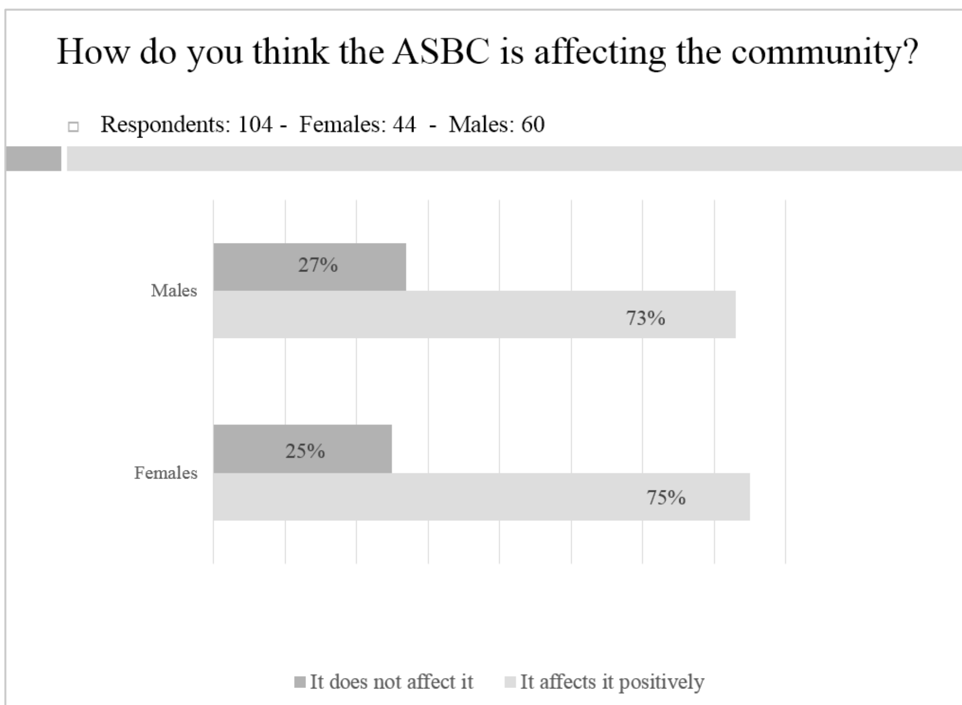
First, I inquired if these residents knew the corridor or not. The majority of females and males knew of the existence of the corridor (see Figure S-3), however, not all of them were able to de-limit it spatially, despite the fact that the communities of Santa Elena and a part of Quizarrá are included in the corridor.

The people of the ASBC value the importance of the corridor. They say that the ASBC is important for them, as well as for the local communities, and underscore the importance of the corridor not only regionally, but also at the global level.

They explain the reasons why the corridor is important and state their arguments in defence of conserving it. Their reasons for the relevance of the corridor are varied and associated with how they ultimately understand their own relationship with nature and the meaning it has in their lives. I will expand on this complex issue in the last part of this section.

Figure S-3 and S-4

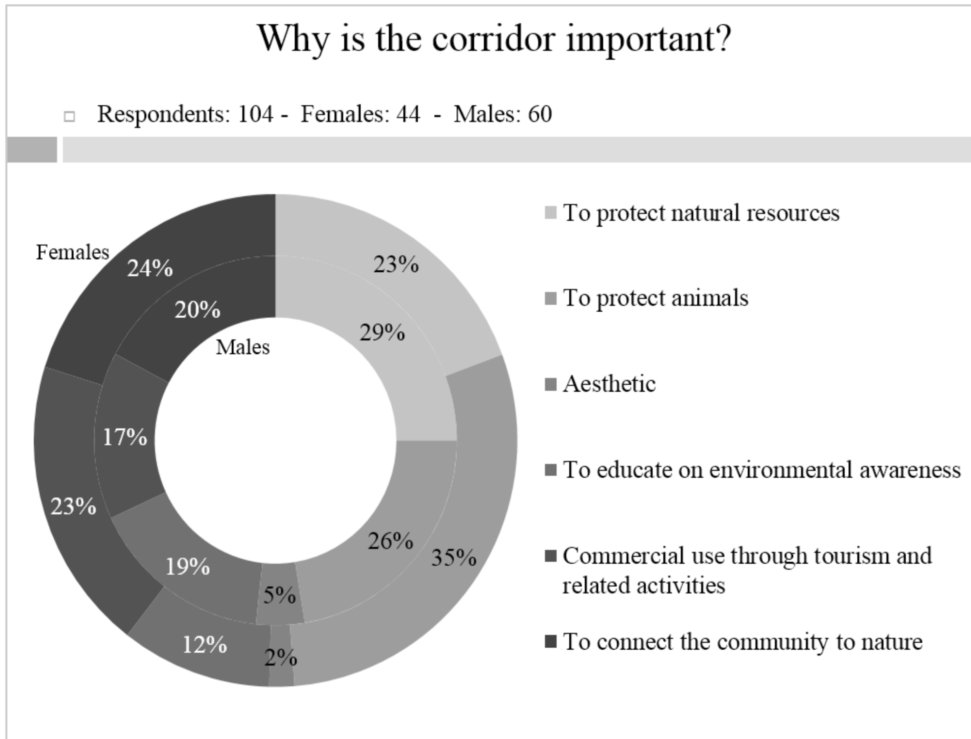




The information provided by the answers to the question of why the corridor was important was grouped in the following categories: 1) protect natural resources; 2) protect animals; 3) educate on environmental awareness; 4) aesthetics; 5) connect the community to nature and; 6) commercial utilization through tourism and related activities. In this last category, I have also included the interest of residents in reinforcing the link between nature and livelihoods.

It is important to note that, as Figure S-5 shows, men and women provided similar responses in terms of the categories – as well as in the distribution of the mentioned categories. However, based on some field observations and informal conversations with women, they seemed to be most concerned about the importance of the welfare of animals and of the corridor itself, and more worried than men about finding a way to improve their livelihoods through the use of the corridor for tourism- related activities of the corridor.

Figure S-5



Emergent topics about nature

In its work on the importance of the aesthetic of nature, E. O. Wilson (1992) maintains that the contemplation of the beauty that natural landscapes provides is one of the most important attractions for human beings. For this author, it is the perception of natural beauty through the visual perception and physical sensation that are experienced in that act of perception that provides wellbeing to human beings. In this sense, the members of the corridor consider that having a natural and beautiful place to see is fundamental for their lives. While the aesthetics category had a low frequency of responses in regards to the importance of the corridor, when I asked respondents why they enjoyed living in the region, aesthetics was a key point. They argued that living in the area gave them the opportunity to enjoy landscapes they would not see anywhere else. Furthermore, these respondents expressed many childhood memories, personal

experiences, and connection with nature associated with the area. This reinforces the point made by Wilson (1992), who states that the beauty of nature is accompanied by deep feelings that arise from experiences with the natural world. Residents of the corridor express these life experiences and connection with nature through statements such as the ones quoted below.

Victoria Manci states*…"nature, the rivers, the songs, the day and the night… everything looks beautiful here."*

"I cannot replace the beauty I have here…anywhere, just sit and you will see many different animals"

Another peasant states*:" I grow seeing them, and during some time they were not here anymore, but now they are coming back…I thinks this is happening because of the creation of the corridor."(Jorge Pietro).*

[In a place close to home] "…Everything is pure life (pura vida) here…"

Environmental education

The peasants' narratives examined in this section show the values that peasants hold for environmental education, and this is manifest in their concern for the preservation of the corridor. For these peasants, the ASBC is a space for the practice of environmental education, enabling them to learn and engage with nature. In fact, some peasants believe that environmental education is the principal and most important function of the ASBC since it's a place where they can learn about the environment and pass their knowledge to younger generation. This categorical assertion made by peasants with regards to education makes a lot of sense if we take into account the environmentalist tradition of the country (Fournier-Origgi, 1991). This assertion could also be the result of the state's implementation of conservation policies that have selected

environmental education as a tool to raise the environmental awareness of the Costa Rican population, using diverse media, such as radio and television (Evans, 1999).

In looking at the environmental education category, I have connected the possibility of enjoying family outings with the topic of education since I have heard that for many parents and grandparents, the idea of being able to show the vegetation and animals to children is very important. While this would not be considered formal education, it does enunciate the importance of orally-transmitted knowledge between generations (personal observations, 2013).

One of the most important categories that emerged in this work related to appreciation of the corridor was the great love and respect towards animals. In the work Human-Animal bonds, Walsh (2009) believes that living organisms function as elements centrally evaluated in the lives of people; this is visible in the inhabitants of the corridor. Through their narrative, these residents manifest profound feelings towards animals. This love is not only evident in their narrative, but also in concrete acts of kindness to animals that, personally, I had never experienced before (Personal observations, 2013), for example providing a shelter for animals, and another woman who designed her garden to feed bees and ants. Some members of these communities said that the corridor returned to their everyday life the possibility of seeing some animals again that they had not seen in the area since their childhoods.

The love towards the animals in the corridor is expressed in the following statements:

"…Years before, this was pure paradise…when watching the mountains you will see many different birds, if you look at my land, you will see that I have chosen some trees to make them to visit my place…. watching them makes me feel very happy… I have seen them since I was a child." (Aldo Lugones).

"…Watching nature; trees, animals… this was part of most of my life" (Juan Segada). "What would we do without nature…having a biological corridor helps people to follow through the idea of preserving the trees and the sources of life for all beings"(Mercedes Fonseca).

It is important to mention that these people show a love towards animals that seems to be a genuine feeling. It is manifested in particular actions of care in which this love becomes evident. However, we should take into account that the presence of concern about the care of animals could be a result of years of environmental education about the preservation of species, a topic that is very present in environmental discourses and with which these residents are familiarized. On the other hand, there is also a relationship between animals and the possibilities these would have in attracting tourism. In this category, (the protection of) birds have been listed and received particular emphasis because they appear to be an important tourism attraction in the ASBC area.

I should clarify that the category that connects nature with economic purposes or with means of survival will not be covered in this section because its treatment will be analyzed within a social and economic context that shows why the corridor would have the potential to link nature to livelihood. These topics will be mentioned in section 5.3.

Concluding with this section, I understand that after developing the indicators of environmental awareness from the model of Chuliá, I can argue that the inhabitants of the ASBC have almost full knowledge of the importance of the environment which led me to support the idea that they have environmental awareness although they engage in non-sustainable practices. They appreciate the ASBC conservation initiative in the area and value the importance of this initiative at local as well as global levels. Additionally, the concern and appreciation of the

animals and natural resources are associated with the concept of different aspects of environmental awareness. For this reason, I consider that the residents of the corridor are fully aware of the damages they inflict on the natural environment. However, they care and they defend their environment through their own ways.

In this section I build on the peasants' sense of identity to go more deeply into understanding their knowledge of the environment and their potential to take appropriate action. I have concluded that the peasants of the ASBC have almost full knowledge of the importance of the environment even though they engage in non-sustainable farming practices. In my interviews, I was able to detect environmental awareness using the environmental indicators from the model of Chuliá that were evident from the analysis of my results. Independent of these indicators, I also found that there was considerable other evidence that the peasants had a deep concern and appreciation for animals and for natural resources and that they understood and supported the conservation initiative in the corridor, that was seen as a place that ensures access to and protection of basic resources needed to sustain life, such as water, air, and trees.

Chapter 5 - Section 3: Political Economy of Production and Conservation in the ASBC

Introduction

The purpose of this chapter is to understand why the identity and the environmental values of these self-defined peasants are not sufficient elements to make a transition to an agricultural system more in harmony with their environmental principles, as well as with the sustainability goals of the AS biological corridor in which these peasants are living.

Building upon the main results of 5.1 and 5.2 and drawing from the conclusions I presented in the previous sections, I argue that the results of this investigation allow me to support the argument that the identity and the environmental awareness of these peasants inform a true concern for the environment and especially toward their land. However, these peasants still use chemicals while growing coffee in the ASBC.

This is how a central question then emerges: Why, if these peasants have such a strong attachment to their land, know the impact of contamination, and live in a biological corridor in a country that prides itself on sustainable practices, do they still engage in unsustainable agricultural practices? And, in this regard, what are the major forces at play that reinforce their contaminating practices?

To address this central question, I will describe the forces (models) that act in the ASBC and reinforce practices that contribute to land pollution, highlighting the resulting dynamic that emerges from the neoliberal and sustainability models. I will explore then how this dynamic contributes to land pollution, while at the same time considering the peasants' perceptions about their reality in the corridor.

As a conclusion of this chapter, I argue that the neoliberal model emerged as the dominant force in reinforcing agricultural practices based on heavy chemical use in this conservation area. This is happening even though the State in its double discourse (its own contradiction) and the NGOs are pursuing goals of sustainable development in this biological corridor.

As I described in the section on identity (5.1) these self-defined peasants find fulfillment and pride in being a "*campesino*" or *"agricultor,"* although they are aware of their high level of economic and social vulnerability. In the same section, I also gave an account of how they express their sense of fulfilment in owning a piece of land, belonging to their community and for living surrounded by a beautiful environment. These are elements they say cannot be replaced in another place and in another profession. Additionally, some argue that agriculture is a fundamental profession for the world and most of them want to continue practicing it.

Complementarily to these ideas on the identity of these peasants, I provided arguments in section 5.2 that these peasants possess what I have described as an environmental awareness. I made this argument by providing information on how they care about the environment and how they value where they live, and how they are engaged in activities to protect their environment. They emphasized the value of their land by defending and supporting the conviction that deep and lasting wellbeing derives from practicing agriculture as a way of life.

Nevertheless, even though the peasants have these values, they are still working in a way that damages their land. Why do these peasants fall into this contradiction between their values and their agricultural practices when growing coffee and cane sugar production in the ASBC?

In order to understand why the peasants of the ASBC are not engaged in sustainable agricultural practices in their coffee and sugar cane production, it is important to describe three important elements (models) that are taking place in the corridor. First, there is a **model of coffee production** that is being implemented in this corridor and which is inherited from an old, but still current export-oriented coffee system. Second, there is a dominant **economic model** (**neoliberalism)** that has been eroding the functions of the state in its social and economic spheres. Third, there is a **sustainable development project** that is grounded in the corridor through national institutions and NGOS, aiming to link economic growth without causing environmental degradation.

Coffee production model in the ASBC

In Costa Rica in general, coffee production was originally under shade and was the traditional way to grow coffee (Perfecto, 2009). The shaded-coffee plant varieties used to be predominant in all Central America (Perfecto, 2009). Coffee production in the corridor started in early 1940's, a government initiative that aimed at the expansion of the agricultural frontier (Varela Jara & Gonzalez Calvo, 1987).

Until the 1960's the agroforestry system allowed peasants to grow coffee, in addition to medicinal plants, and crops under the forest canopy and with no high detrimental alterations on the environment (Znajda, 2000). Perfecto (2009) argues that this traditional system (shaded coffee) respected the diversity of species and structure of the forest.

Due to an increase in the global demand for coffee, and with the support of the Costa Rican government and international organisms like the World Bank and USAID, coffee-growing practices were changed aiming to obtain higher yields (Rice, 1993 cited by Znajda, 2000).

When vegetation management is intensified to increase production, as took place in the ASBC, it reduces shade trees, the species of trees, the canopy cover, and the microorganisms that are necessary to have a healthy coffee plant (Jha et al., 2014). Shade management intensification often requires the use of nitrogen-based fertilizers and pesticides, herbicides, and fungicides (Moguel and Toledo, 1999 cited by Jha et al., 2014). Since shade trees incorporate nitrogen into the soil, this biological function had to be replaced by artificial ways (Moguel and Toledo, 1999 cited by Jha et al., 2014).

In the 1970's and 1980's, the government of Costa Rica encouraged the use of these artificial products to increase coffee yields and the "traditional coffee tree varieties were replaced by those that were more sun tolerant, and the amount of shade in the canopy layer was reduced to almost zero" (Znajda, 2000).

To make the transition toward this production system of heavy dependency on chemicals, the government established a coffee research institute, the ICAFE (Instituto del Café de Costa Rica) to encourage the use of chemicals through financial programs that included free or subsidized use of agrochemicals (Rice, 2014). The reduction of shade cover was highly recommended by ICAFE and this is why many small coffee producers eliminated their shade trees, and adopted varieties that responded better to the chemical inputs and direct sunlight (Picado Umaña, 2011). The ICAFE recommendations should be situated as part of the implementation of the green revolution paradigm[10] that was established not only in Costa Rica,

[10] Green revolution: A process that changed the mode of production in agriculture by the introduction of modified seeds (hybrids or crops that are genetically modified (GMOs) with a heavy dependence on chemicals and the use of fossil fuels (Picado Umaña, 2012). See for more details on GMOs one of my areas of concentration of my Plan of study.

but in many developing countries such as Mexico and India in the 1960's and 1970's (Picado Umaña, 2012).

The elimination of shade trees in the corridor specifically took place when the agroforestry system was replaced by sun-tolerant varieties in the 1960's. While high yields were obtained, over time, to maintain those yields, it became necessary to utilize pesticides and fertilizers in large quantities (Znajda, 2000). This is how the habit of utilizing fertilizers and pesticides became part of the practices of the peasants in the corridor.

In the 1970's, the elimination of the canopy and use of pesticides increased, even more as a measure to prevent spread of *Roya* or leaf rust, a fungal infestation that was affecting Central America (Perfecto, 2009). Interestingly, while Costa Rica drastically reduced shaded coffee, it did not achieve any additional protection from the *Roya*, which as of early 2013 was affecting 64% of coffee plantations, prompting the government to declare a state of emergency (Barquero, 2013).

All the peasants and farmers I interviewed have been affected —to varying degrees—by the *Roya* infestation.

Juana, a peasant of the ASBC talked about the current situation regarding the last leaf rust infection………"*Plagues, like the* Roya *this year… [It] was a loss at the canton level*." (Juana Sanabria).

Another peasant said*: "The price of coffee is very low, Roya did a lot of damage and one gets old and needs a labor force"* (Luis Perez).

"To be honest, the business is very bad… the plagues… I had a good harvest this year, but it left the soil in bad shape" (Luis Gonzalez).

As I described in the previous paragraphs, the use of chemicals in the corridor dates back from the 1960's, and it was encouraged and facilitated by the government of Costa Rica through the financial support that indirectly forced the peasants to remove the shade trees. I will next show how the peasants' narratives inform that this system is still in play in the ASBC.

As a result of all the changes in the agricultural system, the reliance on the use of herbicides and fertilizers has now become an economic necessity for the peasants, and this was reflected in interviews. In these narratives, they identified the problems of now trying to grow coffee without significant chemical inputs that result in environmental damage. As one peasant said, "*The engineers just prescribe chemicals; the land does not work well without chemicals.*" (Juan Bogado).

In another interview, a peasant simply said: "*I cannot prevent myself from using herbicides because if I do that it would have no profit" (Vicente Toledo).*

"There's no other way... because otherwise you can't handle it"(Luis Gonzalez). When he said *"I can't handle it,"* he then explained to me that without the use of herbicides, he would need to hire somebody to work with him and this would mean not obtaining enough profits for both of them.

While talking about the current economic conditions, another peasant expressed the same sentiments: "*...the prices of coffee and the disease that attacked coffee very harshly are going to make our survival very hard" (Luis Perez).*

The history of coffee production in Costa Rica and specifically in the ASBC since the 1960's and the evidence provided by the peasants let me to infer **that the model of coffee**

production in the ASBC is one element that **partially explains** why the peasants are not engaged in sustainable agricultural practices.

The contradiction for those who work in the big fincas

Another source of ASBC peasants' contradiction between their environmental concerns and their practices on their own land and also on others' lands are reflected in the explanations that were provided to me when I interviewed rural employers (peones de fincas). For example, when I asked why they could not avoid the damages on the land, one interviewee responded:

"*I think that… when I use this herbicide… even though it's not as bad as the old one I used to use, I know I should not do it… but the bosses tell me to do it, right*?..." (Julio Chavez).

This is a very clear example of how many people are forced to pollute the land against their will. In these particular cases, people who work for the "*fincas grandes"* (big farms) are forced to produce coffee or sugar cane using pollutants. The use of chemicals on the soils reduces the costs of labor. Even the peasants know perfectly well that they are damaging the land, they say they cannot stop doing it because their bosses are who decide how to produce at the end, as Julio Chavez explains: "*to have the support of a salary, laborers have to do things that "…Unfortunately, since [it's] money, money, money… they want to save labor costs, so then, herbicide…"* (Julio Chavez). He continues: "*any kind of herbicide is bad, but now we are using an herbicide that is "little science"*[11] *and that we call "quemante"; we are no longer using "el grande"* (the big one). I understand that what is implied in Julio's narrative is that "*el*

[11] When the peasant says *"little science"* or " *the big one"* he is referring to chemicals being recommended either by the cooperative or government institutions dealing with agricultural practices in the ASBC.

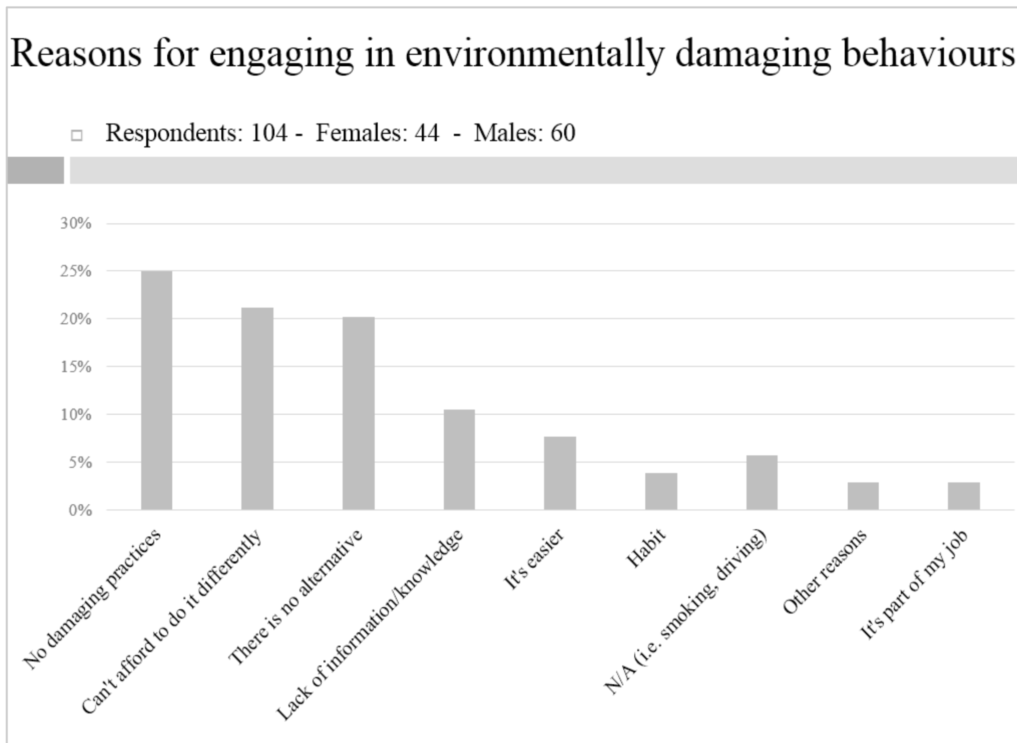
grande" is a very strong herbicide because then, he concludes…. "*May God keep us from applying it!"*

As I showed, for some people it is really difficult and contradictory to engage in the practices that pollute the land, but they have no option. In this sense, I understand this as another argument to support the idea that there are not many alternatives peasants can do in order to prevent their selves in the use of chemicals in the corridor.

Nevertheless, there are some people who believe that they should learn how to grow coffee in another way, and that this land pollution would have the potential to be less frequent if they would have had the support of the government to engage in a more sustainable modes of production.

The Figure E-9 shows the reasons that peasants provided for engaging in non-sustainable practices and it is very interesting that for some people the change would be possible if government financial and technological support were to be provided, as Jose Hernandez says, *"We should be assisted by the government in finding a better way to grow coffee."*

Figure E-9



N/A refers to answers that do not address the question clearly.

Land dependency on heavy chemicals inputs

Another set of perceptions held by the peasants was related to the dependency of the land on the use of chemicals to make profitable the production of coffee. As an interviewed peasant said…"*the land is tired"*…. (Pedro Martinez), indicating the view, held by many peasants, that the soil has been over treated with heavy chemical inputs over the last 50 years. This is the result of coffee cultivation practices in this area of Costa Rica and in the way that coffee production has evolved in the ASBC.

In general, in my interviews I found that many peasants were concerned about the impacts of chemicals on their land, but they are working within a system that relies on chemical inputs for coffee production and to make profits, and they are stuck within this system. In this

regard, a peasant specifically expressed that he realized that he was poisoning the land; however, he did not know how he could continue to produce coffee without the application of these chemicals…He states:

"I am aware I am polluting my land, but if I do not use chemicals, the land does not produce" (Pedro Jimenez).

These comments illustrate the contradiction of the peasants' caring but polluting the land and reflect the tension between the peasants' need to maintain their livelihoods and their concern for the effects of these pollutants on their land.

In the specific area of the corridor, many small producers continue to use fertilizers and herbicides in huge quantities. In this sense, Agne (2000) argues that economic development of the industry of insecticides, the Costa Rican legislation[12] and lack of proper information about the consequences of using chemicals reinforces the current insecticide use habits (Sanz-Bustillo, Pratt, & Perez, 1997). It seems that this entire system of production is still following the hegemonic dictates of the green revolution as it is implied from Picado Umaña (2012).

Currently, the coffee producers of the corridor follow the recommendations of COOPEAGRI (the coffee producers cooperative) in regards to the amount of fertilizer to use. I did not have the chance to gather evidence about the relationship between this cooperative and the Ministry of Agriculture (MAG) while I was in the corridor in 2013, but it seems that COOPEARGI follows guidance from the MAG. In this regard, one of the peasants such as

[12] See the paper of Bustillo, Pratt, Perez, 1997 for a study in the evolution of the use of insecticides in Costa Rica since 1940 to 1990.

Ramiro Arseni clearly states: *"COOPEAGRI recommends to us which chemicals we should use and also the quantities…this year we are using the 'formula complete': 'the 18-15-26'"* (referring to the combination of chemicals that was recommended in 2013).

Almost sixty years of the use of these artificial products has reinforced the habit in the peasants as well as on the land. I argue that habit (historically grounded and oriented to the international market) is an important model that reinforces unsustainable practices in coffee and sugar cane production of the ASBC.

The impact of the neoliberal model

The neoliberal model has affected the peasants of the corridor and encourages contamination through several mechanisms. First, **it reoriented the economy of Costa Rica toward exports**, a process that is being reinforced by the Central American Free Trade Agreement (CAFTA). This reorientation towards exports has pushed the government of Costa Rica to stop the financial support and the technological transference to the coffee producers in favour of other producers that are more suitable with the new exports model (Aguilera Morató, 2013).

Another mechanism that negatively affected the peasants was **redistribution of the government's economic support and incentives,** diminishing the support to local food producers in favour of pineapple and other non-traditional products. Most of these products are being grown and commercialized by transnational corporations such as Pindeco (Aguilera Morató, 2013).

The third important mechanism of neoliberalism **was to erode the role of the state in the social sphere.** The privatization of basic services increased the cost of living for peasants,

which in the absence of improvements in other areas effectively impoverished them (Hidalgo Capitán, 2003). An example of the diminishing role of the state is provided by Robson (2006), who points out that the state used to compensate international market fluctuations in the price of coffee through loans and subsidies, which is now no longer the case.

With the privatization of state institutions such as the national banking system and the lack of technological transfer towards the coffee sector, neoliberalism increases the vulnerability of peasants in the corridor and forces them to continue contaminating their land.

The government's lack of technical support towards coffee producers was evident in 2013 when little was done to control the outbreak of *Roya* (leaf rust.) As a result, this *Roya* outbreak has had a deep financial and social impact on the communities, which have few other alternatives to survive this kind of huge decrease in their production as I mentioned above and that was clearly stated by many peasants in the corridor.

Food Sovereignty at risk in the ASBC

One of the outcomes of the alignment of Costa Rica to the CAFTA has been the lack of subsidies from the government of Costa Rica to support peasants through price fluctuations along with the lack of support to local food production, creating another source of vulnerability for peasants, reinforcing the dependency of these people on coffee production.

José Hernandez explains how the incentive to import had a tremendously negative effect on their economy, he states, "*farmers use corn feed from the U.S, with the ecological crisis of last year the price of corn" went to the clouds" and this affects us because we use their products to feed our animals"* (Jose Hernandez). Furthermore, this respondent described the process of change of the state's position towards the local production of peasants and farmers:

"What you see in the last few governments in Costa Rica…is that the policies of the government are geared towards importing things and seeking free trade agreements, not to produce… to import things at low cost and not produce here…" He completed the idea saying: "You produce something and you get paid a measly price. When you grow something you hope that someone will buy it and pay a fair price for it, but this is not happening in Costa Rica now"(Jose Hernandez).

As a last point, I would like to emphasize how the neoliberal model has changed the production patterns in the agricultural sector eroding as never before the production of traditional crops, thus, fomenting the vulnerability of food sovereignty. (To see a list of crops cultivated in the corridor, please refer to the appendix.) In this regard, a peasant said, "*I don't understand why having land, people don't plant some beans and corn…if I do it, everybody can also do it*"

I believe that all the points exposed in this section clearly show how neoliberalism and free trade stimulate land pollution through the commercialization and competitive conditions imposed on peasants. As Perfecto (2009) states, neoliberalism prioritizes revenues over the consequences on people and the environment.

The Sustainable development model in the ASBC

Concomitantly, the Costa Rican government has made a commitment to the International Sustainable Development Project, a United Nations initiative aiming to promote economic development in a sustainable way. The project is grounded in the corridor by the strategic plan of Costa Rica of 2013-2014, which has as its main goals carbon neutrality and eco-tourism.

The model of Sustainable development has an impact on these people mainly by the intervention of NGOs and the projects that may emerge from the collaboration between these

institutions and others that represent the role of the government regarding environmental issues, such as FONAFIFO, a government institution in charge of financing projects related to carbon neutrality.

As I was exploring the peasants' perceptions regarding the function of the biological corridor, the majority of the respondents stated that the corridor had contributed to improving their lives, but not their livelihoods. As a peasant said, "*Nature per se is not enough*." In this sense, tourism appears as a feasible possibility since at a small scale rural tourism does not require a great investment.

Peasants in the ASBC are excited at the prospect of expanding tourism; they are currently receiving university students for this purpose. They are also looking at integrated farming as another possible way to improving their livelihoods and becoming more independent in terms of food production.

Institutions like the CCT (Tropical Science Centre), York University, and FONAFIFO have been supporting sustainable development efforts in the corridor. However, peasants need to survive and are focused on the immediacy of securing their livelihoods while the gains of sustainable development efforts can be a long-term proposition.

In conclusion, I argue that while most of the peasants in the corridor would like to engage in sustainable practices, the economic pressures they face make it very difficult for them to transition towards sustainable agriculture without receiving any type of financial or technical assistance. The changes in agricultural practices that took place in Costa Rica as part of the Green Revolution and that were reinforced with the implementation of the neoliberal model have

not only contributed to the deterioration of the soil, but also made peasants more dependent on chemical inputs. This process of ecological deterioration as well as the economic difficulties the neoliberal model implies for peasants, has deeply affected their livelihoods.

The economic struggles of these peasants are accompanied by a lack of support from the government. Although peasants of the ASBC have always had to deal with many uncertainties, the social welfare state of the past still holds a very strong presence in their minds. The lingering effects of the social welfare state create a conflicting relationship between the peasants and the government. As one of the peasants pointed out above, "*the politics of the last government administration seem to aim to erase the local production of crops forcing us to buy products such as corn from the US*". Despite this sentiment the same peasant was thinking of asking for financial support from the government to start a new local agricultural enterprise. At the same time, the neoliberal mechanisms impose pressures on the state of Costa Rica pushing it to erode the remains of the social role of the state. Additionally, the loss of food sovereignty that resulted from the implementation of CAFTA and the privatization of many public institutions has also profoundly affected the lives of all the Costa Rican people, and especially the rural communities that do not have many alternatives to earn their living.

Finally, in this section, I argue that the neoliberal model applied through CAFTA and the erosion of the social role of the State are the dominant mechanisms reinforcing the current unsustainable agricultural practices in this conservation area. The state has aligned itself with the neoliberal development model while at the same time aims to achieve economic growth without jeopardizing nature. However, adopting a sustainability model is not enough to reverse the

ecological and economic hardships established by the neoliberal model. In this regard, because of the intrinsic structure of capitalist production, the governmental and non-governmental organizations pursuing conservation goals in this biological corridor cannot shake off the tremendous impacts that the neoliberal model has on peasants' lives and on nature.

Through all this, however, the peasants of the ASBC continue to search for ways to maintain their way of life and improve their livelihoods. For some, the option of embracing community rural tourism as a complement to their farming practices holds some promise.

Chapter 6: Conclusions and Recommendations

The people of the ASBC are self-described as peasants (*campesinos*) and their wish is to continue being *campesinos*. Even though agriculture is not generating a significant income and they face important financial and production problems (as reflected in the low prices of coffee), and even when there are plagues like *Roya* infecting coffee plantations which make *campesinos* even more vulnerable, they remain proud of their identity and want to keep on working and living off their land. They wish to continue with their tradition of growing coffee in spite of a political and economic context that is adverse to *campesino* ways of production (ie. the family farm) and their way of life, and in spite of a dominant ideology that views peasants as backward people opposing modernity, as made evident in innumerable comments of resistance expressed by the *campesinos* of the ASBC. Peasants recognize in their identity values and qualities that give them the strength and the bravery to face all these hardships understanding their social and financial vulnerabilities.

Among the qualities they have there is a clear environmental awareness. Peasants demonstrate having a strong awareness of the vital importance of nature that coincides in many aspects with a historical conservationist tradition and with the current political discourse in favour of sustainable development.

Peasants know which practices are environmental friendly and which are those that damage the environment. They would like to be able to act in agreement with their environmental awareness and their love for the land, but sadly they find themselves forced to implement practices that contaminate their lands and waters, practices that go against their aspirations for a healthy environment, and practices that are contrary to sustainability. They do

this not because they lack of environmental awareness, but because they are forced by external factors and because they have inherited a way to produce coffee that is impossible to change with no external financial assistance.

Among the most significant external conditioning factors is the neoliberal political-economic model Costa Rica has adopted, in spite of the country's discourse in favour of sustainable development. The neoliberal model has reduced the state's support to peasant agricultural production, halting the guarantee of set prices for crops, limiting loans to small producers, and adopting free trade agreements that put peasants in competition with transnational agricultural corporations that have immense economic and political power. Furthermore, the neoliberal model reduced the state's support to primary social services that have also made peasant life harder to carry on.

In spite of all these difficulties, the peasants of the ASBC want to continue being peasants and keep their aspirations to have a healthy environment, searching for alternatives that will allow them to do this. Currently, they have found an opportunity in community rural tourism, which allows them to keep practicing agriculture, while driving and materializing their environmental awareness and, possibly, to endure the damages of neoliberalism.

It is not easy, but if there is something that can be done, it is to support peasants in these strategies that they themselves have sought to implement and that would allow them to maintain their connection to the land and coffee growing tradition, and stay with their community, in their land, doing what they want to do: to be and live as peasants.

Bibliography

Adams, W. M. (1990). *Green development: Environment and sustainability in the Third World.* New York: Routledge.

Agne, S. (2000). *The impact of pesticide taxation on pesticide use and income in Costa Rica's coffee production.* (2) IICA Biblioteca Venezuela.

Agrawal, A. (2005). Community, intimate government, and the making of environmental subjects in Kumaon, India. *Current Anthropology, 46*(2), 161-190.

Aguilar Hernández, M. (2004). *Costa Rica en el siglo XX: Luchas sociales y conquistas laborales.* Series Cuadernos de Historia de la Cultura (10). San José (C.R.): Editorial de la Universidad de Costa Rica.

Aguilera Morató, E. (2013). Costa Rica ¿una maquila republica exitosa? *De la Economía Internacional*, *2*. Retrieved from http://biblioteca.clacso.edu.ar/Cuba/ciei-uh/20131028013431/CostaRicayCentroamerica.pdf

Albertin, A. & Nair, P. K. R. (2004). Farmers' perspectives on the role of shade trees in coffee production systems: An assessment from the Nicoya Peninsula, Costa Rica. *Human Ecology, 32* (4), 443-463.

Albrecht, G. (2010). Solastalgia and the creation of new ways of living. In Pilgrim, S. & Pretty, J. (Eds.) *Nature and culture* (217-234). London (U.K): Earthscan.

Alianza Comunitaria Conservacionista de Turismo Alternativo Rural (ACTUAR). (2014, September 10). *About ACTUAR: Sustainability.* Retrieved from https://www.actuarcostarica.com/las-ventajas-de-actuar/costa-rica-3153.html

Allen, P., Van Dusen, D., Lundy, J., & Gliessman, S. (1991). Expanding the definition of sustainable agriculture. *Sustainability in the balance,* Issue Paper #3

Almeyda Zambrano, A. M., Broadbent, E. N., & Durham, W. H. (2010). Social and environmental effects of ecotourism in the Osa Peninsula of Costa Rica: the Lapa Rios case. *Journal of Ecotourism*, *9*(1), 62-83. doi: 10.1080/14724040902953076

Altieri, M. A. (2009). Agroecology, small farms, and food sovereignty. *Monthly Review*, *61*(3), 102-113.

Altieri, M. A. (2008). *Small farms as a planetary ecological asset: five key reasons why we should support the revitalisation of small farms in the global south*. Santa Barbara (CA): Third World network (TWN).

Altieri, M. A., & Rosset, P. (1999). Ten reasons why biotechnology will not ensure food security, protect the environment, or reduce poverty in the developing world. *AgroBioForum,* 2(3 & 4), 155-162.

Araghi, F. (2012). 5 The invisible hand and the visible foot. In Akram-Lodhi, A. H. & Kay, C. (Eds.), *Peasants and globalization: Political economy, rural transformation and the agrarian question* (111-147). London & New York: Routledge.

Araghi, F. (1995). Global de-peasantisation, 1945-1990. *The Sociological Quarterly, 36*(2), 337-368.

Araghi, F. (2003). Food regimes and the production of value: Some methodological issues. *The Journal of Peasant Studies*, *30*(2), 41-70.

Ballesteros, J. (1985). Hacia un modo de pensar ecológico. *Anuario Filosófico*, *18*(2), 1-985. Retrieved from http://dspace.unav.es/dspace/bitstream/10171/2222/1/01.%20JES%C3%9AS%20BALLESTEROS,%20Hacia%20un%20modo%20de%20pensar%20ecol%C3%B3gico.pdf

Banco Central de Costa Rica (2014, August 29). Indicadores económicos. Retrieved from http://indicadoreseconomicos.bccr.fi.cr/indicadoreseconomicos/Cuadros/frmVerCatCuadro.aspx?idioma=1&CodCuadro=%20184.

Barquero, M. (2013, February 20). Hongo de la roya ya alcanza el 64% de cafetales del país. *La Nación.* Retrieved from http://www.nacion.com/archivo/Hongo-roya-alcanza-cafetales-pais_0_1324867576.html

Bartra, A. (2008). Campesindios. Aproximaciones a los campesinos de un continente colonizado. *Revista Memoria,* 248, 4-13.

Bartra, A. (2002). Hacia una nueva colonización del sureste. In Álvarez, A. et al. (Eds.) *Economía política del plan Puebla-Panamá*. México: Itaca.

Bartra, A. (2003). La invención de Mesoamérica. In *Plataforma campesina Mesoamericana* México: Instituto de Estudios del Pueblo Maya, A.C.

Bartra, A. (2003). Intervención en el *Primer Encuentro Internacional sobre Desarrollo e Integración Regional en el Sur de México y Centroamérica*.

Bathrick, D. D. (2008). *Optimizing the economic growth and poverty reduction benefits of CAFTA-DR: Accelerating trade-led agricultural diversification*. USAID (p. 10) Retrieved from http: //pdf.usaid.gov/pdf_docs/PNADM561.pdf

Berenger, J., Corraliza, J. A., Moreno, M., & Rodríguez, L. (2002). La medida de las actitudes ambientales: propuesta de una escala de conciencia ambiental (Ecobarómetro). *Psychosocial Intervention*, *11*(3), 349-358. Retrieved from http://www.redalyc.org/pdf/1798/179818139007.pdf

Berger, J. (1992). *Pig earth* (Vol. 1). New York: Random House LLC.

Boltvinik, J. (2003). Esbozo de una teoría de la pobreza y la sobrevivencia del campesinado. Polémica con Armando Bartra. Retrieved from http://www.mundosigloxxi.ciecas.ipn.mx/pdf/v05/18/03.pdf

Bonaiuto, M., Bilotta, E., Bonnes, M., Ceccarelli, M., Martorella, H., & Carrus, G. (2008). Local Identity and the Role of Individual Differences in the Use of Natural Resources: The Case of Water Consumption1. *Journal of Applied Social Psychology*, *38*(4), 947-967.

Bonfil, G, Ibarra, M., Varese, S., Verissimo, D., Tumiri, J., et al. (1982). *América Latina, etnodesarrollo y etnocidio*. San José (C.R.): Facultad Latinoamericana de Ciencias Sociales. Retrieved from: www.flacsoandes.edu.ec/libros/digital/40148.pdf.

Booth, J. A. (1998). *Costa Rica: quest for democracy*. Boulder, CO: Westview Press.

Booth, J. A. (2008). Democratic development in Costa Rica. *Democratization*, *15*(4), 714-732.

Botella-Rodríguez, E. (2014, September). *Costa Rica's outward-looking development: from "agriculture of change" to food insecurity (1990-2008)*. Paper presented at the XI Congreso Internacional de la AEHE, Madrid. Retrieved from http://www.aehe.net/xicongreso/pdfs/s18_elisa_botella.pdf

Brundtland, G.H. (1987). *Our common future: Report of the World Commission on Environment and Development*. United Nations.

Canet-Desanti, L. (2010). *Diagnóstico sobre la efectividad de manejo de los Corredores Biologicos de Costa Rica*. Turrialba (C.R.): CATIE.

Canet-Desanti, L. (2005). *Ficha Técnica para el Diseño y Oficialización del Corredor Biológico Alexander Skutch*. San José (C.R.): Centro Científico Tropical.

Carey, C. W., Jr. & Friedman, I. C. (2011). Keith, Minor Cooper. *American Inventors, Entrepreneurs, and Business Visionaries*, Revised Edition, American Biographies. Retrieved on August 1, 2014 from: http://www.fofweb.com/History/MainPrintPage.asp?iPin=AIE0153&DataType=AmericanHistory&WinType=Free

Chaves, E. (2010). Family remittances sent by Costa Ricans in the United States. In Sandoval-García, C. (Ed) *Shattering myths on immigration and emigration in Costa Rica* (pp. 131-142). Plymouth (UK): Lexington Books.

Chuliá, E. (1995). La conciencia ambiental de los españoles en los noventa [The environmental awareness of the Spanish society in the nineties]. *ASP Research Paper, 12*, 1-39.

Clayton, S. D., & Opotow, S. (Eds.). (2003). *Identity and the natural environment: The psychological significance of nature*. Cambridge (MA): MIT Press.

Corella, C. G. (2014, June 16). Dirigentes de zona sur se unen al clamor de habitantes de esta zona norte, que piden un alto en la construcción de nuevas hidroeléctricas. Noticias en Contacto. Retrieved from: http://radiosantaclara.org/article/dirigentes-de-zona-sur-se-unen-al-clamor-de-habita/?page=4

Cover-Ruiz, V., Reilly-Brown, J. & Saavedra, V. (2009). *El país verde and the sunshine state: A comparative analysis, conclusions, and recommendations for Costa Rica water allocation law reform.* Conservation Clinic, University of Florida.

Davies, K. (2010). Sustainable Minds: The next step in human evolution must take environmental learning from schools to the realities of society. *Alternatives Journal 36*(5), 10-11

De Castro Lejarriaga, L. M. (2009). Crecimiento económico y medioambiente. *ECONOMÍA*, (847), 93.

De Grammont, H. C. & Martinez Valle, L. (Eds.) (2009). *La pluriactividad en el campo latinoamericano*. Quito: Flacso, Sede Ecuador.

De Melo Virginio Filho, E. (2013). Alcances de la implementación. In Villanueva et al. (Eds.) Manejo agroecológico como ruta para lograr la sostenibilidad de fincas con café y ganadería (225).

Desmarais, A. A. (2007). *La Via Campesina: globalization and the power of peasants*. Halifax: Fernwood Publications

Dunlap, R. E. (2008). The New Environmental Paradigm Scale: From Marginality to Worldwide Use. *The Journal of Environmental Education, 40*(1), 3-18.

Dunlap, R. E. & Van Liere, K. D. (1978). The new environmental paradigm. *Journal of Environmental Education*, 9, 10-19

Durán Barrantes, N. D. (2005). La ocupación del espacio geográfico y el desarrollo de los sistemas de producción agrícola en el distrito de El General, Pérez Zeledón, entre la segunda mitad del siglo XIX y la primera mitad del siglo XX. *Revista de historia - Centro de investigaciones históricas de América Central, Universidad de Costa Rica,* (51-52), 79-150.

Dyer, Z. (2013, November 11). Costa Rica counts for 40 percent of CAFTA exports to the US. *The Tico Times.* Retrieved from http://www.ticotimes.net/2013/11/11/costa-rica-counts-for-40-percent-of-cafta-exports-to-the-us-2

Edelman, M. (2005). *Campesinos contra la globalización: Movimientos sociales rurales en Costa Rica*. San José: Editorial de la Universidad de Costa Rica.

Edelman, M. (2013). What is a peasant? What are peasantries? A briefing paper on issues of definition. *Intergovernmental Working Group on a United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas.* Retrieved from http://www.ohchr.org/Documents/HRBodies/HRCouncil/WGPleasants/Edelman.pdf

Edelman, M. (2012, May). *Los derechos de los campesinos.* Presented at Seminario internacional sobre la situación de derechos humanos de las comunidades campesinas en el Bajo Aguán. Retrieved from http://www.hunter.cuny.edu/anthropology/faculty-staff/full-time-faculty/edelman-marc/repository/files/EdelmanMarcTocoaseminario52012V2.pdf

EFE, (2013, March 3). Costa Rica batió record de visitantes y de ingresos por turismo en 2012. *América economía.* Retrieved from http://origin.americaeconomia.com/negocios-industrias/costa-rica-batio-record-de-visitantes-y-de-ingresos-por-turismo-en-2012

Escobar, A. (2005). *Más allá del tercer mundo: globalización y diferencia*. Bogotá: Instituto Colombiano de Antropología e Historia, Universidad del Cauca.

Estévez Saá, J. M. (2007). El significado de la tierra en la literatura campesina en lengua inglesa: John Berger. *Garoza: revista de la Sociedad Española de Estudios Literarios de Cultura Popular*, (7), 81-98.

Evans, S. (1999). *Green republic: History of Costa Rica, 1838-1997*. Austin: University of University of Texas Press.

Fernández Arias, M. E. (2003). La agricultura costarricense ante la globalización: las nuevas reglas del comercio internacional y su impacto en el agro. *UCR/Instituto de Investigaciones Sociales, San José*, *3*(2).

Fondo Nacional de Financiamiento Forestal (FONAFIFO). (2014, August 21). *Pago de servicios ambientales* [Environmental services payments]. Retrieved from http://www.fonafifo.go.cr/psa/index.html

Fonseca Corrales, E., Alvarenga Venutolo, P. & Solórzano Fonseca, J. C. (2000). *Costa Rica en el siglo XVIII*. San José (C.R.): Editorial de la Universidad de Costa Rica.

Fournier-Origgi, L. (1991). Desarrollo y perspectivas del movimiento conservacionista costarricense. San José (C.R.): University of Costa Rica.

Friedmann, H. (2005). From colonialism to green capitalism: Social movements and emergence of food regimes. In Buttel, F. H. & McMichael, P. (Eds.) *New directions in the sociology of global development.* Research in Rural Sociology and Development, Volume 11. Emerald Group Publishing Limited, pp.227 – 264

Friedmann, H. (1993). The political economy of food: a global crisis. *New left review*, 29-29.

García, J. E. (1999). La agricultura orgánica en Costa Rica. *Boletín Agroecológico-Centro de Investigación, Educación y Desarrollo*, (61), 4-11.

Gigli, J. M. (1999). Neoliberalismo y ajuste estructural en América Latina. *Revista del Centro de Estudios Internacionales para el Desarrollo*, *1*(1). Retrieved from http://www.juangigli.com/wp-content/uploads/ajuste_estructural_juan_gigli.pdf

Glenribbeen – The eco-blog (December 20, 2012). Carl Jung and others on a 'sense of place.' Retrieved from http://pfiddle.wordpress.com/2012/12/20/carl-jung-and-others-on-a-sense-of-place/.

Global Water Partnership. (2014, May 16). *New water law approved.* Retrieved from http://www.gwp.org/en/gwp-in-action/Central-America/News-and-Activities-GWP-Central-America/New-Water-Law-approved-in-Costa-Rica/

Gómez Carpinteiro, F. J. (2012). "Campesinos": subjetividad endemoniada y frívola "Clase" como un concepto más allá de lo analítico. *Bajo el Volcán*, *11*(18), 167-189.

González Alcantud, J. & González de Molina, M. (Eds.) (1992). *La tierra: Mitos, ritos y realidades.* Barcelona: Editorial Anthropos.

Graham, D. (2011). *Mesoamerican Biological Corridor: Mexico to Panama.* Global Transboundary Conservation Network. Retrieved from http://www.tbpa.net/docs/62_Meso_American_Biological_Corridor.pdf

Gutiérrez Espeleta, N. (1981). Algunas consecuencias de una política agraria modernizante 1970-1978. *Revista de ciencias sociales*, (21), 111-121.

Hale, C. R. (1997). Cultural politics of identity in Latin America. *Annual Review of Anthropology*, *26,* 567-590.

Hall, C. (1976). *El café y el desarrollo histórico geográfico de Costa Rica*. San José (C.R.): Editorial Costa Rica.

Hansen-Kuhn, K. (1993). Structural adjustment in Costa Rica: Sapping the economy. Extract from "Structural adjustment in Central America: The case of Costa Rica." *The Development GAP.* Retrieved from http://www.hartford-hwp.com/archives/47/033.html

Harvey, C. A. et al. (2008). Integrating agricultural landscapes with biodiversity conservation in the Mesoamerican hotspot. *Conservation Biology, 22*(1), 8-15.

Hellman, J. A. (2008). *The world of Mexican migrants: The rock and the hard place.* New York: The New Press.

Hernández, R. (1993-1994). Teorías sobre campesinado en América Latina: una evaluación crítica. *Revista Chilena de Antropología*, (12), 179-200

Hernández Rodríguez, C. (2005). Desestructuración económica y crisis social. El Pacífico Sur costarricense en el marco de la década perdida. *Revista de historia - Centro de investigaciones históricas de América Central, Universidad de Costa Rica,* (51-52), 173-235.

Hidalgo Capitán, A. L. (2003). Costa Rica en evolución. *Política económica, desarrollo y cambio estructural del sistema socioeconómico costarricense (1980-2002)*. San José: Editorial de la Universidad de Costa Rica. Retrieved from http://www.uhu.es/antonio.hidalgo/documentos/CRE-noimprime.pdf

Hidalgo Capitán, A. L. (1997). La forzada apertura comercial y el modelo neoliberal de desarrollo en Costa Rica. *Revista de ciencias sociales*, (78), 61-74. Retrieved from http://www.uhu.es/antonio.hidalgo/documentos/RCS-UCR-78-79.pdf

Hobbs, P. R., Sayre, K., & Gupta, R. (2008). The role of conservation agriculture in sustainable agriculture. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *363*(1491), 543-555.

Honey, M. (1994). *Hostile acts: US policy in Costa Rica in the 1980s*. Gainesville: University Press of Florida.

Horton, L. R. (2009). Buying up nature economic and social impacts of Costa Rica's ecotourism boom. *Latin American Perspectives*, *36*(3), 93-107.

Instituto del Café de Costa Rica. (2014). *History of coffee in Costa Rica.* Retrieved August 19, 2014 from ICAFE's website: http://www.icafe.go.cr/ingles/our_coffee/history.html

Jessop, B. (1997). Twenty years of the (Parisian) regulation approach: The paradox of success and failure at home and abroad. *New Political Economy*, *2*(3), 503-526

Jha, S., Bacon, C. M., Philpott, S. M., Méndez, V. E., Läderach, P., & Rice, R. A. (2014). Shade Coffee: Update on a Disappearing Refuge for Biodiversity. *BioScience*, *64*(5), 416-428.

Jiménez, M., & Lafuente, R. (2006). La operacionalización del concepto de conciencia ambiental en las encuestas. In Castro, R. (Ed.), *La experiencia del ecobarómetro andaluz*. (pp. 121-150).

Krantz, L. (1977). El campesino como concepto analítico. *Nueva Antropología*, *2*(6), 87-98.

Leitón, P. (2013, Abril 9). Turismo de Costa Rica alcanza indicadores que tenía antes de la crisis mundial del 2009. *La Nación.* Retrieved from: http://www.nacion.com/archivo/Turismo-Costa-Rica-indicadores-mundial_0_1334466720.html

Lele, S., Wilshusen, P., Brockington, D., Seidler, R., & Bawa, K. (2010). Beyond exclusion: alternative approaches to biodiversity conservation in the developing tropics. *Current Opinion in Environmental Sustainability*, *2*(1), 94-100.

Lele, U. J. (2000). *Brazil: Forests in the balance: Challenges of conservation with development*. World Bank Publications.

León, J. (n.d.). Las políticas económicas en Costa Rica 1890-1950: La primera mitad del siglo XX. Retrieved on July 20, 2014, from http://www.iice.ucr.ac.cr/PoliticaEconomica1890-1950.pdf

Louwagie, G., Gay, S. H., & Burrell, A. (Eds.) (2009). Final report on the project 'Sustainable Agriculture and Soil Conservation'. *JRC Scientific and Technical Report, Luxembourg, Office for Official Publications of the European Communities*.

MacRae, R. J., Hill, S. B., Henning, J., & Mehuys, G. R. (1989). Agricultural science and sustainable agriculture: a review of the existing scientific barriers to sustainable food production and potential solutions. *Biological Agriculture & Horticulture*, *6*(3), 173-219.

Marín Araya, G. (2013) Reseña del libro de Juan Carlos Solórzano: Los indígenas en la frontera de la colonización. Costa Rica 1502-1930. *Cuadernos Inter.c.a.mbio, 10*(12), 237-247.

Martínez-Alier, J., Pascual, U., Vivien, F. D., & Zaccai, E. (2010). Sustainable de-growth: Mapping the context, criticisms and future prospects of an emergent paradigm. *Ecological Economics*, *69*(9), 1741-1747.

Martínez Franzoni, J., & Sánchez-Ancochea, D. (2012). The Double Challenge of Market and Social Incorporation: Progress and Bottlenecks in Latin America. *desiguALdades.net Working Paper Series* (27). Retrieved from http://www.desigualdades.net/Resources/Working_Paper/27_WP_Mart__nez_Franzoni_and_Sanchez-Ancochea_online.pdf?1367229858

Martinez-Torres, M. E., & Rosset, P. M. (2010). La Vía Campesina: the birth and evolution of a transnational social movement. *The Journal of Peasant Studies*, *37*(1), 149-175.

Marois, T. (2005). From economic crisis to a state of crisis: The emergence of neoliberalism in Costa Rica. *Historical Materialism*, *13*(3), 101.

Max-Neef, M. A., Elizalde, A., & Hopenhayn, M. (1994). *Desarrollo a escala humana: conceptos, aplicaciones y algunas reflexiones* (Vol. 66). Barcelona: Icaria Editorial.

McCord, P. A. (2008). Divergences on the left: The environmentalisms of Rachel Carson and Murray Bookchin. *Left History*, *13*(1), 14-34.

Mc Dermott, A. G. (2005). Ciencia, legislación y discurso conservacionista. El “germen” de los Parques Nacionales en Costa Rica: elementos contextuales y “matices” analíticos 1833-1955.

McMichael, P. (2009). Contemporary contradictions of the global development project: Geopolitics, global ecology and the ‘development climate.’ *Third World Quarterly, 30*(1), 247-262.

McMichael, P. (2006). Peasant prospects in the neoliberal age. *New Political Economy, 2*(3). Retrieved from http://author.cals.cornell.edu/cals/devsoc/research/research-projects/upload/Peasant-Prospects-NPE-06.pdf

McMichael, P. (2005). Global development and the corporate food regime". In Buttel, F. H. & McMichael, P. (Eds.), *New Directions in the Sociology of Global Development* (229-67). Oxford, (England): Elsevier

Miller, A. (2012). *Ecotourism Development in Costa Rica: The Search for Oro Verde*. Lanham (MD): Lexington Books.

Mitchell, M. T., & Pentzer, S. (2008). *Costa Rica: A Global Studies Handbook*. Santa Barbara (CA): ABC-CLIO.

Molina Jiménez, I. (2006). *The History of Costa Rica.* San José (C.R.): Editorial Universidad de Costa Rica.

Molina Jiménez, I., & Palmer, S. P. (2004). *The History of Costa Rica: Brief, Up-to-date and Illustrated*. San Jose: Editorial Universidad de Costa Rica. 3rd Ed.

Montanye, D., Vargas, J. & Hall C. (2000). The Internationalization of the Costa Rican Economy: A Two-Edged Sword. In C. A. Hall, C. L. Perez & G. Leclerc (Eds.), *Quantifying Sustainable Development: The Future of Tropical Economies* (pp. 647-664). San Diego, CA: Academic Press.

Montoya Greenheck, F. (2011). *Tradiciones alimentarias en Costa Rica: Diversidad bio-cultural en peligro de extinción.*

Mora-Carvajal, V. M. (1995). Las luchas de las obreras urbanas en Costa Rica (1900-1930). *Nueva Sociedad*, *135*, 138-149.

Morejón, A. (2011). *Conciencia ambiental: Una necesidad de la sociedad cubana actual.* Editorial Académica Española.

Nayar, P. K. (2005). Review of Identity and the natural environment: The psychological significance of nature. *Electronic Green Journal, 1*(22). http://escholarship.org/uc/item/37d747w9

O'Connor, J. R. (2001). *Causas naturales: ensayos de marxismo ecológico*. New York: Siglo XXI.

Oliva Medina, M. (2006). *Artesanos y obreros costarricenses: 1880-1940*. San José (C.R.): EUNED.

Oyanedel, F. A. (2012). Algunos aspectos teóricos en los estudios sociales del campesinado: De la economía política marxista a la economía ecológica. *Revista Latinoamericana de Estudiantes de Geografía.* Retrieved from www.releg.org/3-2012-8.pdf

Palan, R. (2006). Is the Competition State the New, Post-Fordist, Mode of Regulation? Regulation Theory from an International Political Economic Perspective. *Competition & Change*, *10*(2), 246-262.

Perfecto, I., Vandermeer, J. H., & Wright, A. L. (2009). *Nature's matrix: linking agriculture, conservation and food sovereignty*. London (U.K.): Earthscan.

Picado Umaña, W. (2012). *Conexiones de la revolución verde: Estado y cambio tecnológico en la agricultura de Costa Rica durante el periodo 1940-1980.* Universidade de Santiago de Compostela

Picado Umaña, W. (2011). Breve historia semántica de la Revolución Verde. In *Agriculturas e innovación tecnológica en la Península Ibérica (1946-1975)* (pp. 25-50).

Pierri, N. (2005). Historia del concepto de desarrollo sustentable. In G. *Foladori & N. Pierri, (Eds.), ¿Sustentabilidad? Desacuerdos sobre el desarrollo sustentable*, (pp. 27-81). México City: Miguel Ángel Porrua, UAZ.

Piñero, S. L. (2008). La teoría de las representaciones sociales y la perspectiva de Pierre Bourdieu: Una articulación conceptual. *CPU-e, Revista de Investigación Educativa*, *7*. Retrieved from http://www.uv.mx/cpue/num7/inves/pinero_representaciones_bourdieu.html

Programa Estado de la Nación, 2013. *Decimonoveno informe estado de la ación en desarrollo humano sostenible*. San José, Programa Estado de la Nación. Retrieved from http://www.estadonacion.or.cr/estado-nacion/informe-actual

Quarrie, J. (1992). Earth Summit '92. The United Nations Conference on Environment and Development, Rio de Janeiro 1992.

Querol, J., & Di Masso, M. (2003). Los derechos de propiedad intelectual y la biodiversidad cultivada en Costa Rica. *Ecología política: cuadernos de debate internacional*, (26), 91-105.

Rankin, M. A. (2012). *The History of Costa Rica*. ABC-CLIO.

Restrepo, E. (2006). Teoría social, antropología y desarrollo: a propósito de narrativas y gráficas de Arturo Escobar. *Boletín de Antropología Universidad de Antioquia*, *20*(37), 307-326.

Ritchie, J., Lewis, J., Mc Naughton Nicholls, C., & Ormston, R. (Eds.) (2013). *Qualitative research practice: A guide for social science students and researchers*. Sage.

Rivera Araya, R. & Ceciliano, Y. (2004). *Cultura, masculinidad y paternidad: las representaciones de los hombres en Costa Rica*. San Jose, C.R.: FLACSO.

Robson, P. A. (2009). *Neoliberalism and social response: A preliminary study of the peasantry in Alfaro Ruiz, Costa Rica.* ACM Tropical Field Research.

Rodríguez, I. & Govea, H. (2006). El discurso del desarrollo sustentable en América Latina. *Revista Venezolana de Economía y Ciencias Sociales*, *12*(2), 37-63. Retrieved from: http://www.scielo.org.ve/scielo.php?script=sci_arttext&pid=S1315-64112006000200003&lng=en&nrm=iso

Rodríguez, E. (1980). *De Calderón a Figueres.* San José (C.R.): EUNED.

Rodríguez, J. Q. & Ulate, R. C. (2011). Informe final, primer foro nacional de consulta sobre el proceso hacia la cumbre de desarrollo sostenible Río +20. Retrieved from http://sustainabledevelopment.un.org/content/documents/costarica.pdf

Rosset, P. (2011). Food sovereignty and alternative paradigms to confront land grabbing and the food and climate crises. *Development*, *54*(1), 21-30.

Rosset, P. (2011). Preventing hunger: change economic policy. *Nature*, *479*(7374), 472-473.

Rosset, P. (2009). Fixing our global food system: Food sovereignty and redistributive land reform. *Monthly Review*, *61*(3), 114-128.

Rosset, P. (2006). Moving forward: agrarian reform as part of food sovereignty. *Promised Land: Competing visions of agrarian reform*, 301-21.

Rottenberg, S. (1993). *The political economy of poverty, equity, and growth: Costa Rica and Uruguay*. cabdirect.org

Salafsky, N. & Wollenberg, E. (2000). Linking livelihoods and conservation: A conceptual framework and scale for assessing the integration of human needs and biodiversity. *World Development, 28*(8), 1421-1438.

Samper, M. (1990). *Generations of settlers: rural households and markets on the Costa Rican frontier, 1850-1935*. Boulder: Westview Press.

Sanchez-Ancochea, D. (2009). State, firms and the process of industrial upgrading: Latin America's variety of capitalism and the Costa Rican experience. *Economy and Society*, *38*(1), 62-86.

Sanchez-Ancochea, D. (2006). Development trajectories and new comparative advantages: Costa Rica and the Dominican Republic under globalization. *World Development*, *34*(6), 996-1015.

Sanz-Bustillo, J. J., Pratt, L., & Pérez, J. M. CEN, no. 762. Uso de plaguicidas en la agroindustria de Costa Rica.

Schoenberger, E. (2001). Interdisciplinarity and social power. *Progress in human geography*, *25*(3), 365-382.

Seligson, M. A. (1980). *Peasants of Costa Rica and the development of agrarian capitalism.* Madison (WI): University of Wisconsin Press.

Seligson, M. A. (1980). Trust, efficacy and modes of political participation: A study of Costa Rican peasants. *British Journal of Political Science, 10*(1), 75-98.

Seligson, M. A. (2001). Costa Rican exceptionalism: Why the Ticos are different. In Camp, R. A. (Ed.), *Citizen Views of Democracy in Latin America* (90-106). Pittsburgh (PA): University of Pittsburgh Press.

Seligson, M. A. (2002). Trouble in paradise: The erosion of system support in Costa Rica, 1978-1999. *Latin American Research Review 37*(1), 160-185.

Seligson, M. A. & Booth, J. A. (1976). Political participation in Latin America: An agenda for research. *Latin American Research Review 11*(3), 95-119.

Seligson, M. A. & Booth, J. A. (1979). Structure and levels of political participation in Costa Rica: Comparing peasants with urbanites. In Seligson, M. A. & Booth, J. A. (Eds.) *Political Participation in Latin America, Vol. II: Politics and the poor* (62-75). NY: Holmes and Meier.

Seligson, M. A. & Booth, J. A. (1993) Political culture and regime type: Evidence from Nicaragua and Costa Rica. *The Journal of Politics 55*(3), 777-792.

Seligson, M. A. & Muller, E. N. (1987). Democratic stability and economic crisis: Costa Rica, 1978-1983. *International Studies Quarterly 31*(3), 301-326.

Seligson, M. A. & Salazar, J. M. (1979) Political and interperson trust among peasants: A reevaluation. *Rural Sociology 44*(3), 505-524

Shanin, T. (2008). Lições camponesas. In Tomiasi Pulino, E. & Edmilson Fabrini, J. (Eds) *Campesinato e territórios em disputa. São Paulo: Expressão popular*, 23-47.

Sibaja, L. F. (1983). La encomienda de tributo en el Valle Central de Costa Rica, 1569-1683. *Anuario de estudios centroamericanos*, 69-86.

Silverman, S. (1979). The peasant concept in anthropology. *The Journal of Peasant Studies*, *7*(1), 49-69.

Sistema Nacional de Áreas de Conservación (SINAC). (2014, October 1). *Manejo y aprovechamiento forestal.* [Forest management and use.] Retrieved from http://www.sinac.go.cr/competencias/RecursosForestales/Paginas/manejoforestal.aspx.

Smit, B., & Smithers, J. (1993). Sustainable agriculture: interpretations, analyses and prospects. *Canadian Journal of Regional Science*, *16*(3), 499-524.

Solórzano Fonseca, J. C. (2012). Las relaciones comerciales de Costa Rica en el Pacífico (1575-1821). *Revista de Historia*, (43), 93-142. Retrieved from http://www.revistas.una.ac.cr/index.php/historia/article/view/1841

Solórzano Fonseca, J. C. (1991). Comentario del libro: "La era de la encomienda, de Claudia Quirós." *Revista de Historia,* (24). Retrieved from http://www.revistas.una.ac.cr/index.php/historia/article/view/3338

Soto Quirós, R., & Díaz Arias, D. (2006). Mestizaje, indígenas e identidad nacional en Centroamérica: de la colonia a las repúblicas Liberales. *Cuaderno de Ciencias Sociales*, *143*.

Spalding, R. J. (2014). *Contesting Trade in Central America: Market Reform and Resistance*. Austin: University of Texas Press.

Spicer, E. H. (1971). Persistent cultural systems: A comparative study of identity systems that can adapt to contrasting environment. *Science*, *174*(4011), 795-800.

Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of social issues*, *56*(3), 407-424.

Stets, J. E. & Biga, C. F. (2003). Bridging identity theory into environmental sociology. *Sociological Theory, 21*(4), 398-423

Stryker, S., & Burke, P. J. (2000). The past, present, and future of an identity theory. *Social Psychology Quarterly*, *63*(4), Special Millennium Issue on the State of Sociological Social Psychology, 284-297.

Taylor, J. J. (2008). Naming the land. *Geoforum*, *39*(5), 1766-1775.

Teubal, M. (2008). *Expansión de la soja transgénica en la Argentina*. Working Group on Development and Environment in the Americas. Retrieved from https://www_vocesenelfenix_com.1.com.ar/sites/default/files/pdf/13_2.pdf

The International Ecotourism Society. (2014). *What is ecotourism?* Retrieved August 8, 2014, from https://www.ecotourism.org/what-is-ecotourism

Thorner, D. (1965). A post-marxian theory of peasant economy. *The School of AV Chayanov, Economic Weekly, February,* 227-236.

Ulloa R. F. (1979). *Apuntes para la historia de la legislación laboral costarricense.* San José (C.R.): IESTRA

United Nations Educational, Scientific and Cultural Organization (UNESCO). (1997) *Educating for a sustainable future: A transdisciplinary vision for concerted action.* Retrieved from http://www.unesco.org/education/tlsf/mods/theme_a/popups/mod01t05s01.html

United Nations Framework Convention on Climate Change. (2006, August). *Costa Rica: Environmental services payment as a policy tool to avoid deforestation and promote forest recovery*. UNFCCC workshop on reducing emissions from deforestation in developing countries, Rome, Italy. Retrieved from: https://unfccc.int/files/methods/lulucf/application/pdf/060830_ulate.pdf

USAID (2014, May 15). *USAID History.* Retrieved from http://www.usaid.gov/who-we-are/usaid-history.

Van der Ploeg, J. D. (2009). *The new peasantries, struggles for autonomy and sustainability in an era of empire and globalization.* New York: Earthscan.

Van der Ploeg, J. D. (2010). The peasantries of the twenty-first century: the commoditisation debate revisited. *The Journal of Peasant Studies*, *37*(1), 1-30.

Varela Jara, J. & González Calvo, H. (1987). Movimientos migratorios internos en Costa Rica – Censo de población 1984. *Revista ABRA*, *7*(7-8), 245-280.

Villanueva, C., Sepúlveda, L., Claudia, L., & Ibrahim, M. (2011). *Manejo agroecológico como ruta para lograr la sostenibilidad de fincas con café y ganadería.* Informe técnico 387. CATIE. Retrieved from http://biblioteca.catie.ac.cr:5151/repositoriomap/bitstream/123456789/67/3/93.pdf

Vindas Quirós, L. (2014, March 19). Turismo genera el 4,6% del PIB de Costa Rica. *El Financiero.* Retrieved on August 8, 2014 from http://www.elfinancierocr.com/negocios/Turismo-Costa-Rica-genera-PIB_0_484151588.html

Vlek, C., & Steg, L. (2007). Human behavior and environmental sustainability: problems, driving forces, and research topics. *Journal of Social Issues*, *63*(1), 1-19.

Walsh, F. (2009). Human-Animal Bonds I: The Relational Significance of Companion Animals. *Family process*, *48*(4), 462-480.

West, P. & Carrier, J. G. (2004). Ecotourism and authenticity: Getting away from it all? *Current Anthropology, 45*(4), 483-498.

West, P., Igoe, J., & Brockington, D. (2006). Parks and peoples: the social impact of protected areas. *Annual Review of Anthropology*, *35*, 251-277.

Wetherell, M., & Mohanty, C. T. (Eds.). (2010). *The SAGE handbook of identities*. Thousand Oaks (CA): Sage Publications Ltd.

Wilson, E. O. (1992). The diversity of life. Allen Lane.

Wolf, E. R. (1955). Types of Latin American Peasantry: A Preliminary Discussion*. *American Anthropologist*, *57*(3), 452-471.

Wolf, E. R. (1980). *Pueblos y culturas de Mesoamérica.* México: ERA

Yeager, T. J. (1995). Encomienda or Slavery? The Spanish Crown's Choice of Labor Organization in Sixteenth-Century Spanish America. *The Journal of Economic History*, *55*(04), 842-859.

Yin, R. K. (2009). *Case study research: Design and methods*. Thousand Oaks (CA): Sage publications, 4th Ed. (page 18)

Znajda, S. K. (2000). *Habitat conservation, avian diversity, and coffee agroecosystems in southern Costa Rica*. Masters of environmental studies thesis. York University.

Appendix A: Research Proposal

Original Proposal (Feb, 2013)

My research examines the role of sustainable agriculture as a part of the wellbeing of peasant communities and as a contributing factor to the conservation efforts being carried out in the Alexander Skutch Biological Corridor (ASBC) in Costa Rica. My area of concentration covers the negative outcomes that GMOs as a tool for agroindustry are having at all levels of food production. Rather than fulfilling the promise to find a solution to world hunger, agroindustry has intensified this problem while increasing poverty worldwide. Currently, agroindustries are satisfying the requirements of the global market for producing low cost food. Along with this process of massive food commodification, GMOS have swept through and destroyed many local economies, which were traditionally communal and based on small farms and family units. Sustainable agriculture emerges as a feasible alternative to the Agroindustry and GMO model of food production

Appendix B: Questionnaire for semi-structure interviews

SPANISH : Buenos días, yo soy estudiante de la Universidad y estoy haciendo un estudio sobre el uso de la tierra en el corredor AS. Quería ver si usted me puede regalar unos minutos para hacerle unas preguntas. Esta información es confidencial, y la quiero usar para ver qué podemos hacer para mejorar la condiciones en el corredor. Cuando elabore mi informe final quiero presentarle a usted los resultados. ¿Estaría de acuerdo en colaborar?

ENGLISH TRANSLATION: Greetings, I am a student from York University and I am doing research on the use of land in the Alexander Skutch Biological Corridor. I would like to ask you for your time to answer some questions. This information will be confidential and I would like to use it to identify how we can improve the conditions of this corridor. When I finish my final work, I would also like to share the results with you.

1. No. de Ficha/ Interview Number.	2. Fecha/ Date	3. Lugar (dirección)/ Address
4. Nombre/ Name	5. Edad/ Age	6. Ocupación/ Occupation
7. Lugar de trabajo/ Where do you work?	8. Tel./Telephone	9. E-mail/ E-mail

10. Esta casa es/ This house is : a. Propia/Owned b. Alquila/Rented

11. Tiene otras propiedades? Do you own other properties?

    a. Si/Yes b. No/No (pasa a pregunta 13/continue to question 13)

12. Cuantas, Donde? How many? Where?

13. En que utiliza su tierra? How do you use your land?

    a. Agricultura/ Agriculture b. Ganaderia/Cattle (preg.15) c. Habitación/ To live on
    d. Otro/Other

14. Usted produce algún alimento? Do you produce some kind of food? a. Si/Yes - b. No/No

15. Ud. se considera/ Do you consider yourself a: a. Agricultor/Farmer
    b. Campesino/Peasant c. Ganadero/Cattle farmer d. Otro, cuál?/Other
    e. Ninguno (p.21)/None

16. Qué siembra- cultiva? What do you cultivate on your land?

17. Qué uso le da a lo que produce? For what purposes do you cultivate? a. Para uso propio/ For internal consumption b. Para vender, comercio/ For commercial purposes

18. Cuánta tierra le dedica a cada cultivo/ a la ganaderia? How much of your land is devoted to cattle?

19. Qué insumos utiliza en su agricultura? Which agricultural inputs do you use on your land?

    a. Pesticidas/Pesticides b. Fertilizantes Químicos/Chemical Fertilizers c. Semillas compradas/ Purchased Seeds d. Sistema de Riego/Irrigation system e. Abono orgánico/Organic Fertilizers (Compost, Manure) f. Otros –cuales/Others

20. Usa usted algún sistema de agricultura orgánica o ecológica? Cuál, cómo lo utiliza y cuánto? Do you practice organic farming or sustainable agricultual? Describe how often and how much you may use these techniques.

21. Le gustaría continuar con la práctica que realiza en su tierra? Por qué? Do you enjoy farming or cultivating your land? Why or why not?

22. Le gustaría producir algún producto agricola? Por qué?/ algún otro producto? Would you like to produce some agricultural product? Some other agricultural product?

23. Tiene obstáculos/impedimentos/dificultades para continuar con dicha práctica?/ o para iniciarla? Cuáles? Are there obstacles or difficulties that you face which may prevent you from continuing to farm? What are they?

24. Qué crees que necesitarías o te ayudaría para continuar o iniciar con la agricultura? What would be helpful or necessary to allow you to continue to farm?

25. Qué le gustaría hacer con su tierra en un futuro? What would you like to do with your land in the future?

a. Vender parte de esta/Sell part of it b. Venderla en su totalidad/Sell all of it
c. Heredarsela a sus hijos/Leave it to your children

26. En caso de heredarsela a sus hijos, que uso le gustaría q le dieran a esta? What would you like your children to do with this land?

    a. Venderla/Sell b. Cultivarla /Cultivate c. Otro, cual?/Other

27. Qué importancia/beneficio tiene la agricultura para: Which benefits do you think agricultural practices have for:

a. Usted/You	
b. Su familia/Your family	
c. La comunidad/ the community	
d. El ambiente, naturaleza/ The environment	

28. Qué efectos/impacto considera ud que tienen las piñeras para: Which effects/ impacts do you believe pineapple plantations have on:

a. La naturaleza/ The environment	
b. Para las comunidades/ For the communities	
c. Para su familia / For your family	

29. Participa usted en actividades, organizaciones, iniciativas de conservación de la naturaleza? Do you participate in any activites, organization or initiatives related to the conservations of nature?

    a. Si/Yes a1. En cual? What kind of activity? b. No/No

30. Por qué? Why?

31. Sabe ud. qué es el Corredor Biológico Alexander Skutch? Do you know what the Alexander Skutch Biological Corridor is?

a. Si/Yes b. No (pasa a pregunta 35) No (Continue to question 35)

32. Cree ud. que el Corredor Biológico Alexander Skutch tiene un impacto en la comunidad? Do you think that the Alexander Skutch Biological Corridor has some impact on the community?

    a. Si/Yes b. No (pasa a pregunta 35)/ No (continue to question 35)

33. Qué tipo de impacto? What type of impact?

    a. Positivo (beneficios)/ Positive b. Negativo (costo, daño) /Negative

34. Cuáles? What are they? (para usted, su familia, la comunidad, el ambiente… For you, your family, the community, the environment...)

35. Qué cree usted que se debería hacer aquí para cuidar mejor a la naturaleza en el corredor? What do you think you should be doing to take better care of the natural environment in the corridor?

36. Qué cosas dañinas le haces a la naturaleza que no podes evitar? What are you doing that may be harmful to nature that your find unavoidable? What harmful activities could you avoid doing but given the current circumstancesit are easier to continue to practice?

37. Por qué? (condiciones, facilidades, dificultades) Why? (Conditions, Difficulties)

38. Qué actividades productivas le podrían generar un ingreso y además proteger el ambiente? Where do you see yourself in the future? Think of your family, your land and your community.

39. Qué es lo que más te gusta de donde vives? What do you like the most about the place you live?

40. Qué es lo que menos le gusta de donde vive? What do you like the least about the place you live?

41. Cómo te gustaría verte a vos, a tu familia y a tu tierra y esta comunidad en el futuro? How do you see yourself in the future?

42. Me podrías sugerir algúna otra persona para entrevistar? Could you suggest someone else for me to interview?

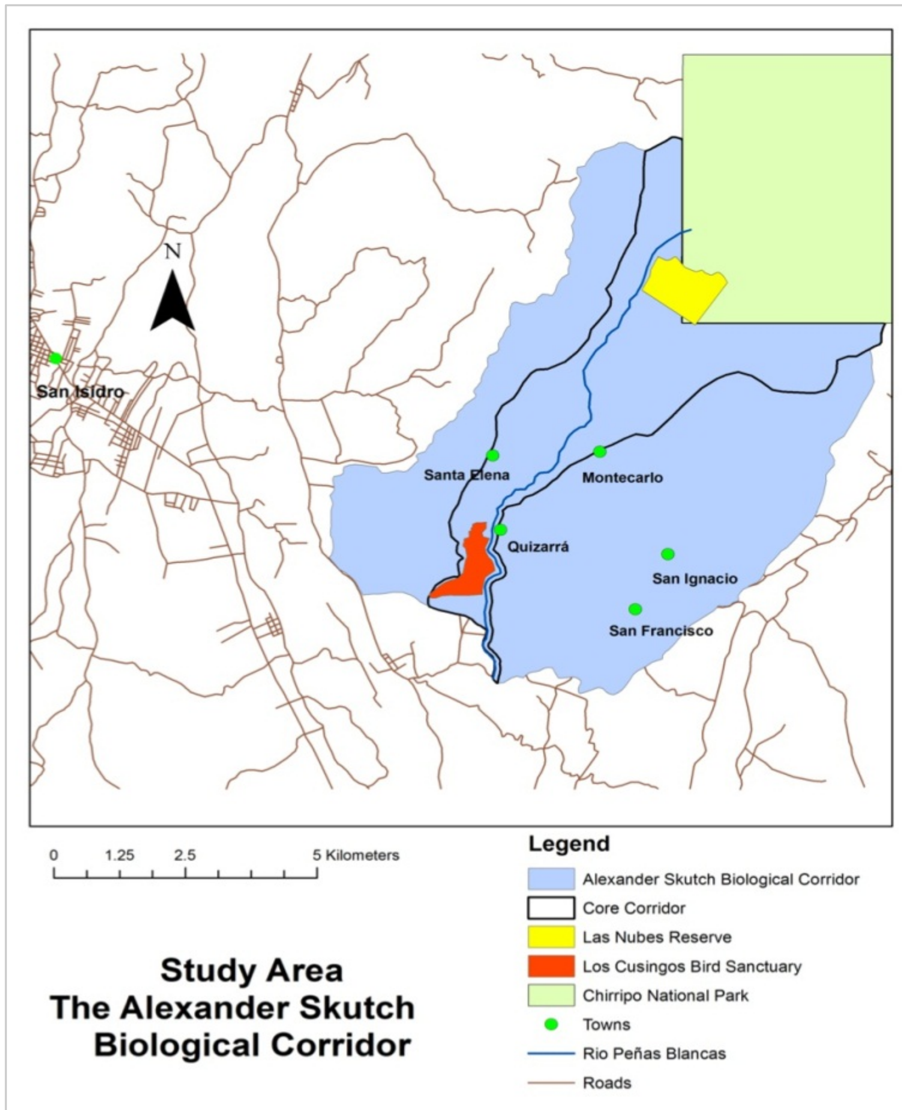
43. ¿Estaría ud de acuerdo con que su nombre formara parte del informe que se realizara en base a la información recolectada? Do you agree to be identified by your name as part of the information provided with the data collected in this research?

Appendix C: Maps

Map of Costa Rica

Source: Google Maps, 2014

Map of the Alexander Skutch Biological Corridor



Source: TSC

Appendix D: Tables

TABLE 1: Age breakdown (104 respondents)

	Females	Males
> 20 years of age	0	1
21-30	4	5
31-40	12	15
41-50	14	14
51-60	7	12
> 60	7	13
Total	**44**	**60**

TABLE 2: Land ownership

	Females	Males
Owns	86%	92%
Borrows	7%	3%
Rents	7%	3%
Other (provided to worker by owner)	0%	2%
Total	100%	100%

TABLE 3: Land use

	Females	Males
Plan to continue with agriculture	59%	62%
Want children (next generation) to continue with agriculture	48%	35%
Produce for self-provision purposes	57%	45%
Produce for commercial purposes	57%	45%
Produce for commercial and self-provision purposes	57%	45%

TABLE 4: Agricultural production

	Females	Males
Does not produce for self-provision	2%	0%
Has additional land for production	43%	36%
Has land and produces	73%	70%

TABLE 5: Food production for self-provision

	Females	Males
Produces own food	30	36
Does not produce	11	19
Does not have land for own production	3	5
Total	**44**	**60**

TABLE 6: Breakdown of food production

	Females	Males
Coffee	33%	39%
Fruit trees	5%	23%
Tubers	2%	21%
Sugar cane	5%	18%
Vegetables	14%	18%
Others: Watermelon, berries	5%	12%
Timber (Maderables)	7%	11%
Maize and legumes	0%	11%

TABLE 7: Peasant Identity

NP/P: Non peasant that considers him/herself peasant	40%
P: Peasant	54%
NP: Non peasant	6%

TABLE 8: Occupations

Described Occupation	Females	Males
Farmer ("Agricultor")	9%	47%
Other	12%	12%
Business Owner	0	8%
Peasant ("Campesino")	2%	8%
Construction Worker	0	7%
Rural worker (trabajador de finca/peones)	0	7%
Educator	2%	5%
Retired	2%	3%
Student	7%	3%
Baker	9%	0
Housewife	57%	0%

TABLE 9: Intent to continue working in agriculture according to identification

	Females	Males
NP/P: Non peasant that considers him/herself peasant	27%	17%
P: Peasant	12%	42%
NP: Non peasant	11%	2%

TABLE 10: Factors driving peasant self-identification

	Females	Males
Tradition	23%	13%
Heritage	20%	25%
Way of life	16%	13%
It's what I love	11%	0%
Pride	7%	10%
Education	5%	4%
Other	18%	35%

TABLE 11: What importance/benefit does agriculture have for you?

	Females	Males
It's my job / how I make a living	19%	23%
It's important, but currently without economic benefits	5%	13%
It's a source of additional income	12%	10%
Having healthy food without chemicals	13%	10%
Strengthening communities/humanity	4%	8%
No benefits because I don't produce	14%	7%
It brings me pleasure	0%	7%
It is a tradition / way of life	7%	7%
It's everything	4%	7%
Being able to grow my own food/having independence	18%	5%
No response	4%	3%
I don't know	0%	0%

TABLE 12: Environmentally damaging behaviours

	Females	Males
Agricultural burning	50%	22%
Use of chemicals	5%	35%
Use of detergents	14%	5%
Improper waste management (including burning of waste)	7%	8%
Improper recycling	4%	0%
Other	2%	13%
Does not know	0%	2%
No response	0%	3%
Does not cause damage	18%	12%

TABLE 13a: Reasons provided for engaging in damaging behaviours

	Females	Males
No damaging practices	27%	23%
Can't afford to do it differently	16%	25%
There is no alternative	16%	23%
Lack of information/knowledge	11%	10%
It's easier	11%	5%
Habit	5%	3%
N/A (i.e., smoking, driving)	7%	5%
Other reasons	7%	0%
It's part of my job	0%	5%

TABLE 13b: Reasons provided for engaging in damaging behaviours

Combined responses from men and women.

No damaging practices	25%
Can't afford to do it differently	21%
There is no alternative	20%
Lack of information/knowledge	11%
It's easier	8%
Habit	4%
N/A (i.e., smoking, driving)	6%
Other reasons	3%
It's part of my job	3%

TABLE 14: Involvement in activities related to conservation

	Females	Males
Yes	20%	25%
No	71%	72%
Does not know	9%	3%

TABLE 15: Reasons for not participating in activities related to conservation

	Females	Males
Physical exhaustion due to age	10%	16%
Lack of information	52%	7%
Lack of time	19%	23%
Lack of motivation	6%	5%
Not recruited	3%	9%
Does not find it useful	10%	14%
Does not like to participate	0%	12%
Political or personal conflicts	0%	14%

TABLE 16: Reported knowledge of the ASBC

	Females	Males
Yes	91%	78%
No	9%	22%

TABLE 17: Perceived effect of the ASBC on the community

	Females	Males
It is affecting it positively	73%	75%
It is not affecting it	27%	25%

TABLE 18: Perceived reasons for the importance of the ASBC

	Females	Males
To protect animals	35%	26%
To connect the community to nature	24%	20%
To protect natural resources	23%	29%
Commercial exploitation through tourism and related activities	23%	17%
To educate on environmental awareness	12%	19%
Aesthetic	2%	5%

TABLE 19: Activities that could be implemented in the ASBC to protect nature

	Females	Males
Plant trees	19%	26%
Provide information	28%	24%
More state intervention/control	0%	12%
Protect nature	9%	9%
Water conservation	9%	6%
Eliminate agricultural and waste burning	9%	6%
Eliminate fumigations	2%	6%

Avoid generating waste	9%	5%
Involve the community	9%	5%
Generate production and consumption	3%	1%
There is nothing else that should be done	3%	0%

Figure I-1

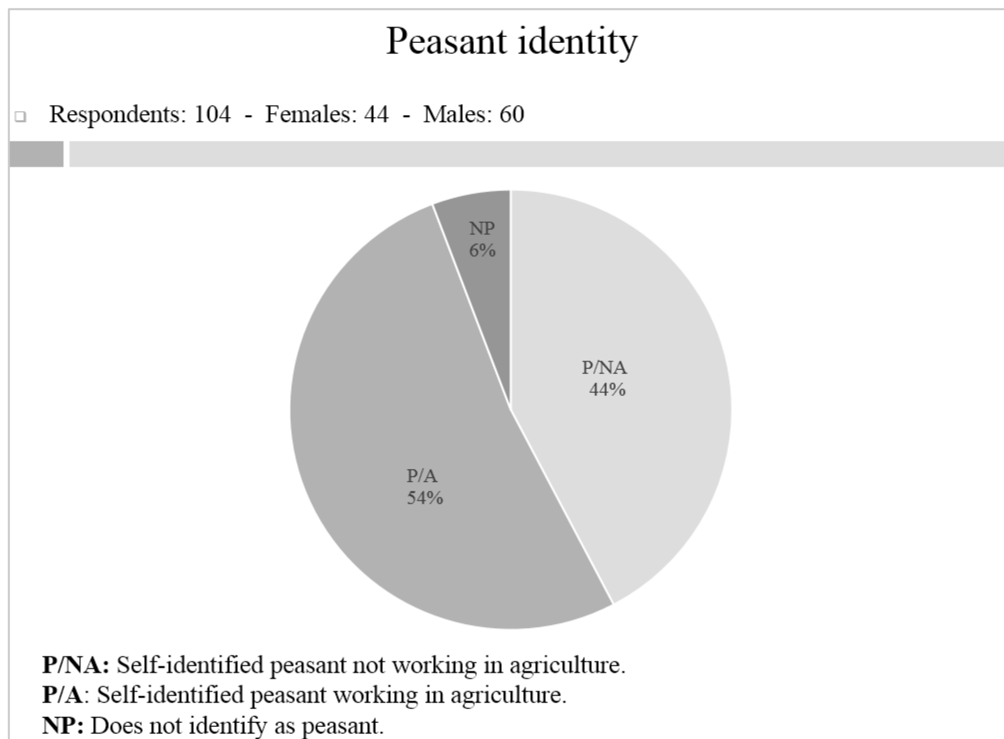


Figure I-2

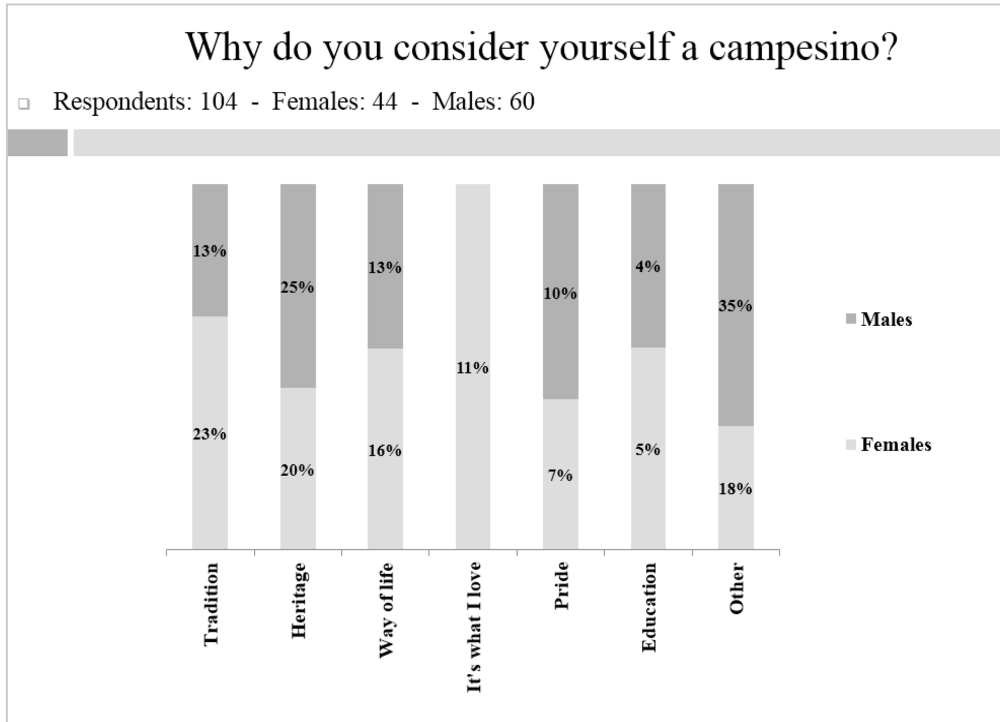


Figure S-1

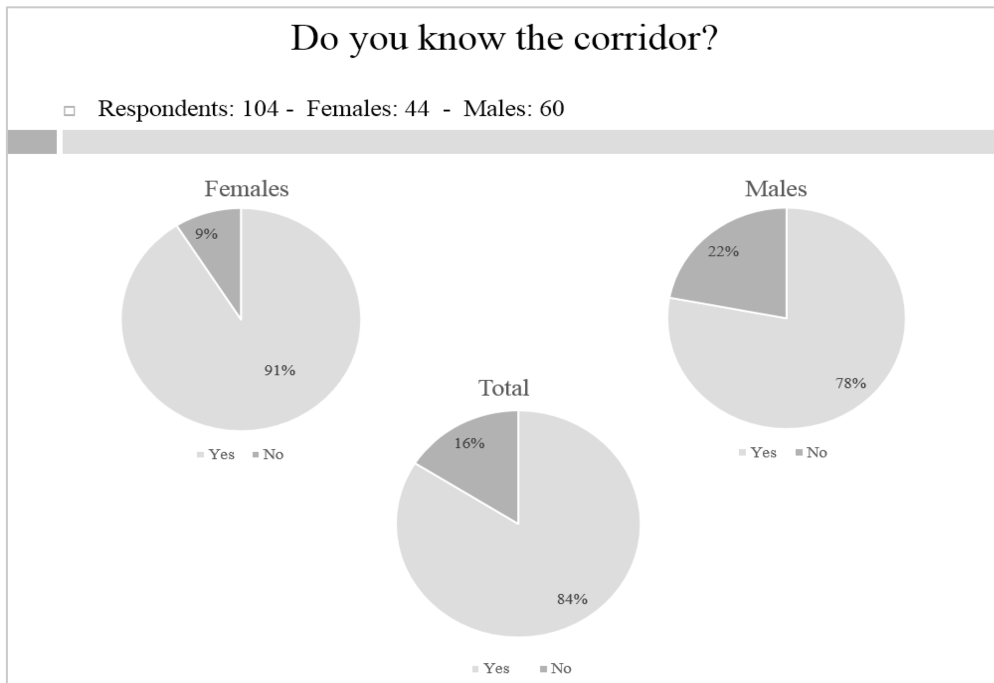
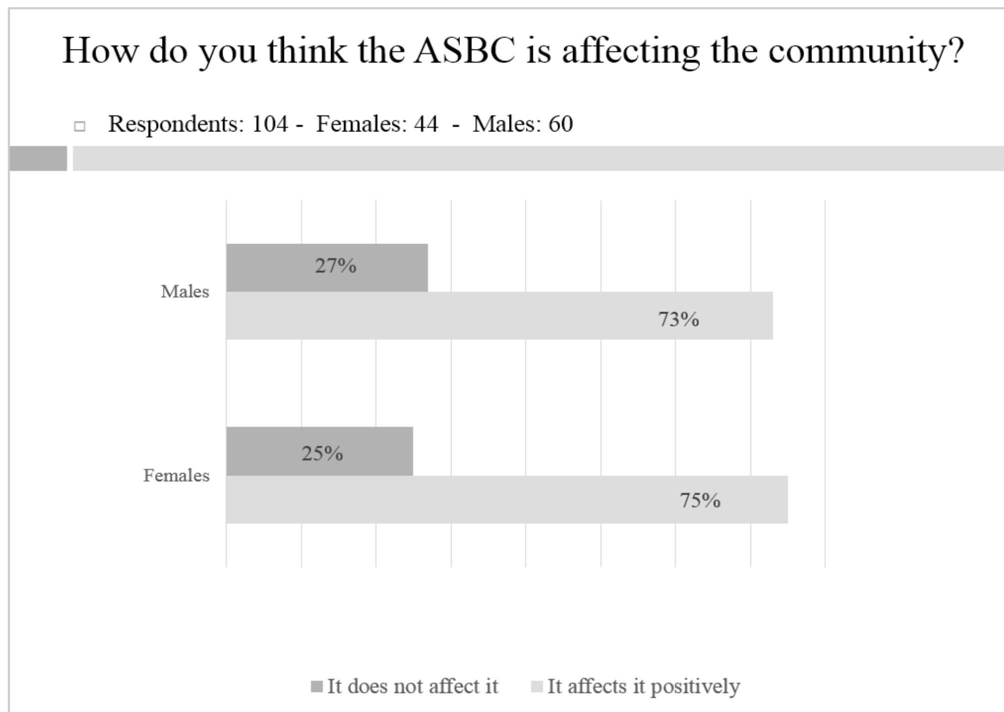


Figure S-2 --Figure S-3



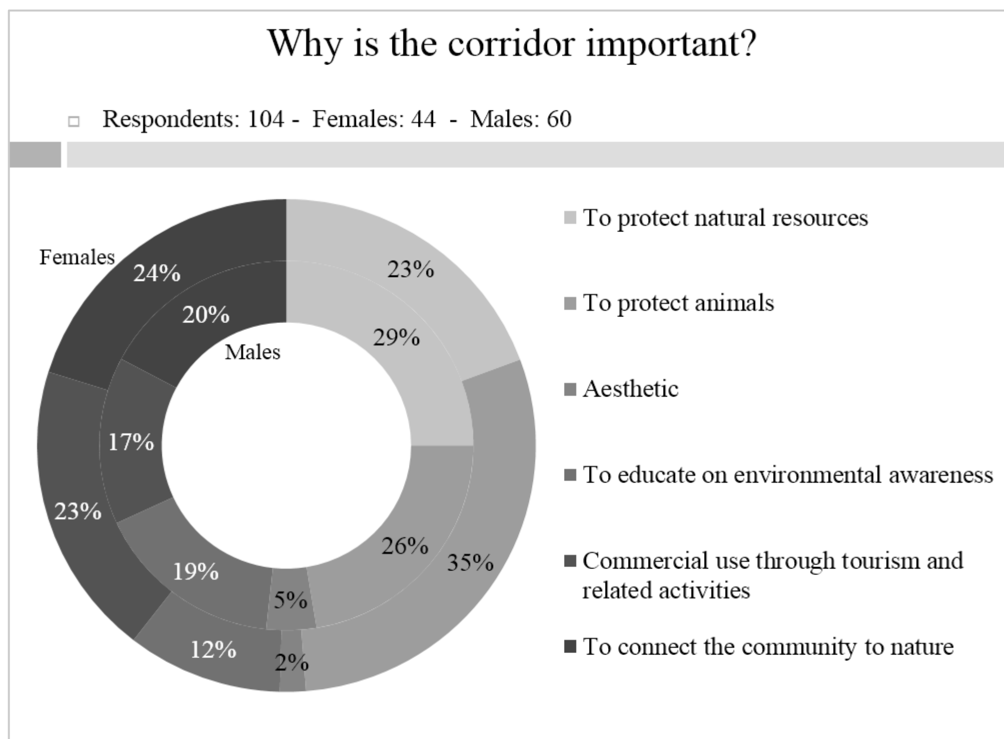
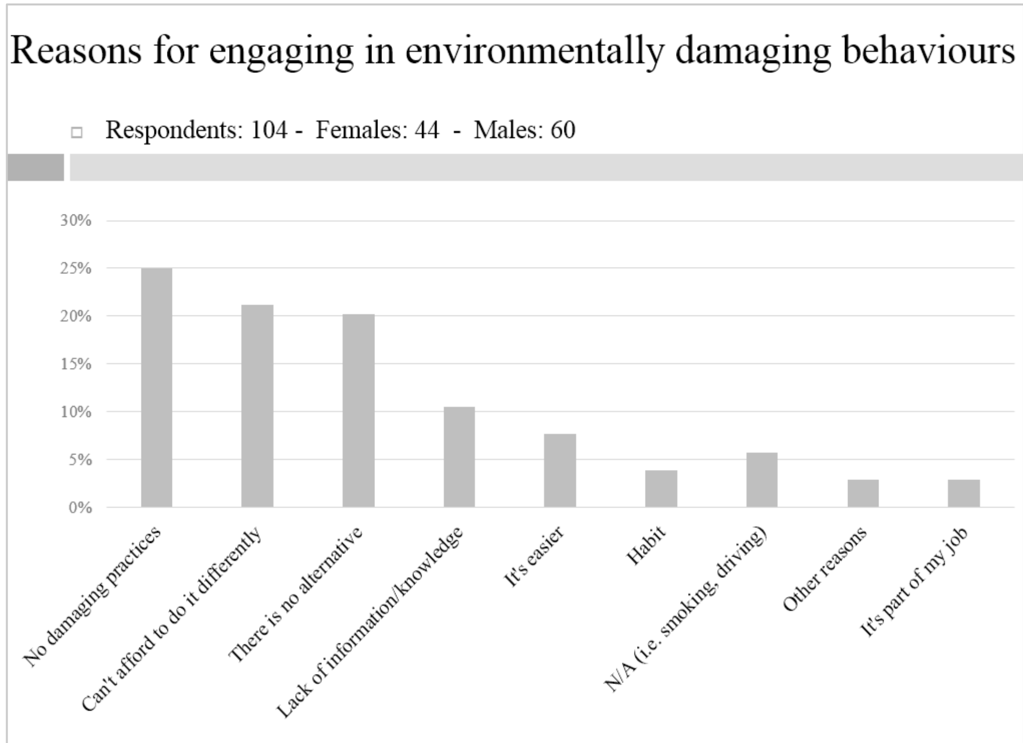


Figure S-7 Figure S-8



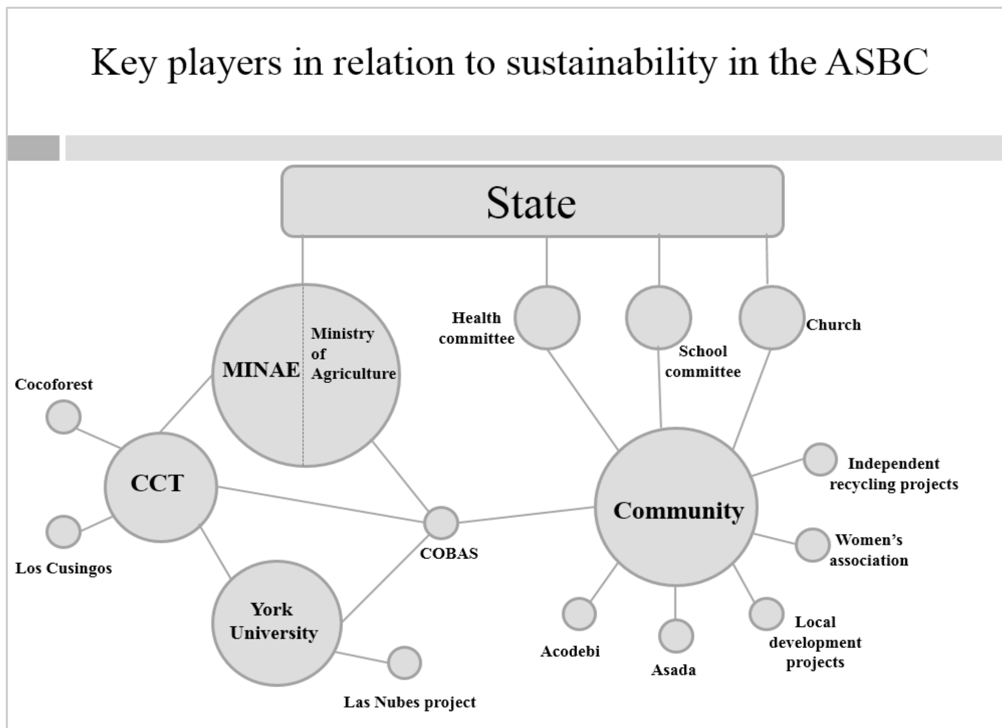


Figure E-7