

Real Utopias and Dystopias from the Colombian Amazon:

Collective Future Scenarios under Government & FARC-EP post-agreement period

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Abstract

After more than 50 years of internal armed conflict, the peace agreement between the Colombian Government and the Revolutionary Armed Forces of Colombia- People's Army (FARC-EP) raises both hope and concern. There are several opportunities for people, derived from wealth and land redistribution. However, the environmental sustainability of the mechanisms to implement the agreements represent the biggest challenges facing the future. Threats to the environment, such as increased deforestation in areas previously isolated during the conflict, can compromise the ecosystem balances humans and non-humans depend on. The Amazon Forest Reserve is among the areas that will likely undergo the biggest pressures during the post-agreement period. Certainly, there are no blueprints to achieve a stable and lasting peace. However, any real peace proposals need to include all concerned parties. Constructing future scenarios with indigenous peoples living in Forest Reserves and external agents working in La Pedrera, Amazonas Department, is a good case example to define what kind of futures they can envision.

For this research project, I designed and served as facilitator during six scenario construction exercises, with 40 Forest Reserve dwellers. Additionally, I conducted six semi-structured formal interviews with relevant actors. The process of synthesising participants' views, the current state of the territory, and perceived future opportunities and threats, lead me to a baseline and three future scenarios: Utopian, Business as Usual, and Dystopian. Furthermore, I used the capabilities approach, and Political Ecology, to understand the kinds of conflicts present in the area, to explore real possibilities of peace for the territory, and to expand the roles participants described as more conducive to achieve desirable futures.

Through the baseline and the future scenarios, I was able to identify two kinds of conflicts. The first conflict, in the existential territory, is the clash between the Western and the Indigenous world. The second type of conflict, in the physical territory, is how the armed conflict is present in the study area, through the connexion between gold mining and armed groups. Real proposals for the resolution of conflicts in the existential territory would require collective action, from both indigenous and non-indigenous peoples, to construct a common world. Enhancing the role of youth and ecological movements is key to resolving the conflict in the physical territory, to demand accountability from the state and non-official armed actors, to make more desirable futures possible.

Keywords: Amazon Forest Reserve, Capabilities, indigenous peoples, Peace-agreement, Political Ecology, scenario construction

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List of Abbreviations

DANE	National Administrative Statistics Department (<i>-Departamento Administrativo Nacional de Estadística</i>)
------	---

ELN	The National Liberation Army (<i>-Ejército de Liberación Nacional</i>)
ETI	Indigenous Territorial Entity (<i>-Entidad Territorial Indígena</i>)
FARC-EP	Revolutionary Armed Forces of Colombia- People's Army (<i>-Fuerzas Armadas Revolucionarias de Colombia - Ejección del Pueblo</i>)
GO	Governmental Organisation
NGO	Non-Governmental Organization
ONIC	Colombian National Indigenous Organisation (<i>-Organización Nacional Indígena de Colombia</i>)
OPIAC	National Indigenous Organisation from the Indigenous Nations of the Colombian Amazon (<i>-Organización Nacional de los Pueblos Indígenas de la Amazonía Colombiana</i>)
PNN	Natural National Parks (<i>-Parques Nacionales Naturales</i>)

1 Introduction

1.1 Problem statement

The peace agreement between the Colombian Government and the FARC-EP (see figure 1 –Peace accord Process in Colombia) raises both hope and concern. Ending more than 50 years of armed confrontations is a necessary condition to build desirable futures for those who have more closely lived the rigours of the internal war, yet the implementation of the agreements presents critical challenges, notably regarding environmental sustainability (Fajardo et al., 2014). Lack of participation and engagement of relevant parties, before and after a peace agreement, can drift into conflict relapse (See figure 1 –Conflict cycle). The victims of the conflict, small farmers, ethnic minority groups, and ex-combatants from the guerrilla group are expected to benefit more directly from the agreement. Wealth and land redistribution, infrastructural improvements, and Human Rights enforcement are supposed to improve the conditions of underserved groups (Carmona, 2015; Fajardo et al., 2014; The Government of Colombia and the Revolutionary Armed Forces of Colombia – People's Army (FARC – EP), 2016). Nevertheless, benefits for people, derived from the implementations of the agreement, can be reversed by pressures such as land-use change, and exploitation of natural resources, at scales that were previously forbidden by the conflict (Álvarez, 2001; Dávalos et al., 2011; Fajardo et al., 2014).

Ecological issues related to Forest Reserves deserve special attention. These are areas in principle set aside for the protection of ecosystem functioning, productive activities different from forestry are not allowed in these Territorial Entities (Ministerio de Ambiente y Desarrollo Sostenible, 2014). Since the Colombian Government relies on the subtraction of land from Forest Reserves to comply with the land redistribution reforms, their protective role can be jeopardised during the implementation of the peace agreement (Fajardo et al., 2014). Additionally, the benefits that the peace accord promises will not be delivered to people in the short term, not even human security, as other experiences show that violence against civilians may increase during post-conflict periods (Camelo, 2015; International Crisis Group, 2014; Kathman and Wood, 2014). Consequently, marginalised groups may benefit from discussing the kind of threats and opportunities that the post-agreement can bring to them, to identify actions that they and other actors should take to make use of the possibilities and withstand the threats.

Therefore, with this study, I seek to engage in the *construction*^{*1} of future scenarios with Indigenous Communities living in Forest Reserves, and with external agents working in the area of La Pedrera, Amazonas Colombia. Working with this population is important because, on the one hand, the armed conflict has impacted ethnic groups in a disproportionate manner (Amnesty International, 2015; Sánchez G., 2013). On the other hand, both indigenous and non-indigenous people from the area are also agents of change that can make significant contributions to the construction of a stable and durable peace.

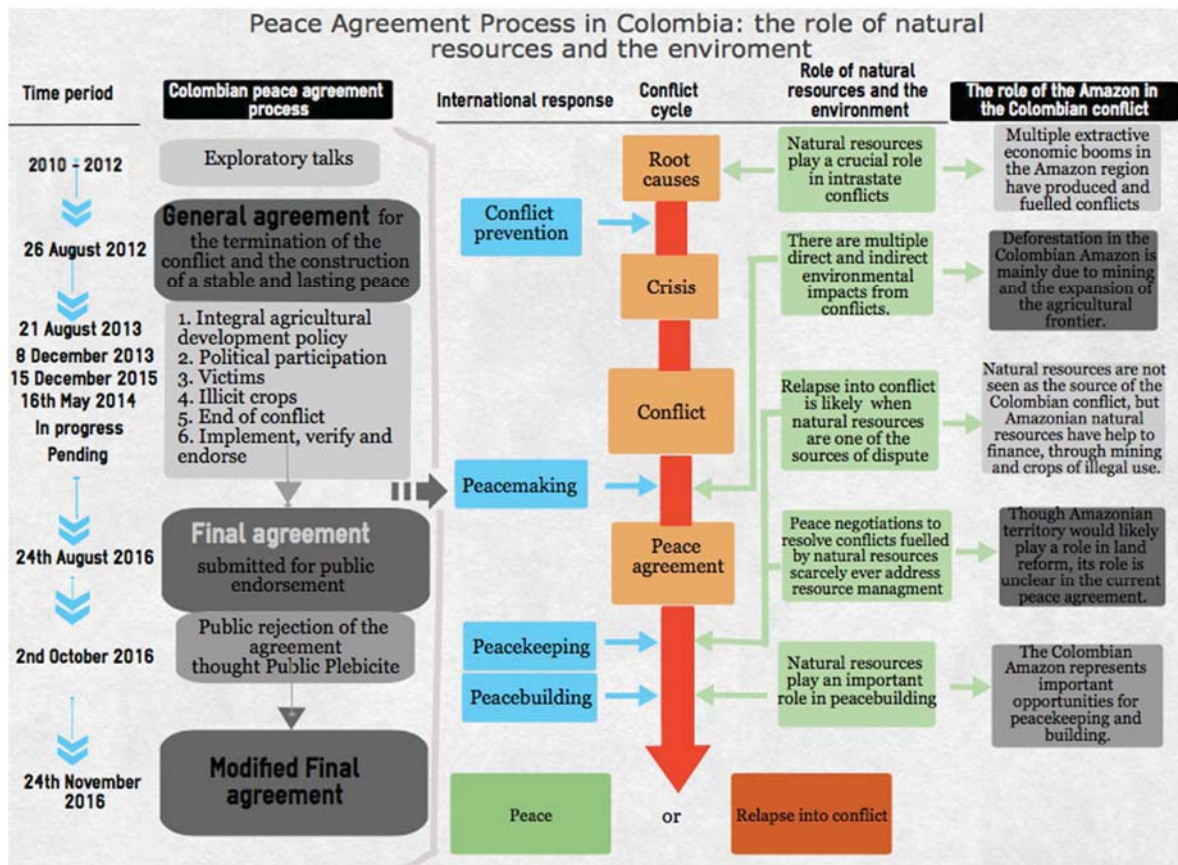


Figure 1: Peace agreement process in Colombia and the role of the natural environment.

This graph represents the peace accord process in Colombia, between the Government of Juan Manuel Santos and the FARC-EP, about the international cycle of conflicts defined by the UNEP. In addition to the National stages and international phases of the armed conflict, this graph includes the connection between intra-state armed conflict and the natural environment. In particular, the graph contains the role of the Colombian Amazon about the internal armed conflict, and its potential to play a role in peacekeeping and peacebuilding (Sources: Adapted from Rodríguez (2015); (RAISG, 2015; UNEP, 2009).

1.2. Relevance and Research Questions

¹ Please find all the terms in italics which have the * symbol in the Glossary at the end of this document (Annexe 1).

From a developmental approach to peace, natural resources need to be accounted for to enhance peacebuilding and peacekeeping; otherwise, progress and economic growth will be threatened (Peacebuilding Support Office, 2010; UNEP, 2009), see figure 1 –The role of natural resources and the environment. From a non-developmental approach, both humans and non-humans need to participate in the definition of the kind of advancement that we need to adopt, to construct a collective future in the only planet we have (Latour, 2006, 2004a, Morin, 2006, 1995). Whether we take the human centred or the post-humanist approach to analyse the armed conflict in Colombia, we will arrive at the conclusion that the Colombian Amazon rainforest has played a significant role in fuelling the conflict. Although their roles are still uncertain, humans and non-humans from Forest Reserves in the Amazon can also play important roles for peacebuilding (See figure 1 –The role of the Amazon in the Colombian conflict). More desirable futures are not possible if those who take decisions that affect the composition of the landscape are further apart from those who will bear the consequences of those decisions (Hägerstrand, 2001). Therefore, with this research project, I attempt to answer the following research question:

What imagined future scenarios are envisioned by Forest Reserve dwellers and external agents² in La Pedrera, Amazonas, during the post-agreement period in Colombia?

General Objective: Describing, from participants' perspectives, what are the challenges and possibilities that a peace agreement can bring to them.

The following research sub-questions and the related objectives will help me answer the overarching research question (Table 1).

Table 1: Research sub-questions and associated objectives

² Internal agents (A)_{in} and External agents (A)_{ex} are categories I introduced during data analysis to differentiate participants who were born and currently live in the area, from participants who work in the area but come from other Departments. Due to the difficulty of defining participants only as indigenous or non-indigenous, I decided to introduce this 'mobility qualifier', where internal agents are more bounded to the territory than external agents. For a full description of these categories see the Glossary (Annexe 1).

Research sub-questions	Specific Objectives
(RQ1) What would collectively desirable and undesirable futures look like from the perspective of internal and external agents living and working in La Pedrera, Amazonas Department?	To describe how indigenous peoples and external agents imagine future scenarios, within the frame of the peace agreement between the Colombian Government and the FARC-EP.
(RQ2) How can we make more desirable futures possible?	To identify courses of action that could be performed by <i>internal agents</i> , and other relevant parties, in order to bring about better futures.
(RQ3) What role should agents play in order to achieve more desirable futures?	To understand how participants see themselves, and the role of other relevant parties, in the construction of better common futures.

1.3 Aim and Contributions to sustainability

The overall aim of this research is to engage in the simple but powerful act of discussion about prospects, threats and opportunities, for indigenous peoples living in Forest Reserves in La Pedrera, Amazonas, during the post-agreement period in Colombia. Beyond this, I inquire about the possible courses of action that participants can take to make more desirable futures possible. Finally, this research helps to identify research needs that should be addressed to minimise the future negative consequences of the post-agreement period for humans and non-humans in the territory of Forest Reserves in the Colombian Amazon.

2 Setting the scene

2.1 The role of the Amazon in the Colombian conflict

Romantic views of the Amazon, portraying the forests as “the lungs of the world”, or a biodiversity reservoir, have helped to carved our outsider mental pictures of it (Kawa, 2014). These views conceal the many ways in which the Amazon region in Colombia is a territory in conflict. It is both the scenario where the armed conflict takes place and a region whose resources have been used to finance the internal war (Dávalos et al., 2011; Fjeldså et al., 2005; Franco, 2012; Molina Guerrero, 2007; RAISG, 2015; Zárate, 2015). See Figure 1 –The role of the Amazon in the Colombian conflict. The dynamics of the internal armed conflict in Colombia have shaped the territories of the Amazon in many direct and indirect ways. The direct influences of the armed conflict are mainly through the expansion of the agricultural frontier and illegal mining. Both activities produce 50% of the deforestation in the Colombian Amazon (RAISG, 2015). Other factors contributing to deforestation have been: processes

of colonisation due to the internal armed conflict, the various economic booms³, development of infrastructure, crops of illicit use, monocultures, firewood, forest fires, and wood extraction for industrial and commercial purposes. Some indirect influences have been deforestation, induced through human displacement (RAISG, 2015; Sánchez-Cuervo and Aide, 2013); and forest recovery, favoured by the consequential land abandonment (Sánchez-Cuervo and Aide, 2013).

Likewise, the geophysical characteristics of the region have shaped the dynamics of the conflict, favouring FARC-EP's establishment of rear-guards and control over illicit economies that flourished in remote areas (Frédéric et al., 2009; Sánchez, 2013). One primary source for the FARC to finance its insurgent campaign has been through crops of illicit use⁴ and drug trafficking (Arévalo Bencardino, 2014; International Crisis Group, 2014; Sánchez, 2013). Although dispersed around the Andes, Chocó and Amazonas regions, most of the plantations are located in the Amazon foothills of the East Andes (Álvarez, 2007). The most impacted departments have been Caquetá, Guaviare (De Jong et al., 2007), and Meta (Sánchez G., 2013), (See Figure 2). In recent years gold mining and other types of mineral extraction have also gained importance as a source of financing for the FARC and other illegal groups (Idrobo et al., 2014; International Crisis Group, 2014).

³ Some examples are the rubber, fur, cinchona bark, gold and oil extraction booms.

⁴ These crops are marijuana, coca and opium poppy. Until the mid-1970s, the non-ethnic majority of the Colombian population barely knew about marijuana and coca plants (Molano, 2000). In contrast, for indigenous peoples, the coca, together with tobacco, are sacred plants and are essential parts of their traditions (Andoque Macuna et al., 2011; von Hildebrand and Brackelaire, 2012). Classifying these crops as illicit or illegal has been a politically contested process in Colombia (Molano, 2000), where the more politically correct phrase "crops of illicit use" has been adopted for official reports. The final peace agreement acknowledges the medicinal and ritual use of these crops by indigenous communities (The Government of Colombia and the Revolutionary Armed Forces of Colombia – People's Army (FARC –EP), 2016).

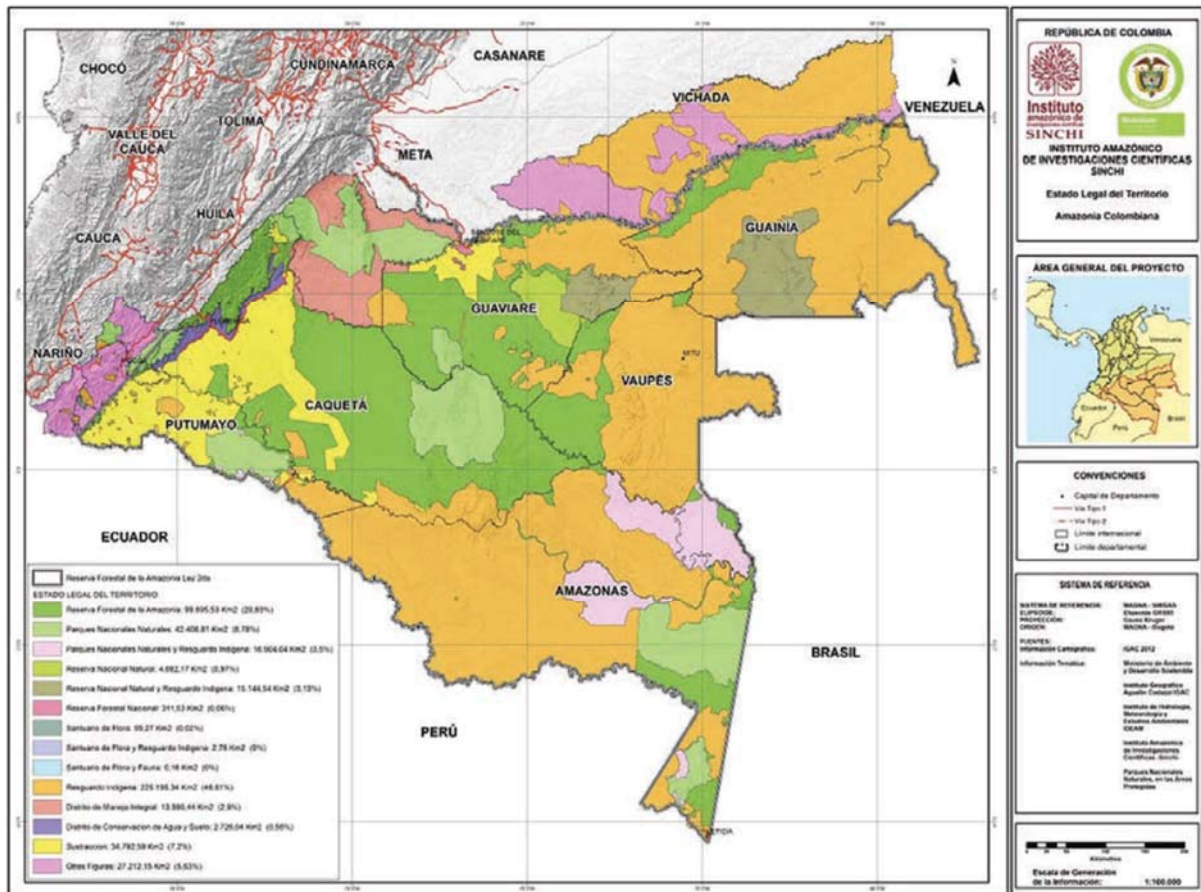


Figure 2: Map of the Legal State of the Territory in the Colombian Amazon

This map displays the Territorial Entities in the Colombian Amazon by colour. Thin black lines represent department limits. Adapted from (Murcia-García et al., 2014). Source: Sinchi Institute:

http://geosemantica.siatac.co/collections/map_explorer.aspx?map=813fec86-9cf7-4a95-90f2-505637858a75

2.2 A brief introduction to the armed conflict and the peace negotiations in Colombia

There are two main visions of the root causes of the long-lasting insurgency and the widespread violence in the country. Whereas one view assigns the root causes to organised delinquency, and the inability of the state to keep control over the national territory (Arévalo Bencardino, 2014; Beittel, 2014; Sánchez, 2013). The other view attributes the conflict to more fundamental social and political disparities, intensified by disputes over land between actors with unequal bargaining power, and the weak legitimacy of the state (Flores, 2014; LeGrand, 2003; Sánchez, 2013). Proponents of the second explanation reject the Colombian 'weak state' theory, arguing that the formulation of a new Constitution in 1991, several military attacks against guerrillas, and a steady economic growth are rather characteristics of a strong s(Flores, 2014; Vásquez, 2008). Colombian State lacks legitimacy for different reasons. In the first place, there have been numerous human right violations perpetrated or overlooked by government authorities. These issues have eroded public confidence in the ability of the state to protect its citizens (Cortés, 2013; LeGrand, 2003; Sánchez, 2013). In the second place,

using force as the primary mechanism to end conflicts has created a culture of tolerance for violence to resolve disputes, thus reducing the credibility of the state to mediate in local conflicts (Camelo, 2015).

Against this background, the Colombian presidency of Juan Manuel Santos engaged in exploratory talks with the FARC back in 2010 and used the peace agreement as his main political project, which won him the re-election in 2014 (López de la Roche, 2015). Peace negotiations culminated in November 2016 (See Figure 1-Colombian Peace Agreement Process). There are different interpretations about the current Government's approach to peace. One is that the negotiations were a radical shift away from the Defence and Democratic Security approach to conflict from the former president. The previous plan focused on anti-terrorism and followed the U.S. declared war on drugs. This method managed to increase the sense of security among the general public but proved too costly and ineffective to defeat the FARC (Castañeda, 2014; Rodríguez Pico, 2015). Another interpretation is that the government's approach to peace aims to clean Colombia's international bad image, to make the *mining locomotive**⁵ a more viable project (Cortés, 2013). Framing the Colombian conflict only as the result of the drug trafficking problem is insufficient (Flores, 2014; LeGrand, 2003). A comprehensive analysis of the armed conflict requires acknowledging the role that private actors, seeking to gain political and economic power in the country, alongside the increasing weakening of the state, have played in exacerbating and financing the conflict (Flores, 2014; LeGrand, 2003).

2.3 Post-agreement period

Several authors refer to the period after the signature of the peace agreement between the Colombian Government and the FARC as 'post-conflict' period (Molano-Rojas, 2015; Nussio, 2013; Santamaría, 2015; Ugarriza, 2013). This expression is nonetheless misleading because it gives the impression that the act of signing a peace agreement translates directly into a period without conflict when in practice these periods are often characterised by increased violence against civilians (Camelo, 2015; International Crisis Group, 2014; Kathman and Wood, 2014). Both for practical reasons and because it avoids the distorted idea of this period as an unproblematic transition into peace, I decided to use the term post-agreement period instead, which has been used as a synonymous for the former (Fajardo et al., 2014; Hernández, 2015; Rodríguez Pico, 2015). Increased violence is nevertheless not

⁵ This is the name widely used interchangeably to refer to both The General Policy for Mining Development (2010-2014) and the Development Plans proposed by the Santos Government in Colombia. For detail definition and sources see the Glossary (Annexe 1).

the primary challenge that the post-agreement in Colombia poses, ecological challenges are at the forefront.

2.4 Ecological challenges from the post-agreement period in Colombia

Environmental impacts derived from the mechanisms to implement the peace agreement between the Government and the FARC-EP are portrayed as the biggest challenge facing the post-agreement period in Colombia (Fajardo et al., 2014; Gutiérrez Roa, 2015; Hochschild, 2015). The first point in the agreement, the "Integral Agricultural Development Plan" (see Figure 1 –Colombian peace agreement process), contains the central mechanisms devised for economic integration. These financial strategies mainly rely on land-redistribution and productive alternatives to replace crops of illicit use, together with technical improvements for agricultural development (Beittel, 2014; Fajardo et al., 2014; Flores, 2014). Land redistribution is the aspect of the agreement that more directly relates to possible future environmental negative impacts, given that new titling of land will inevitably collide with protective figures, such as National Natural Parks, Indigenous Reserves, and Forest Reserves (Fajardo et al., 2014). Internal conflict experiences worldwide demonstrate that disregarding the role of natural resources in fuelling and sustaining armed conflict, and dismissing their potential to help in conflict resolution, peacebuilding and peacekeeping, often results in a relapse into conflict (UNEP, 2009), see figure 1 –The Role of natural resources and the environment-.

3 Theoretical Foundations

3.1 Political Ecology (Latour) and Capabilities Approach (Sen)

Political Ecology is a research tradition applied by sustainability scientists to explore human-environment dynamics, with a focus on informing development (Turner and Robbins, 2008). Among the many practices within this broad research tradition, I am interested in the Political Ecology inspired by Bruno Latour, which urges us to go beyond the divide between humans and nature, to articulate humans and non-humans in the process of becoming a *collective** (Latour, 2004a). Capabilities is an approach to development, formulated from a primarily economic perspective. This concept aims at shifting the focus from measuring progress in terms of utilities, income, or wealth, and instead measure it regarding the capabilities that enable individuals to 'lead the kind of lives they have reasons to value' (Sen, 1999). Sen (1999) proposed five instrumental freedoms, political, economic, social opportunities, transparency guarantees, and protective security. There are notable differences

between these two approaches. I was nevertheless able to find points of reconciliation between them by de-emphasising their metaphysical discrepancies (Sil and Katzenstein, 2010).

Others before me have attempted to bring these two authors and their seemingly incommensurable approaches into dialogue, using Latour's work to ground the ideas of development and human value in Sen (Kullman and Lee, 2015). We will take on a similar path, using some of Latour's 'sociology of associations'⁶ and politics, to ground Sen's ideas on how to achieve Human Freedom through the development of capabilities. Specifically, Latour and Sen's ideas on *agency** and *equality**, peace and war, are particularly useful to analyse the scenarios from this case study. Conversely, we will use the capabilities approach, which focuses on individuals, to see the applicability of the concept to communal capabilities, which has previously been suggested as a suitable framework to analyse indigenous struggles and Environmental Justice (Schlosberg and Carruthers, 2010). Finally, to make the capabilities approach operational, I decided to use the list of ten capabilities suggested by Martha Nussbaum (2003). From Sen's approach to human development, Nussbaum (2003), proposed ten central Human Freedoms (Figure 3). According to her, these are basic entitlements, guiding principles for all states to guarantee to their citizens, yet the author proposes them as a draft, submitted for public discussion and improvement.

3.1.1 Agency and equality

Latour and Sen have different approaches to *agency** and *equality**. Sen (1995, 1993, 1999) is mostly concerned with guaranteeing *agency* and *equality* to humans. Latour (2004, 2005, 2013) on the contrary, cannot conceive *agency* and *equality* if we do not take non-humans into account. In an attempt to capture relevant elements from both authors, I consider both humans and non-humans and use the capabilities concept. *Agency* throughout this research is "the capacity to make other being(s) do something" (Callon and Latour, 1992; Latour, 2013, 2004). *Equality* means to provide humans and non-humans with the necessary conditions to assemble in ways that allow them to fulfil their capabilities.

⁶ In brief, the differences between 'sociology of associations', coined by Latour and his colleagues, is different from the 'sociology of the social' in that the first one does not use social, or society as an already organized structure. Their main thesis is that the social is something that is in constant transformation through the links that humans and non-humans constantly form. For a detailed account of the difference between the two approaches see Latour (2013).

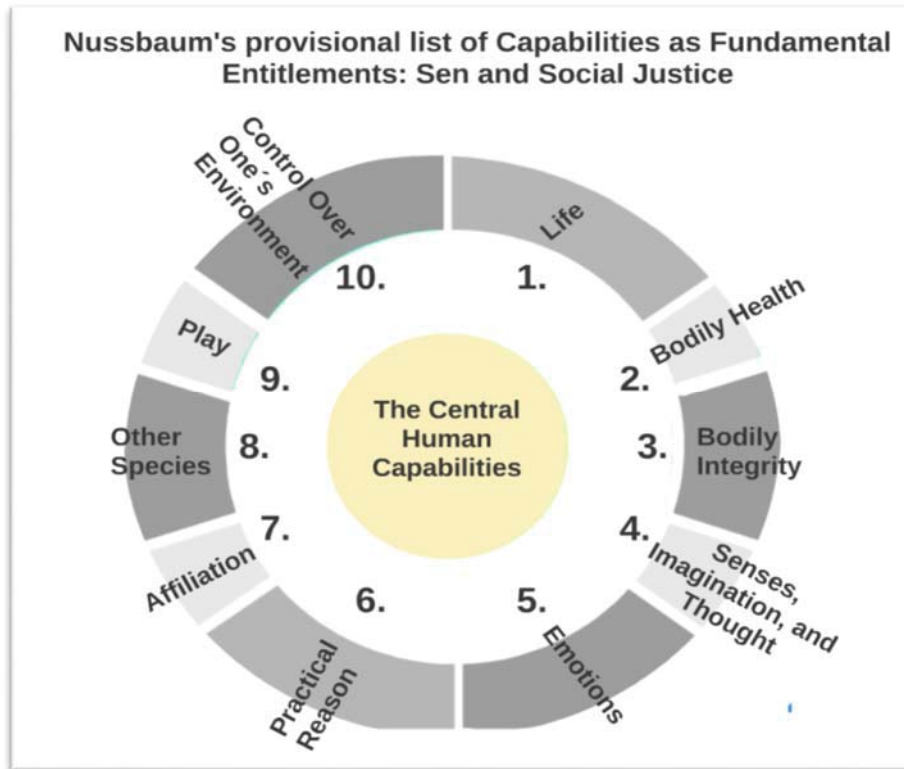


Figure 3: The Central Human Capabilities.

This figure displays the list of ten Human Central capabilities proposed by Martha Nussbaum. Amartya Sen's Capabilities Approach is the basis for these ten entitlements. I used these categories to analyse the different scenarios that my co-researchers and I created (Baseline, and the three future scenarios). Adapted from (Nussbaum, 2003). Please find the definition of each Capability at the end of this document (Annexe 7, Table 8)

3.1.2 Peace and war

Two interesting meeting points between Sen and Latour are their preoccupations with peace and war, and their defence of democracy as a necessary mechanism to resolve conflicts. These meeting points also present clashes, not only their assessments are different, but the very meaning of the words 'peace', 'war' and 'democracy' contrast, as we shall see. Despite these divergences, their insights were useful for me to approach the armed conflict and the ongoing peace process in Colombia.

Sen (2011), focusing on human conflicts and wars linked to violence, sees conflicts and wars with disapproval, accordingly, policies should target conflict prevention. To him, violent conflicts result from a combination of factors, notably, when extremists find the way to singularize divisive identities, and grievances exist, people who have been denied social, political and material freedoms, can restore to violent means to obtain what would be guaranteed to them in a genuinely democratic society. Civic paths to peace demand political empowerment of individuals, social dignity and the spread of economic equality, regarding opportunity and outcomes (Sen, 2011). Sen (1999) acknowledges the necessity of finding alternative institutions to resolve fundamental inequalities. He explores the

contradictions within the capitalist economic system, notably the coexistence of poverty in an era of unabated material wealth (Sen, 1999); yet, his idea of democracy, and by extension, his mechanisms for peace, are linked to the current social and political institutions.

In contrast, Latour (2002, 2004, 2013a) does not disapprove war. In his view, war is the mechanism through which the process of reassembling the collective is put in motion anew. Through this mechanism enemies, those humans and non-humans we leave outside the list of civilised⁷ entities, put the unified common world into question (Latour, 2004). Latour often refers to human conflicts concerning the 'war front of modernization' (Latour, 2013). Through the imposition of their values (Science, Technology, the Market, Democracy, Human Rights), Moderns have caused countless conflicts (Latour, 2002). Despite this, westerners have never acknowledged these conflicts as wars, given that their authority as the 'unifier' and 'pacifiers' of the world has never been under question (Latour, 2011, 2002). From 'his sociology of associations' to compose a collective, we need to rebuild the institutions that will help us assemble humans and non-humans, we have to understand politics as the "progressive composition of the common world" (Latour, 2014a, p. 3, 2011, p. 16, 2004). Civil paths to peace require diplomacy and negotiation, to progressively answer the question of what the common world is composed of. To this end, the fragile institution of democracy needs to be carefully constructed (Latour, 2002).

3.2 Theoretical foundations of research questions

3.2.1 What do collectively desirable and undesirable futures look like? (RQ1)

Characterising the different scenarios regarding how desirable or undesirable they are to participants is an alternative for classifying the different narratives. Using war and conflict as possibilities for reform, as Latour (2004b) and Barnett (2001) suggest, is appealing. Nevertheless, as I showed in the previous section, these concepts have other nuances. Instead of the disciplining peace that Modernity offers (Latour, 2002), we can think of conflicts as critical situations that can induce necessary changes. However, this approach is not appropriate for this case study, where allusions to conflict and war provoke fear and rejection rather than engagement⁸. Hence, it is more appropriate to frame those

⁷ Civilised in this context contrasts with the ostensive definition of barbarian. Borrowing Lévi-Strauss's definition of barbarians: those unable to recognise the civility of others, Latour (2004) defines 'civilised' as those humans and non-humans who belong to the collective. Those who are not barbarians are the ones who recognise that they are surrounded by 'enemies', or other entities that might eventually need to be civilised, that is, guaranteed agency within the collective.

⁸ Rejection and discomfort were the reactions I got when I initially used the term 'post-conflict' and this was a general reaction in the study area. About reactions to 'conflict' see section 4.5.1 Field work challenges.

collective futures in terms of a kind of peace. We can see peace in two ways: Negative peace is the absence of physical violence and positive peace is one that allows for the redistribution of power and provides human security (Barnett, 2001). From this framing, a positive peace is a precondition for people to be able to develop their capabilities.

3.2.2 How can we make more desirable futures possible? (RQ2)

To answer this question, I will need to define three elements: (1) Who are "we"? (2) What do I mean by more desirable futures? And (3) What are those mechanisms to achieve the drafted desirable futures? In the first place, "we" are those who participated in this project, but is not limited to us. We all are engaged in social experimentation and are agents shaping those futures (Latour, 2011, 2004). In the second place, for this project, more desirable futures can be characterised as real utopias, ideals of better worlds, grounded on pathways that acknowledge challenges and limitations (Wright, 2009). From a Human Development perspective, desirable futures are those where humans have the capabilities to choose the kind of lives they have reasons to value (Nussbaum and Sen, 1993; Sen, 1999). From a post-humanist perspective, desirable futures are those where there is an adequate representation of humans and non-humans, and together we engage in collective experimentation, to find the methods of progression (Latour, 2010, 2004). Finally, the mechanisms, the specific "how" is what participants suggested as actions that were more conducive to attain those desirable futures.

3.2.3 What role should actors play in order to achieve more desirable futures? (RQ3)

People are agents, not passive recipients of rules of conduct tele-directed from upper levels (Latour, 2013; Sen, 1999). We take decisions in our present, and thus shape our futures in many ways, playing the role of those who write the script we will follow on a daily basis, and at the same time, we are the actors that perform those scripts (Latour, 2013). This is not to say that we have a boundless capacity to write and perform whatever narrative we create; our scripts are connected, and often collide with other multiple scripts, or roles that others expect us to take (Latour, 2013). In this research, we are interested in the roles that participants expect from themselves and from others, if we are to engage in the *construction** of real utopias. Beyond individual action, certain groups perform crucial roles in the prevention and resolution of violent conflicts. Sen (2011) highlights the role of youth and women, as crucial target groups, and the role of Democratic States, and mass media, to foster the conditions for people to develop their capabilities. Humans are nevertheless not the only agents, without non-humans our societies would be unthinkable (Callon and Latour, 1992; Latour,

2005, 2004; Strum and Latour, 1987). Consequently, we also have to take non-human roles into account.

4 Travel Guide (Methodology/Methods)

4.1 Study site description

4.1.1 The Amazonian Forest Reserve in Colombia

A Forest Reserve is a legal status assigned by the state to certain territories to secure the national resource base. In Colombia, the Amazonian Forest Reserve is the second largest Territorial Entity in the Amazon, after Indigenous Reserves (See Figure 4), and it has a total area of 99.695,81 km² (Murcia-García et al., 2014). The primary objective of Forest Reserves in Colombia was the development of forestry and the protection of soil, water and wildlife (El Congreso de Colombia, 1959). Developing activities of *Public Utility and Social Interest** in Forest Reserves requires requesting the subtraction of these areas to the Ministry of Environment and Sustainable Development (Ministerio de Ambiente y Desarrollo Sostenible, 2014). Subtraction of territories from Forest Reserves for productive activities, notably, mining, was facilitated by the declaration of the mining industry as an activity of "Public utility and Social Interest" (Congreso de Colombia, 2001, p. 2). Indigenous and Afro-descendant organisations, together with their allies, have filed lawsuits against this Congressional Law, for it compromises the environmental security in their territories (Corte Constitucional, 2016a, 2016b; Corte Suprema de Justicia, 2012).

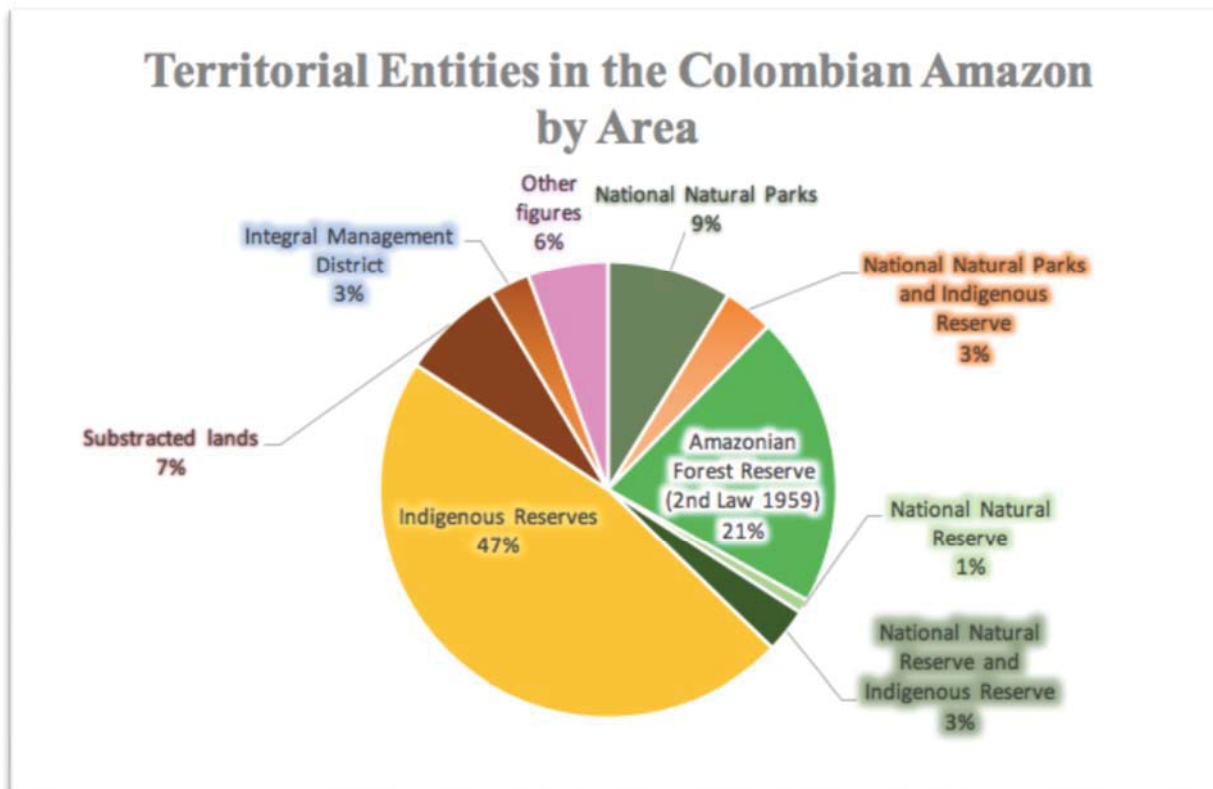


Figure 4: Territorial Entities in the Colombian Amazon.

This graph shows the proportions of land in hectares of the different Territorial Entities in the Colombian Amazon (see Figure 2), from a total area of 483.163,73 km². Initially, the Amazon Forest Reserve established by the 2nd Law of 1959 included a good portion of Huila Department, and part of the west side of the Meta Department, these areas do not appear in this graph. Territorial Entities with areas inferior to 1% were also excluded from this chart (See the complete information in Annex 2) Data source: (Murcia-García et al., 2014).

4.1.2 La Pedrera

The *corregimiento*⁹ of La Pedrera is a non-municipalised area located in South-eastern part of the Department of Amazonas, Colombia, alongside the Caquetá River in the border with Brazil (See Figure 5). According to the National Statistics Institute, population by 2016 is estimated to have reached 5.125 inhabitants (DANE, 2010). Inhabitants from the Low Caquetá river were, and continue to be mainly indigenous peoples (Franco, 2012). The semi-urban area is mostly inhabited by settlers, coming from urban centres in Colombia and some others from Brazil, who established their selling businesses there. State institutions in town are a First Aid Centre, a Police station, the Military Base, a Primary School, and crossing the river there is the Boarding School, where students from the area, the Indigenous Reserves included, attend Secondary and High School levels.

⁹ This is the name that was given to the non-municipalised areas, and it is still in use.

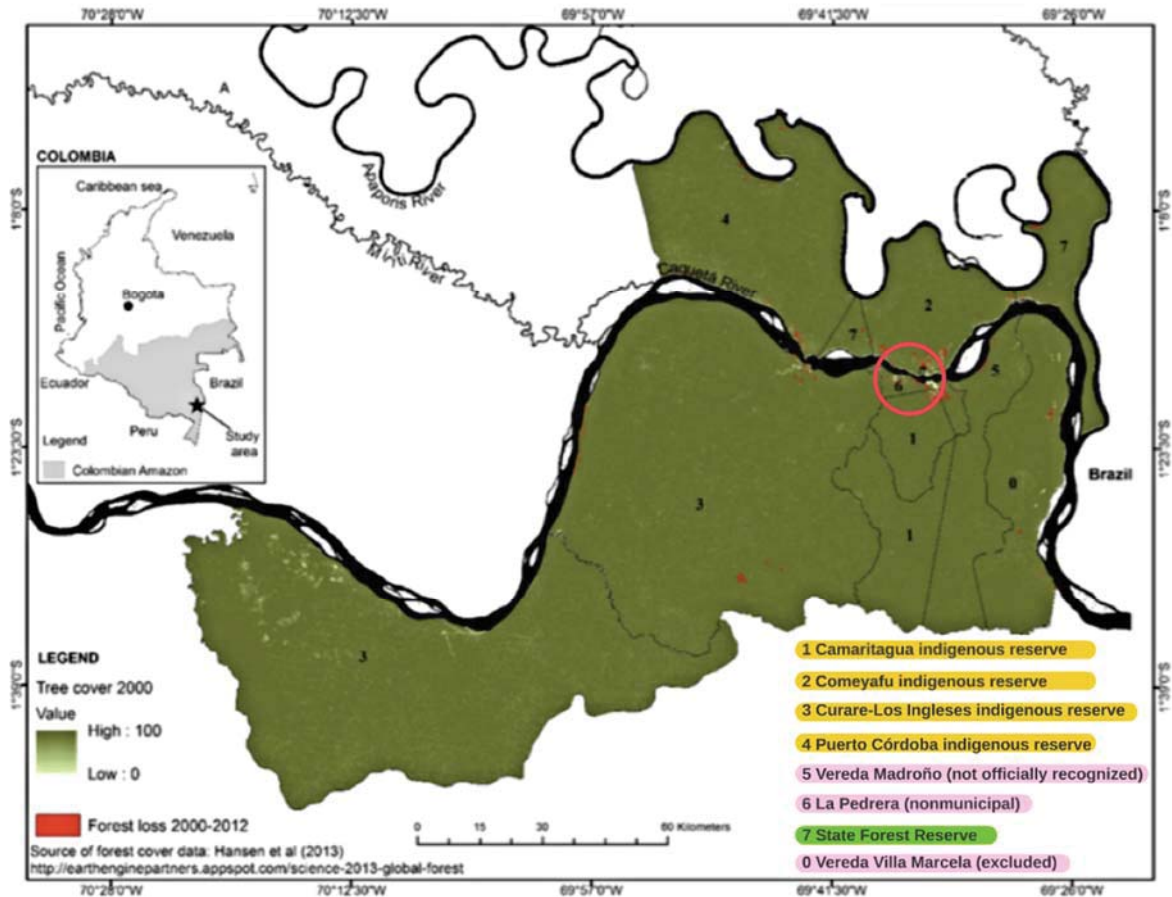


Figure 5: Map of the study area.

The Study site (red circle) is located in La Pedrera, and bordering area with the Camaritagua indigenous reserve (Legend No. 1). Dark green colour indicates tree cover, and red dots indicate areas with forest loss. Legend colours correspond to the Territorial entities Indigenous Reserve (yellow), other areas (pink), and Forest Reserves (green). Thick black lines indicate water bodies. Thin black lines around polygons represent Territorial entity limits. Adapted from: (Ramirez-Gomez et al., 2014).

4.2 My travel book (Methodology)

To help my reader navigate my expedition, below I am sharing my travel guide (Figure 6). For this case study I used *deontology**, and *constructivism** for my epistemological underpinnings¹⁰.

¹⁰ The focus of this thesis is not theoretical, therefore, I placed the focus of the methodology section on the tools I used instead of fully addressing the epistemological underpinnings I took. Nevertheless, acknowledging the importance of making explicit what I mean by deontology and constructivism, I provide a definition of the two terms, in connexion to this research project in the Glossary at the end of the document (see Annex 1).



Figure 6: Layers of Methodology

This graph represents methodology layers in my research, and where they accommodate according to a methodology pyramid. The upper levels of the pyramid are devoted to metaphysical aspects (conceptions about the nature of reality, approaches to knowledge, theories, etc.) and the base of the pyramid is dedicated to the tools I applied. This chart represents my travel guide, which is a better metaphor for the adopted Greek terms method and methodology. A trip guide helps us to determine where to go, and what is worth seeing there, but it is nothing that should be imposed on us (Latour, 2005).

4.2.2 Research Strategy and Design

This project is a qualitative research, in the form of a case study, guided by Scenario Construction methodology. A case study is a well-established approach in qualitative research, widely used by sustainability scientists engaged with Political Ecology (Turner and Robbins, 2008), convenient for developing a nuanced view of reality (Flyvbjerg, 2004). By contrast, until very recently, Scenario Construction methodology was almost exclusively used in land-use planning (Shearer, 2009) and management (Schwenker and Wulf, 2013). Currently, researchers apply scenarios to address diverse research endeavours, in International Relations, where it is proposed as a lively methodology to produce interesting research (Han, 2011; Ramirez et al., 2015), and also adequate to account for complexity in social-ecological systems (Hanspach et al., 2014). A case study complemented with Scenario Construction is an appropriate combination to create scenarios from the post-agreement period in Colombia, because they both allow for incorporating complexity and depth into poorly understood cases (Han, 2011; Ramirez et al., 2015; Silverman, 2013; Turner and Robbins, 2008). This

strategy responds to the objective of understanding what the problems and courses of action proposed by agents are, thus deploying a wider range of realities and possible solutions.

4.3 Travelling toolkit (Data Construction methods)

I lived in La Pedrera for two and a half months, from January to March 2016. In the following sections, I describe the tools for data construction and data analysis I used to answer the research sub-questions (See Table 2). 56 people, including me, contributed to this project. Specifically, with the contributions of my co-researchers¹¹, I was able to assemble three future scenarios, through scenario construction exercises with *local agents*, in the form of focus groups; and semi-structured individual interviews with *external agents*. I used DPSIR scheme¹², interpretative content analysis, alongside academic literature and official documents review, to place the constructed scenarios into a broader context.

Table 2: Data Construction & analysis strategies, and related research sub-questions

¹¹ Calling participants co-researchers here is in no way intended as tokenism, this is my way to both acknowledge the crucial role of my colleagues and all the participants from the research, and to how we all are, willy-nilly, involved in constant social experimentation (Latour, 2013, 2011, 2004). We all get involved in these experimentations within our different roles in society; except for now the role of experts vs. those who must follow what the expert says no longer holds true (Latour, 2014c, 2011).

¹² This acronym stands for Drivers Pressures State Impacts Response. This scheme is associated with the work of the European Environmental Agency, and it is used as a tool for analysing the cause-effect relationships in environmental and resource management (Ness et al., 2010). DPSIR has been primarily applied to find policy alternatives for identified challenges, and assess responses (Ness et al., 2010). See section 4.4.2 for a comprehensive description of how I used the scheme.

Data Construction and Analysis Strategies 2016		
Period	Method used	Research sub-questions
January – March 2016	<ul style="list-style-type: none"> Participant observations (74 entries on field-work journal) Informal interviews with Governmental officials (5), and Non-Government Organisation consultants (4) Informal interview with Park Ranger local representative (1) Scenario construction through focus groups (6 / Total number of participants: 40) Semi-structured interviews with <i>external agents</i> working in the area (6) Collection of official documents from the peace process. 	(RQ1) What do collectively desirable and undesirable futures look like from the perspective of internal and external agents living and working in La Pedrera, Amazonas Department?
March-April 2016	<ul style="list-style-type: none"> Expanded DPSIR scheme Interpretative Content Analysis Review of official documents 	(RQ2) How can we make more desirable futures possible?
May-October 2016	<ul style="list-style-type: none"> Review of academic literature on post-agreement period Review of relevant theory in connection with actor roles 	(RQ3) What role should agents play in order to achieve more desirable futures?

4.3.1 Participant Observations and Informal interviews

During my stay I had the chance to participate in different activities organised by the local indigenous communities; public entities, notably Corpoamazonía, National Natural Parks, the Departmental Governor's Office, and the Military Base. Additionally, I had the chance to join some activities lead by Non-Governmental Organisations working in the area, namely International Conservation and Gaia International. The possibility to interact with so many organisations and people working in the area allowed me to better frame my research project, and to have a grasp of the dynamics in the territory. Informal interviews were of great help to define the focus of this study –Forest Reserves. I kept record of these interactions through my field work journal.

4.3.2 Scenario Construction and the expanded **DPSIR scheme**

4.3.2.1 Scenarios

Scenario construction has been used in Sustainability Science, in combination with other methods, to translate science into policy and planning and to assess sustainability (Jerneck et al., 2011). The challenge is to move beyond these established approaches, to study the dynamics of social and natural processes (Jerneck et al., 2011). As a research methodology, scenario construction provides the

flexibility to take an eclectic approach, simultaneously using diverse theoretical approaches (Han, 2011), and it has been previously used to study social and ecological dynamics (Hanspach et al., 2014). My decision to use scenario methodology to work with indigenous peoples was influenced by the “*Field Guide to the future: Four ways for communities to think ahead*” (Evans et al., 2006). I used this guide to plan the workshop protocol (see Annexes 5 and 6).

We successfully completed six focus groups, four in Barrio Nuevo¹³ on the 5th March 2016, and two at the Boarding School, on the 15th March 2016. I applied two criteria for participation: willingness to participate, and living in the target area –Forest Reserves, or the urban area of La Pedrera, excluding Indigenous Reserves. Through my first encounters with the community in Barrio Nuevo, during the community assembly where I formally invited them to participate in the research, I realised that some subgroups, notably women and young people would not talk in public discussions. Therefore, I chose to use focus groups, to give participants better control over the issues to be discussed (Marrone et al., 2015; Stewart et al., 2007), divided by gender and age (See Table 3), to facilitate participation of these subgroups. Participants engaged in the activities voluntarily; no monetary compensation was given to people in exchange for participation¹⁴.

Table 3: Focus Group participant characterization by sex and age

Location	Focus Group	Women/ Men	Age group	Number of participants	Total
Barrio Nuevo	FG2	Women	Adult women	8	21 Women
Barrio Nuevo	FG3	Women	Young women	5	
Boarding School	FG5	Women		8	
Barrio Nuevo	FG4	Men	Adult men	5	18 Men
Barrio Nuevo	FG1	Men	Young men	6	
Boarding School	FG6	Men		8	
					40

¹³ This is a neighbourhood located in the peri-urban area around La Pedrera. Please find the full description in section Annex 3 Participant Characterization. “Co-researchers”.

¹⁴ Nevertheless, given that activities in Barrio Nuevo would take up precious time for them to provide for food, the costs of two meals and one snack for each day respectively was included into the workshop budget. This is an important issue to take into account when working with subsistent agriculture communities (Evans et al., 2006)

4.3.2.2 C + DPSIR scheme

DPSIR scheme is useful to structure economic, social and natural system information, to identify cause-effect relationships and develop a better understanding of a problem (Ness et al., 2010). Although I was familiar with the scheme, what helped me to grasp the meaning of each element was their adequacy to classify participants' narrations of present and imagined future conditions, and the terms we used to frame those discussions¹⁵. Critiques to the scheme address, among others, the oversimplification of the model, and the difficulty to account for complex dynamics of space and time (Ness et al., 2010). I addressed these challenges by expanding the scheme, adding passed changes in the territory as a new category, the resulting (C)hanges + (D)rivers (P)ressures (S)tate (I)mpacts (R)esponse scheme was useful to describe the Baseline scenario. Additionally, I used some of these categories as basis for new ones adapted to what participants outlined in their imagined futures. I provide a full description and definition of the categories and codes at the end of this report (Annexe 7). Finally, I also used emerging categories (Drisko and Maschi, 2015), which mainly addressed themes applicable to past, present and future. Therefore, I classified these as temporal categories (Annex 7.1). Initially, I had ten atemporal categories, but through consolidation of the codes, I was able to group them into > natural environment, build environment, capabilities and actors (Annex 7.2).

4.3.3 Semi-structured interviews

To add the perceptions of external agents living and working in the area, I interviewed 6 participants, one woman and five men (Ip41 to Ip46, see Annex 3), using a semi-structured interview guide (Annexe 5). The intention was to explore the same key points addressed during the scenario exercises: (I) Participants' understanding of key concepts¹⁶, (II) Changes in the territory and (III) Future scenarios. I used convenience sampling to invite participants, only applying two criteria, the first one was their long experience working or living in the territory, and second, their willingness to participate in the study. I used the rolling interview guide (Stewart, Shamdasani & Rook, 2007), meaning that I adapted and improved my interview guiding questions according to the needs I could identify through previous interactions with other participants.

4.4 Home toolkit (Data Analysis methods)

¹⁵ The terms we used to discuss about the situations were for instance, 'pressures', to describe issues that were most urgent for participants, and 'impacts', to refer to the effects of the post-conflict, or those of pollution, on humans and non-humans.

¹⁶ Initially, I needed to see what shared understanding participants and I had about 'Post-agreement period' (in the context of Government – FARC peace negotiations), and of biodiversity. See my Stages of Inquiry in Figure 7 below.

4.4.1 Transcription, Coding and Translation

The first phase of analysis started from the transcription (Stewart et al., 2007). Transcription is intrinsically related to academic goals (Riessman, 2003), therefore, as my primary goal was to describe the situations from the perspective of *internal agents*, it was important for me to keep subtle features of the interaction, including paralinguistic elements (Riessman, 2003). The whole data set includes transcriptions from focus groups, semi-structured interviews, and some of my observations that helped complement the information participants and I produced through our interaction (Schwartz-Shea and Yanow, 2012). Once I transcribed the recordings from the workshops, I used the expanded DIPSIR scheme and emerging coding to categorise and manage the data. In order to incorporate the most relevant interventions into this report I translated from Spanish to English, and once again I tried to keep translations as close as possible to participants' language use.

4.4.2 Basic and Interpretative content analysis

I used both basic and interpretive content analysis to make sense of the data set. I used basic content analysis when I applied coding categories belonging to an already established framework (DIPSIR scheme). However, from the epistemological perspective I took, meaning is not contained in the text, it is rather the result of my reading of the texts put in context (Drisko and Maschi, 2015). Therefore, I used interpretative content analysis when I made inferences from text and from participants' body language that I had included in the transcriptions. Additionally, combining and consolidating coding involved more interpretation (Drisko and Maschi, 2015). This data analysis method is in line with my acknowledgement of multiple realities, and various valid claims to truth (Latour, 2013; Schwartz-Shea and Yanow, 2012). As recommended in the interpretative content analysis literature, I provide samples of the data set applying interpretative content analysis (see Annexe 8).

4.5 Field work challenges

I had initially planned to work in coordination with Conservation International (CI), to support their ongoing process of data collection and assembling of the 'Life Plan' from the Indigenous Association of la Pedrera Amazonas (AIPEA). The indigenous authorities rejected my proposal during the public assembly. Likely motivations for the rejection of my proposal were related to how some of the leaders saw my research role as that of 'the expert' who went there to tell the communities what their futures should look like. In my first encounter with indigenous communities in the Amazon, I did not anticipate that my researcher role could be perceived as a colonialist intrusion. The rejection of my first proposal

forced me to be aware of these issues. I was able to draw on this experience, and made sure that my role was not seen as that of the "expert" who went there to tell people what their future should be, but as a facilitator of discussions. Other challenges were related to the sensitivity that addressing the armed conflict in Colombia raises. For instance, during field work, I was painfully reminded of how difficult it is to address issues dealing with the armed conflict, and also about the importance of language choice. I realised about this when the reactions of my colleagues and some people from the area were of rejection and discomfort when I talked about "Post-conflict scenarios", whereas talking about "Scenarios under post-agreement period" allowed me to get in contact with participants (Observation Journal. January 2016).

4.6 Research Ethics

Confidentiality of information was particularly important for this research project. Addressing the armed conflict in Colombia raises security concerns for individuals. The long history of violence exercised by different actors against dissenters makes people hesitant about sharing their views on the topic, even in the context of imagined future effects of the peace agreement. Many authors addressing the armed conflict in Colombia have used anonymity as a way of protecting participant from potential reprisals (Rueda, 2014). For this research, it was important to manage information in a way that would not compromise participant's security in any foreseeable way. For those people who saw no inconvenience with their names appearing in this report, instead of anonymity, I am using co-researchers' ethnic or first names. Naming participants is a way to oppose the anonymity of the war (Sánchez, 2013), thus affirming our right to talk about real possibilities of peace. For other people, I am using codes instead of names. I have not kept any other personal data from participant that could compromise their security. Additionally, through the Consent Form (Annexe 4), I provided participants with all the information about how I was going to use their contributions.

4.6 Reflections on the research process

My research paths are always sinuous, and my starting point hardly ever conduces me to the first aim I set out to achieve. Whenever I read spotless research reports, where the authors present how they set out to do something and describe the clear-cut way in which they achieved it, I always get the feeling that my work is less valid than theirs. I went to the Amazon to study biodiversity loss and the future pressures on people and ecosystems under-post agreement conditions, and I came back with a scenario construction puzzle, where my initial framing of the problem was poorly suited to frame the realities I encountered. Therefore, it is very liberating to be reminded that our experiments are

fallible (Latour, 2010; Sil and Katzenstein, 2010). That the learning curve is evaluated not from how straight to the goal our journey is, but from how able we are to learn from our mistakes (Latour, 2013, 2004). Report limits do not allow space for describing our trials and errors, yet leaving some room for those stages of our inquiry is important, to remind young researchers like me that studies might come to closure, but research is never closed process (Latour, 2005). To this end, I am sharing here my detours in Figure 7.

Stages of inquiry

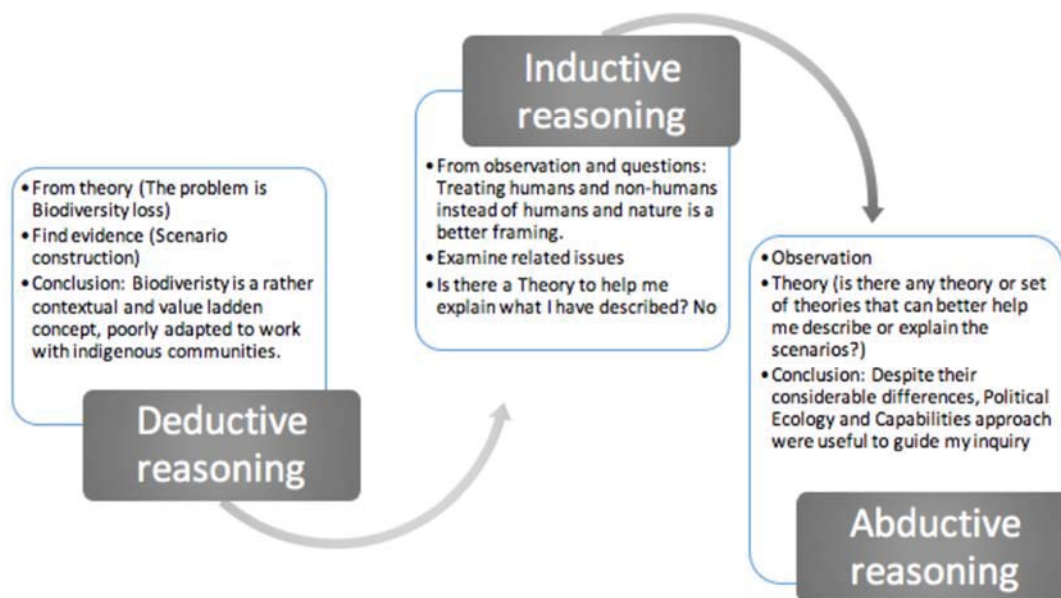


Figure 7: Research process Stages of Inquiry.

This graph represents the different stages I went through during my research, connecting the theories and concepts I intended to use during the initial stages of my inquiry, and those I came to use in the final report. Source: Richardson, R., Kramer, E.H., 2006. Abduction as the type of inference that characterizes the development of a grounded theory. Qual. Res. Doi: 10.1177/1468794106068019

5 Presentation and Analysis of Findings

In the first part of this section, I present the results from the scenario construction, composed by a summary of the baseline scenario ¹⁷ and the future scenarios obtained through the focus groups and

¹⁷ Baseline scenarios have been used in fundamental reports for sustainability science such as the IPCC. In the latest reports, the meaning of baseline scenario is not the same as the one I use in this report. In contrast to the definition adopted by the IPCC, which is baseline as “the state against which change is measured” (Pachauri and Meyer, 2014. p. 118) in other words, a scenario that represents the state of CO2 emissions without any policy intervention. By contrast, in this research, the baseline scenario represents the current conditions (Shearer, 2009), regarding the natural and built environments, actors and capabilities, from the perspective of participants.

the interviews. From there, to answer the second research sub-question I explore the driving forces and acts that participants suggested as possible ways to bring about desirable futures. Towards the end, I present participant's perceptions of the roles that other actors, institutions, and themselves should play to make desirable futures possible.

5.1 Scenarios

Applying the expanded DPSIR scheme for past and present trends allowed me to obtain general themes (Figure 9), and from there I was able to identify three main recurrent issues underlying most of the Changes, Drivers, Pressures, State, Impacts and Responses mentioned during the Focus Groups and interviews. These main underlying issues were (1) Culture loss, (2) Increased commercialisation, and (3) Mercury contamination due to gold mining. In the following sections I will briefly describe the baseline scenario, and then move on to a detailed description of the future scenarios.

5.1.1 Baseline scenario - (C) + (D)(P)(S)(I)(R)

Changes in the territory have mainly entailed the reduction of animals and forests; infrastructure, in terms of new houses and asphalted streets in the urban centre. Regarding capabilities, indigenous peoples' cultural practices, the way they dress and eat, have been modified through the influence of *whites' culture**. Families have migrated closer to the urban area, in search of better living conditions, mainly to be closer to formal schooling facilities (See Figure 9). **Andrea**'s comment helps to explain how she perceives the influence of western culture, and also the motivation of the families to migrate to this area: *"We are indigenous, but we are living in an occidental world*, and in the occidental world those who do not study do not have options"*. She added that young people no longer give priority to traditional culture because *"if they do not study, they will not have a good life in the future"* (p-30 *Boarding School 15.03.16*). Values are also changing, participants at the Boarding School linked the loss of traditional cultural practices to increased commercialisation, which in turn had an effect on environmental degradation. Indigenous people used to have a subsistent economy, they hunted for their own consumption, and used to follow the recommendations of the *traditionals**. Now, as a young man explained *"there are no animals left because they [people from the communities] keep on hunting them to sell them in town"* (**Gilberto**, p37).

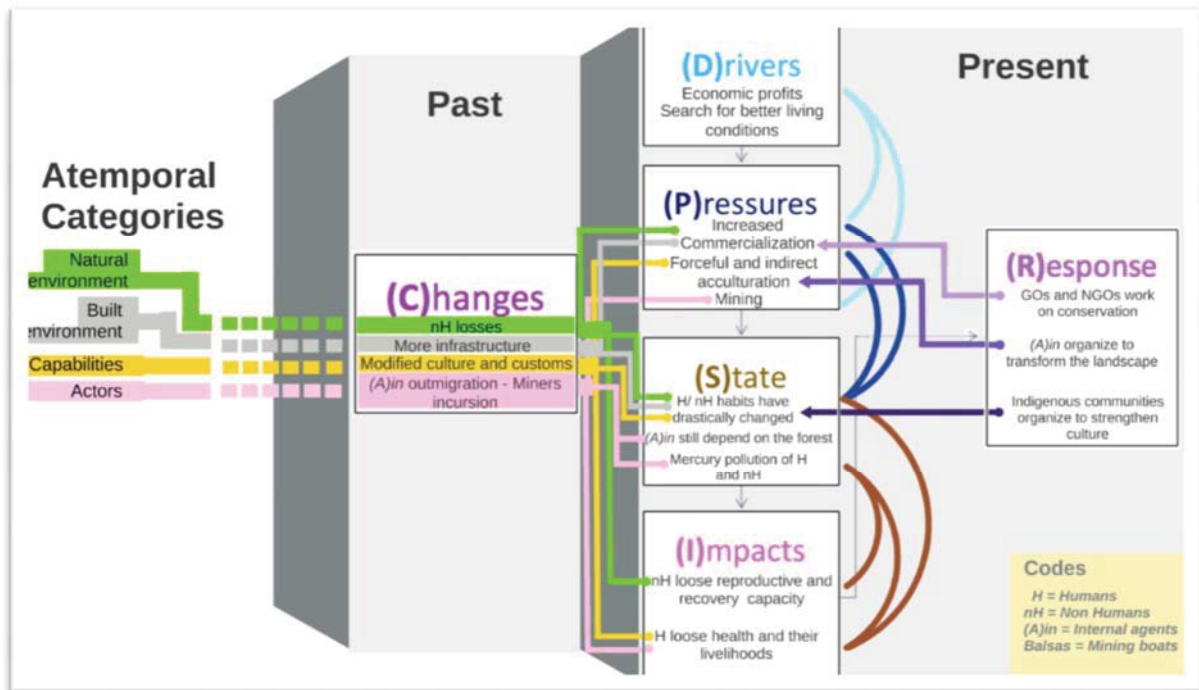


Figure 8: Baseline scenario applying the expanded DPSIR scheme

It is based on the most salient issues described by internal agents (See Annexe 8 “Applied expanded DPSIR to analyse the past and present trends”). The diagram includes the relations between the four atemporal categories (Natural environment, built environment, capabilities, and actors), and the Changes, Pressures, State and Impacts identified by participants. The three underlying issues in this baseline scenario are 1) Culture loss, 2) Increased commercialisation, and 3) mining and the consequential mercury pollution.

Mercury contamination of water streams, fish, and humans, was a recurrent topic addressed by the young women and men at the Boarding School (**FG5** and **FG6**); young women and adult men in Barrio Nuevo (**FG3** and **FG4**) also manifested concern about mercury contaminations from gold mining. All of the interviewees, and some of the participants in focus groups, related gold mining to the armed conflict, linking this activity with guerrilla and other armed groups, as illustrated by the following quotes:

It was... the guerrilla who brought the miners, and what they did was that monthly they collected a *vaccine*¹⁸. After a period, they [miners] went away, but now a few of them came back, and those who work in the *balsas**, most of them have been indigenous people.

(NGO consultant p44- Man Biologist 04.03.16)

¹⁸ Literally translated from the Spanish ‘vacuna’, which is the money from extortion that the FARC and other groups collect either from legal or illegal activities (Franco, 2012; Wagner, 2016)

Armed actors' presence hampers the possibilities of the communities to denied miners access to their territory, and in this way prevent mercury contamination:

The problem is that sometimes people from the community say "No, we do not give you permission", and they do it in an abusive manner, they come with those people... illegal, with the guerrilla, let's say, and that is already like an obligation [...]. Even if the community does not want to, those people who are interested in those things [gold and other resources], they are not self-conscious, they come for what they need, and they don't care whether they cause harm or not.

(**Andrea** p30- Young Woman Boarding School Student 15.03.16)

These links between the territory and the armed conflict in Colombia contrasts with participants' perceptions of the peacefulness they experience in this place. Both *internal* and *external agents* talked about the security and peace they feel close to the rainforest, which they described as a shelter from the conflicts, and source of healthy food and clean air. Several of them contrasted this peaceful region with the chaotic, polluted and violence-ridden cities of Colombia¹⁹. The Military Commander agreed with this view, adding that in La Pedrera guerrilla groups have not been present in the same way they have been present in other areas of the national territory. Armed confrontations between guerrilla groups and the Armed Forces have never taken place in La Pedrera or the surroundings, "*but regarding drug trafficking and mining, they have been present. They have their supporting networks, people who collaborate with them; but an action against the Armed Forces as such has never happened*" (**N** p43- *Man Military Base Commander*). **Carlos** p45- *Professor working with the regional government*, talked about La Pedrera as a peaceful bubble, where government officials could come to discuss with the citizens without needing extreme security measures.

5.1.2 Three future scenarios (RQ1)

In the following sections I describe in detail the most relevant issues mentioned by participants when sharing their perceptions about considered futures during the period after an eventual signature of the peace agreement²⁰ between the Colombian Government and the FARC-EP. To evaluate the correlation between participants' perception and the peace agreement I was able to identify four degrees of awareness (see Annexe 9, Figure 10). Given that the majority of participants had between a fair and a very good level of awareness, the correlation between their perceptions and the peace

¹⁹ In La Pedrera the primary cause of death, other than natural causes, is through boat accidents, mainly by driving under the influence of alcohol (Observation Journal. 14th January 2016).

²⁰ At the time of my fieldwork It was still uncertain whether or not the parties would get to an agreement. Therefore, our references to the peace accords in this section reflect this uncertainty.

agreement is high. Below I present a graphic representation of the three future scenarios, including the Baseline scenario (Figure 9).

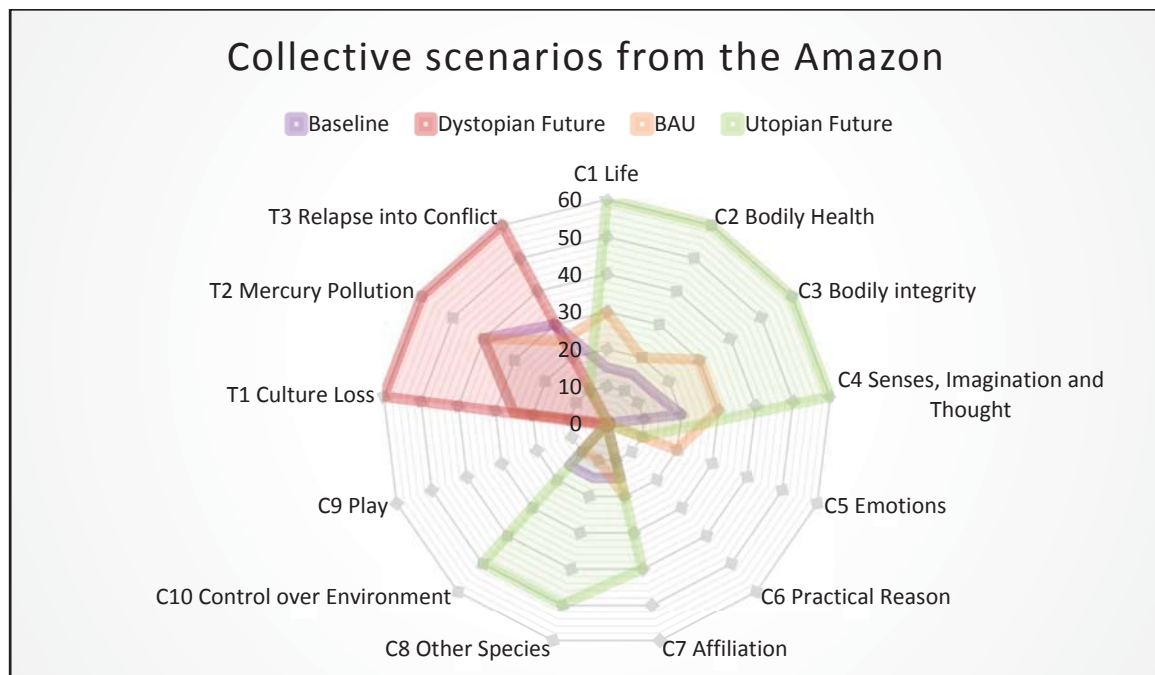


Figure 9: Scenarios

This image displays the Baseline and the three future scenarios that I assembled from the data set. C1-C10 Represent the Central Human Capabilities proposed by Martha Nussbaum (2003). T1-T3 Represent the main threats identified by participants. The Sections that are not covered in the scenarios are those topics that were either not directly mentioned by participants, or given the definition provided by the author, it was difficult to see the application in the context (e.g. C6-Practical Reason and C9-Play).

After exploring the changes and current state, I invited participants to share what they thought could happen in the territory, within a time span of 15 years, if the Colombian government and the FARC sign the peace agreement. I assembled those scenarios under the rubrics: (i) Dystopian Future (DF), (ii) Business-as-usual (BAU)²¹, and (iii) Utopian Future (UF). Below I present a detailed description of each narrative. The information is organised by what participants mentioned about the categories natural environment, build environment, capabilities, and actors, in that order.

5.1.2.1 Dystopian Future (DF)

(DF) *The natural and the built environment internal agents fear for*

²¹ Business-as-usual is a term adopted in the Climate Change literature, often used interchangeably with the Baseline scenario. The term is now less used, as the idea coming from business is less suitable to describe century-long projections (Pachauri and Meyer, 2014). BAU is useful for this project as we are only describing possibilities in the next 5 to 15 years.

For *internal agents*, increased commercialisation, a rapidly changing built environment, and mining as the main sources of environmental degradation characterised the dystopian future. In this scenario, participants described an increasingly degraded natural environment, where there will be fewer animals and trees. A recurrent concern in all focus groups was air and water pollution. Some groups identified the pollution source: the expansion of the built environment, mainly due to more people migrating to the area, and more commercialisation²². When I asked participants in **FG5- Young Women at Boarding School** why would there be more contamination in such conditions, one of the students explain to me that *“there is going to be tree reduction, water is going to be more contaminated, there is going to be more like..., as Luciana (p25) said, there is going to be more commercialisation, but they are going to build more things that pollute the air”* (**Helena** p26- *Young Woman Boarding School Student 15.03.16*). One threat for the future the adult men saw was *“contamination of water, due to factories, or to machinery brought by the colonos*, or due to the works to extract gold, as water would be polluted with mercury”* (**FG4- Notes from Second Workshop, 05.03.16**).

Internal agents brought up issues of culture and identity loss as a big menace that indigenous communities are facing, and will continue to face in the future. Both young and adult participants shared this perception, for them, the huge influence of western culture and machinery from *white* settlers could have devastating consequences for indigenous communities’ well-being, Indigenous peoples’ well-being will be compromised through processes of cultural domination and forced displacement. Discussing the prospects for the future with **FG1**, the discussion revolved around ideas about a future where *“No one will know how to sing²³ {p3: That is exactly what is going to happen. What is going to happen to culture? It is going to be lost!}”* (**Tobías** p5 and **Juan** p3- *Young Men Barrio Nuevo*). Another participant reinforced this idea, explaining the main reason for culture loss: *“In my opinion culture will be lost because the whites’ culture is everywhere”* (**Jimet** p1-*Young Man Barrio Nuevo*).

Participants from **FG2- Adult Women in Barrio Nuevo** shared the perspective of *whites’* dominance, as one of the adult women said *“Later on, as you say, in the future, what is going to be left is... all the youngsters, our children, they are going to turn into whites”* (**MariLuz** p10). MariLuz explained to me that there would not be any more shamanic practices, and indigenous people will cease to exist under the influence of the white settlers, either due to cultural assimilation, as was evident in the previous

²² The Spanish term used by students at the Boarding School was ‘comercialización’, and with this they meant more goods, infrastructure and perhaps cars and industries that will pollute air and water streams.

²³ Singing is a crucial activity for the men, because, besides the important social role it plays during social gatherings, it is also one of the ways in which the knowledge and practices are passed down from one generation to the next.

quote, or due to forced displacement. as a young woman in the group said: “*when the whites come, they come and start taking [us] out*” (Yuber p11), then another intervention reinforced the idea of eviction, “*They start buying (NICOCO p7) {They are going to say: ‘Get out from here!’ and we are going to head out (MariLuz p10)}*”.

(DF) The natural and the built environment external agents do not want to have

External agents also mentioned more commercialisation, mining, and culture loss as features of the dystopian future. **Juan** p42- *Adult Man Lawyer*, shared that an undesirable future for him was going to rely on commercialisation and exchange, instead of focusing on nature conservation; the impoverishment of indigenous people, whose knowledges are going to disappear would ensue in this future. According to him, this scenario was worrying, and today it has a lot of strength.

“It is the one of how the economy of the market is getting here, the projects of extract... the extractive initiatives that I was telling you about: mining, oil, together with the commodification²⁴ of the Rainforest. And this also finds in the indigenous nations young people, they are those who see the referent of the non-indigenous as the ideal, and then they want to advance towards there, and then those two... let’s say, essences meet, and then we will have a highly commodified society”

(Juan p-42 Lawyer 03.03.16)

Other participants also talked about commercialisation, linked to extractive projects, notably oil, gold and coltan extraction. **Germán** p44- *Biologist NGO Consultant*, linked mining with reduced capabilities for the indigenous communities, as mining could bring “easy money” which in turn foster prostitution, drugs and alcoholism, as has happened with other groups in the Pirá Paraná. Another participant shared this opinion, **Carlos** p45- *Professor working with the regional government*, mining and other economic booms were problematic, as these itinerant economies deeply affected the social fabric of the communities, by giving people rapid profits that they never have the chance to capitalize. People get used to “easy money” and loose interest in education and developing entrepreneurial abilities.

5.1.2.2 “Business-as-usual” (BAU)

(BAU) for internal agents

²⁴ The original term in Spanish that he used was ‘mercantilización’, but from the context I would argue that the adequate term in English is commodification, which is the meaning that word mercantilizar currently has. The term ‘commodification’ has not been adopted by the Real Spanish Academy of Language.

In this scenario there were less detailed descriptions about what participants expect to happen with natural and built environments. They expect to see less animals and forest, and water streams will continue to be polluted. There will be more people migrating to the area, and there will be more roads and houses. In this scenario there are serious doubts from both internal and external actors about the endurance and effectiveness of the peace agreement. In a scenario where the armed confrontations would continue, people's capabilities, such as their well-being and their ability to adapt to the changing economic conditions, will be hampered by the intervention of different armed actors. As illustrated by the following quote, there is concern about groups that might be against the peace agreement and would prevent the families from taking new opportunities:

Those people who are away from *thought*, then it would be, let's say, there is a family, they are living well, right? They have a farm, and have chicken, everything, right? I mean, they live well. But, as those people who do not agree, let's say the paramilitaries, or the FARC, or guerrilla, all the same". Then they come and... invade that place, I mean, they come and kick out those people who are living in tranquillity.

(Andrea p30- *Boarding School Student* 15.03.16)

The young men from the Boarding School shared the perception of the continued influence of unofficial armed actors. They discussed the role of the military in such scenario. In the perspective of one of the students, the peace agreement could also be "*a lie, because there can also be conflict. Because many times there are complications, right?*" (Nicolás p40- *Young man High School Student* 15.03.16), in the same line, reflecting on the role of the state Armed Forces in such unstable security situation, the group concluded that the Military forces would still be needed, even if there were reduced confrontations with the FARC-EP.

(BAU) for external agents

The only explicit references to the changes in the natural and built environments from *external agents* in this scenario were shared by Germán (p44- *Man Biologist NGO Consultant*). He expressed his concern about current infrastructure development projects in the Amazon Basin, to build terrestrial and fluvial routes to connect remote areas with the urban centres. He mentioned IIRSA²⁵ as the initiative leading the projects. In his opinion, these infrastructure projects were problematic with or without the peace agreement because they could interrupt the biological corridors, that exist thanks to the relative isolation of the Amazon region.

²⁵ IIRSA stands for Initiative for the Infrastructural Integration of the Sur American Region, see <http://www.iirsa.org/>

Discussions *external agents* revolved around the mechanisms to reintegrate the demobilised ex-combatants into civil life, and development projects that may transform the landscape in the future. Participants mentioned two mechanisms of reintegration, notably, the expansion of Peasant Reserve Zones and the incorporation of ex-FARC members into the working force. Interviewees and informal participants see Zones set aside for the demobilised population, and their integration into public institutions, as challenging issues. In their view, these mechanisms could compromise the security of civilians. The military base commander also pointed out at the possibility of relapse into conflict, on accounts of current and emerging criminal groups, and other groups that currently have influence in the country, *“in Colombia there is not only the FARC, there is the ELN, and the criminal groups: the Urabeños, the Águilas Negras, etc. [...], the FARC signs an agreement, but those who do not acquiesce in the treatise are going to evolve into other groups”* (N p43- Man Military Base Commander).

5.1.2.3 Utopian Future (UF)

(UF) The natural and the built environment internal agents long for

On the category of natural environment, young women gave me a very detailed account of what they want. One young woman said that she would like *“that people stopped killing so many animals”* (Ana p15- Young Woman Barrio Nuevo 05.03.16). Two other participants mentioned that they would like *“to improve the condition in which animals currently live, just like us they also suffer because of the pollution we have. To improve the condition of the trees, the water, so it is not polluted”* (Yolima p28- Young woman High School Student 15.03.16). They would like to have *‘the same Rainforest, or even better, with everyone’s help’* (Andrea p30- Young woman High School Student 15.03.16). An ideal future for them also involves having more opportunities for studying and working. In this respect, the aspiration of young men from Barrio Nuevo was to improve their community’s organisation.

In particular, one group expressed the ideal future as the possibility for them to have a *‘good life’*, this being the result of progress. Progress was mentioned in **FG1** (Young Men Barrio Nuevo) a couple of times, and when I inquired about what they meant by this, the answer was that *“Progress means to organise people, with harmony, with healthcare. We should have all of that in 15 years. That is what I hope”* (Tobías p5- 05.03.16).

Progress, regarding what we are doing here is, that in today’s world, we, the youth, we can change in many aspects, I mean, jobs, study, and we have opportunities to go abroad. In other

words, in 15 years from now, [our hope is] that the community can have a professional. I mean, someone from the same community, but doing... having studies, and those things.

(Henry p2- 05.03.16)

In all focus groups, there was agreement about the importance of maintaining cultural practices, and this was equally crucial for adults and young people, as one of the elders' expressed it, in that period *"those who are kids now... [...] they are going to be youth by then... and as we were talking about before. Hopefully, they will not forget... the culture"* (GUSMA p21- Adult man Barrio Nuevo 05.03.16). In this same regard, students at the boarding school said that the desirable future entailed *"a better future. Something good, such as maintaining the culture, which is what we are losing"* (Wilmer p39- Young man High School Student), to what another student from the same group added that this kind of future should imply *'To have more animals, more fish! and to continue with the traditional culture!'* (Leandro p34- Young man High School Student 15.03.16).

(UF) The future external agents would like for the territory

External agents' picture of an ideal future for the territory of the Forest Reserves around La Pedrera, and in general for the Colombian Amazon, was characterised by ecosystems conservation and maintenance of indigenous cultural traditions and knowledge systems. In his words, an ideal scenario would be where,

From outside a 'knowledge society' tries to have an interlocution with a 'knowledge society' here. There we would have maximal possibilities because people is not coming here to tell others how they have to live, what the world looks like. Instead, there is an experience-based and vital construction of knowledge, a construction of reality, and of the way we comprehend reality to be able to live.

(Juan p-42 Lawyer 03.03.16)

All interviewees mentioned these two aspects. Three out of six respondents referred to the need for finding equilibrium between the natural environment and the built environment, as to guarantee that those people living there can benefit from material wealth, this without degrading the ecosystems. The other three emphasised the need to maintain both the natural environment and the communities rather untouched. As one of the interviewees put it, in his work he had learned that *"sometimes when you try to help or trying to... help those communities, what you are doing is rather... doing harm. Then you learn those... situations, of the traditions that they must have"* (John p43- Man Military Base Commander). Additionally, facing out mining was a prerequisite for attaining ideal conditions, the

following remark illustrates how important this issue is for one of the participants. When I asked her what she would like for the future if she could influence it she said:

Ah! (sight)... that there was no illegal mining... although it does not affect us directly here, but it does... in the nearby areas. And that is something that... yes, the harm is not notorious now, in the landscapes, and the surroundings, but also the harm to people, that kind of mining brings a lot of consequences. At least I would like to be able to have an influence there.

(Adriana 46- School Teacher and leader of the local women's organisation).

5.2 What does it take to make more desirable futures possible?(RQ2)

Participants of both *internal* and *external* agent groups referred to increased consciousness to counterbalance the pressures from Western culture, and to reduce the negative ecological impacts of changing values. *Internal agents* could not see a way to stop the contamination of water streams, other than preventive measures to avoid that community members get involve in gold mining. Increased consciousness, strengthening *traditional though** and formal education were the means for families and the communities to persuade young people not to get involved in mining, drugs, alcohol, or to engage in economic activities that give them individuals gains, but erode both the land and their cultural values. They see formal education as a means to open different opportunities to them, preventing that young people be forced to take human or nature degrading working options to make a living. *External agents* see the need for state intervention to stop mining operations, and to offer people alternatives to illegal economies (e.g. wildlife trafficking and gold mining).

Formal education and the acquisition of white's knowledge were main driving forces to bring about more desirable futures. To improve their individual and communal conditions, internal agents mentioned projects proposed by the community as a way to bring about those improvements. In **Tobías'** words, in the ideal scenario, they needed to have "*control over the environment. [Since] the only place where we have [drinkable] water is the one that comes from here. If we do not control the environment, if [someone] pollutes it, where from are we going to drink water? There is none! Therefore, we need a project*" (p5- Young man Barrio Nuevo 05.03.16). When I inquired about what kind of projects they could think of, they mentioned housing improvements, paving the soccer court and the access roads to the neighbourhood. Adult women also suggested improvements in housing and access routes as a change they would like to see in the future, and identified projects as a mean to improve their living conditions.

Both groups agreed on the need to get support from external actors, the aim of this support should be directed to providing them with working opportunities, as to get the means for their children to be able to finish their studies. Their hope was that their children could help them after completing their education, yet they would need support from others, *“To give us a job. And in this way, we can buy... or the government, that they help us in that. Because here no one has studied for that”* (Deicy p8- Adult woman Barrio Nuevo) *“to do a... a project, to do... to write well. This is a vision that goes with that project”* (NICOCO p7- Adult woman Barrio Nuevo). They were explaining to me how their access to benefits was limited given that they could hardly understand what the *white** people said, luckily their children are studying and they could help them in the future.

5.3 What role should actors play to achieve more desirable futures? (RQ3)

Adults from *internal* and *external* agent groups stressed the role of youth to bring about more desirable futures. Specifically, these roles for young people from the communities were to finish their formal studies, guide their families and communities into the decisions they should take, and continue the traditional culture. However, once they fulfil this role, young people need supportive institutions to provide them with possibilities to realise their agency. As a young man from Barrio Nuevo shared with me, not belonging to a recognised Indigenous Community deprives them from the necessary support. The consequence is that, once they finish their studies, young people do not have options. In his words:

“that is the problem. If we were [a recognised] community, the community would support students that finish High School [...]. They would give them jobs. Here we don't have that because we belong to the Urban Centre. We are from the town, the *corregimiento*, therefore they do not give jobs. Someone who finished High School, there is no one to help him”

(Tobías p5- Barrio Nuevo 05.03.16)

Both internal and external agents' emphasised the ambiguous role of the state, international actors, and members of the FARC who would demobilise. Their interventions, rather than giving a clear idea of the roles these actors need to perform to construct more desirable futures, underscore the duality of their actions. These three groups have the material capacity to help in the construction of real peace in the territory, depending on the kind of dynamics that state planning for land redistribution, interests from international actors, and the effective demobilisation, disarmament, and reintegration of current FARC-EP combatants to civil life will determine. At the same time, actions from these groups also have

the potential to reinforce inequalities that will compromise the environmental security in the study area.

6 Discussion

The general objective of this case study was to describe the future scenarios that Forest Reserve dwellers and external agents envisioned, in the context of future effects of the peace agreement in La Pedrera, Colombian Amazon. The specific objectives were to (1) describe different scenarios that participants could imagine, (2) identify actions that participants suggested as more conducive to make more desirable futures possible, and (3) understand what roles participants identified for themselves and others for the construction of more desirable futures. In this closing chapter, I will revisit the objectives mentioned above, and summarise the findings, connecting the results to theory. Importantly, I will present my conclusions, based on evidence from the case study. Additionally, at the end of this discussion offer some suggestions for further research.

6.1 Collective future scenarios in the Colombian Amazon under post-agreement period (Research Objective 1)

Through both present and future time frames, participants were concerned with two main kinds of conflicts: one in relation to the existential territory and the other one linked to the physical territory. The first one is a conflict between the indigenous world and the western world, and the latter is the presence of the armed conflict in the area through gold mining.

Before describing in detail each one of these kind of conflicts in the following sections, it is worth addressing the relation between the scenarios and the peace agreement. From the perspective of participants, the peace accord in Colombia has a contradictory nature, given the opportunities and threats for humans and non-humans that the post-agreement period can bring. This view is in line with the literature, where authors see the mechanisms to implement the peace agreement as paradoxical. People could benefit from these devices through wealth and land redistribution (Fajardo et al., 2014; Flores, 2014), and from stronger political and social institutions (Arévalo Bencardino, 2014; Hernández, 2015). These mechanisms also represent ecological challenges for new settlements and infrastructure, alongside national and international investments for resource exploitation, can produce environmental degradation on a scale previously prevented by the armed conflict (Álvarez, 2001; Fajardo et al., 2014).

6.1.1 Conflict in the existential territory

The dispute in the existential territory became evident in participants' preoccupation with traditional culture loss. According to both internal and external agents, culture loss is the result of the domineering influence of white culture* strong influence. In La Pedrera, values are rapidly changing. Indigenous people are increasingly absorbed by the market economy, changing their traditional relations to the ecosystem (Ramirez-Gomez et al., 2014). This is especially problematic for youth, as they do not see other option than taking westerns' model to guide what they have to strive for. Local researchers from the Colombian Amazon agree with participants' interpretation. In their view, young people undervalue traditional culture as a result of pressures from 'foreign acculturation' (Andoque Macuna et al., 2011). The conflict in the existential territory that participants and other local experts described coincide with the view of other scholars, who assert that the lifestyles, practices, and culture, alongside the knowledge of indigenous peoples, are disappearing under the pressures of modernization and cultural homogenization (Agrawal, 1995). A more optimistic view is that, although certain aspects of traditional cultures would be unavoidably lost with development, it should be a decision of the communities to choose which of those traits are they willing to relinquish (Sen, 1999).

Deciding which cultural traits indigenous communities should maintain seems unlikely for communities living in Forest Reserves. For *internal agents**, *whites' culture** is pervading to such an extent that young participants perceive the world they live in as an "Occidental World". The idea that "the West²⁶" is superior in comparison to other cultures has been carefully crafted through scientific and economic discourses (Escobar, 1995; Latour, 2014a). According to Latour (2013, 2004, 2002), westerns present themselves as non-cultural individuals, not the products of ethnicity, but the products of scientific reasoning, armed with "Natural Laws", purportedly the only authentic tools to access the one reality. These conflicts bear upon how Moderns do not grant full civil rights²⁷ to others. Participants never mentioned 'Modernity' or 'Moderns', yet there are notable connexions with Latour's arguments. Latour also refers to Moderns or Westerns, as *whites**, and the way he characterises them is in many ways connected to what participants fear for the future: "*In the march of civilisation, the Whites have only met the spectre of the irrational and the archaic. They were never faced with enemies, so how could they ever think about peace?*" (Latour, 2002, p. 28).

²⁶ The West no longer represents Europe and North America, it is better understood as a mentality.

²⁷ In this context, civic rights for Latour (2004) would mean to have the right to define what composes the 'social'.

Through the conflicts in the existential territory, there are at least three hindered Human Central Capabilities 4.) Thought. 7.) Affiliation. And 10.) Control Over One's Environment. Briefly, the influence of Modern values thwarts indigenous communities' entitlements to Thought and Affiliation in different ways, particularly, when modern values are presented as the only possible alternative to having a worthwhile life, *traditional thought** and communal ways of association are forced to fit the unifying models allowed by the modernization project. In this model, scholars portray people as profit-seeking individuals, 'homo economicus' (Cramer, 2002; Medows, 2009). This model is at odds with traditional culture, where values derived from social interactions used to be more important than economic profits (Andoque Macuna et al., 2011). Less evident, this conflict also hinders 'control over one's environment'. This capability has two dimensions, one is immaterial and the other material, the first one is related to the existential territory and the second one is more connected to the physical territory. According to Nussbaum (2003), the first category in her tenth capability refers to how people can participate effectively in political choices that govern their lives.

6.1.2 Conflict in the physical territory

In the area of Bajo Caquetá River, the conflict in the physical territory is present through mechanisms other than physical violence. Participants perceive the area as peaceful, yet, at the same time, they also connect the kind of insecurities local dwellers live, such as water stream pollution, and the impossibility to decide on what kind of changes their natural environment undergoes, with the armed conflict. Armed groups' enforcement of gold mining is the most notorious way in which the armed conflict affects people living and working in the area. Despite the absence of physical violence, people lack ecological security. From this perspective, we can classify the kind of peace that participants identified as a negative peace (Barnett, 2001). The situation described by participants confirms findings in a series of studies. Different reports over the past 12 years have witnessed the rise of gold mining as a source of financing for guerrilla, paramilitary, and other armed groups in Colombia (Barthem and Souter, 2004; Franco, 2012; Sánchez-Cuervo and Aide, 2013; Wagner, 2016). Although the ecological impacts have not been quantified in the Colombian Amazon, the most affected departments by gold mining are Caquetá and Amazonas (SPDA, 2015).

Despite the absence of physical violence, mining imposition impedes the enjoyment of at least three central capabilities: 1.) Life, both for the implicit threat to their lives if agents refuse new mining operations, or oppose those already in place. Furthermore, people capacity to live enjoyable lives, according to a life span of regular length (Nussbaum, 2003), can also be impaired due to a whole range

of adverse effects related to illegal mining, notably, water stream pollution and mercury contamination (SPDA, 2015). 2.) Bodily Health, compromised due to water stream chemical contamination. To corroborate participants' descriptions, mercury in hair samples from indigenous populations who inhabit along the banks of the Caquetá River, Colombian Amazon, are greater than double the World Health Organization threshold (Olivero-Verbel et al., 2016). Finally, 10.) Control Over One's Environment results also compromised. Nussbaum (2003), defines the material dimension of 'Control Over one's Environment' concerning how people should be entitled to possess property, to have humane conditions at work, relate to other workers, and be able to use practical reason. For this case study, the entitlement of people to enjoy a functioning natural environment, free from man-produced pollution, would be a better definition for this capability. As this study shows, people's control over their surroundings is weak in the study area, due to both gold mining and the increased migration of settlers looking for profits (SPDA, 2015).

The continuous connection between the Colombian armed conflict and the mining extractive booms in the Amazon is not surprising. Oil, gold, coca, timber and emeralds have fuelled the internal armed conflict in Colombia since 1984 (Franco, 2012; UNEP, 2009). What is surprising is that, even when in the final document from the peace agreement there are recurrent concepts such as environmental sustainability, and 'living well' for minorities, the mining, which largely affects Afro-descendant and Indigenous communities, was nonetheless neglected throughout the text. Despite the crucial role that gold mining currently plays in the dynamics of the Colombian conflict, mining was mentioned twice in the final agreement. The two occasions when mining appears in the text is to ascertain that the state will take control over the tributary revenues, and will fight criminal activities such as illegal mining. With the caveat that traditional artisanal mining shall not be considered criminal (The Government of Colombia and the Revolutionary Armed Forces of Colombia – People's Army (FARC –EP), 2016).

6.2 Actions into more desirable futures (Research Objective 2)

Among the actions that participants suggested to construct more desirable futures, I will concentrate on those actions conducive to resolve the conflicts in the existential, and physical territories respectively. To recapitulate, more desirable futures for participants have the characteristic of a positive peace; a peace that not only guarantees ruling out physical violence but also provides the conditions for human flourishing (Barnett, 2001; Sen, 2011, 1999). Both agent groups are advocating for equality, some participants go beyond equality for indigenous communities and humans in general, to considered non-humans' conditions that need to be restored. To analyse actions conducive

to achieve this positive peace, in the following sections I introduce the kind of inequalities I was able to identify, and then I explore the mechanisms to achieve equality.

6.2.1 Real peace proposals in the existential territory

The kind of inequality that characterises the conflict in the existential territory is the unequal claims to reason and reality the indigenous world has before the western world. Consequently, indigenous peoples have reduced power to define what kind of values are worth striving for. There are two main mechanisms in which participants think this inequality can be addressed. One is through formal education; the second one is through strengthening *traditional thought**. Young people from Indigenous Reserves in the Amazon think that the way to fight 'whites' pressures is with western techniques and tools, elders instead see the necessity to have a solid traditional base to guide their actions (Andoque Macuna et al., 2011).

Formal education seems to be the clearest way *internal agents** see to achieve a transformative engagement with Modernisation, this through the acquisition of *white knowledge**. Nevertheless, standardised education has been the most effective apparatus devised for homogenising and disciplining thought, and particularly, weakening indigenous resistance (Chomsky et al., 2010; von Hildebrand and Brackelaire, 2012). Strengthening *traditional thought* seems to be the 'antidote' that participants see to prevent that the effect of this engagement with modernity turns into *whitening** of indigenous peoples. This action is methodologically sound, as it is not through cataloguing and recording indigenous knowledge that it will stand a chance against modernization, the only way for it to survive is through practice (Agrawal, 1995). However, strengthening *traditional thought** is a necessary, yet not enough condition to offer real possibilities for peace in the existential territory. Safeguarding the interest of indigenous peoples is poorly served through the dichotomy between indigenous and western knowledge, a better approach is to acknowledge the multiplicity of domains and types of knowledge, that only differ in their logics and epistemologies, not in their status or validity (Agrawal, 1995).

Real peace proposals in the existential territory require multiple actions that cannot be defined by academic 'experts'. Surely, a viable mechanism to achieve more desirable futures is experimentation,

yet this is no longer the exclusive work of '*scientists in white coats*'²⁸, this is the work of a collective (Escobar, 1995; Latour, 2004; Morin, 2008). Regarding the indigenous world and *ecology movements**, communities need to experiment with economic alternatives, and semiotic resistance, challenging the Modern imposed meaning of 'social' and 'nature' (Escobar, 1995; Kullman and Lee, 2015). Regarding the western world, the universalisation of Modern values needs to stop (Latour, 2013; Morin, 2008, 1995). For a long time, the scientific community has been aware that the western world needs to modify its values, and that we need to change our habits, established through a perpetual economic growth rhetoric that does not hold true against ecosystemic limits (Escobar, 1995; Meadows et al., 1972). Certainly, "*there is a need for the harmonious integration between the white and the indigenous world*" (Andoque Macuna et al., 2011, p. 82).

6.2.2 Real peace proposals in the physical territory

Unequal control over the environment, competing understandings of what this control entails, together with different attachments to the land, characterise the conflict in the physical territory. Indigenous people from Forest and Indigenous Reserves do not have the capacity to stop mining activities that affect the territories they occupy because miners receive protection from armed groups. Preventive measures suggested by *internal agents* are again related to strengthening *traditional thought* and formal education. *External agents* see state intervention as the only means to stop mining activities and provide people with economic alternatives. One of the key elements for civil paths to peace proposed by Sen (2011) is formal education. This mechanism is expected to help downplay divisive identities, which, together with material inequality, are for him the root causes of violent conflicts (Sen, 2011). For the Colombian case, several authors agree with the explanation of material inequality as the root cause of the conflict (Beittel, 2014; Cárdenas Ruiz, 2015; Carmona, 2015; Hernández, 2015; Rodríguez Pico, 2015). Others agree with the both elements, emphasising the role of divisive political identities, together with socio-economic disparities in maintaining the armed confrontations (Flores, 2014; Vásquez, 2008).

According to the Colombian government, to address social and economic inequalities after the peace agreement, the country needs to attain similar 'quality of life' levels in urban and rural areas (The Government of Colombia and the Revolutionary Armed Forces of Colombia – People's Army (FARC –

²⁸ Latour (2004) uses similar expressions to emphasise the difference between Moderns' conception of Science, where experts worked in controlled environments, and non-humans were not agents, to contrast it with the new kind of experiments that involve both humans and non-humans.

EP), 2016). It is not clear what is meant by 'living well', 'well-being', or 'quality of life' in official documents, what is certain is that the mechanism is development. More specifically, as I briefly discussed in the introduction to the armed conflict and the peace agreement in Colombia (section 2.1), the two development driving forces for the current government are mining and the expansion of the energy sector. This may explain why the position of the central government is not stopping illegal mining, but taking control over the monopoly of tributes to the National Treasury from these activities (The Government of Colombia and the Revolutionary Armed Forces of Colombia – People's Army (FARC –EP), 2016, p. 79).

Real peace proposals for the physical territory require stopping illegal mining operations. At the same time, a reformulation of the Colombian state's development model based on mineral extraction is needed (Carmona, 2015). More than government intervention to take control over the profits from illegal economies, what is necessary is a renegotiation of the very definition of progress. The 'extractive locomotive' rests upon the questionable assumption that peace, alongside an equitable future for marginalised groups, can only be achieved through mineral extraction (McNeish, 2016). These assumptions take for granted the ecosystem damages that this kind of development causes (Bonilla Montenegro, 2015), and overlooks the other kind of insecurities it engenders. Pollution produced by the extractive industry has generated reactions among peasant and ethnic movements, together with environmental activists fighting for environmental justice (Montilla, 2014). Counter actions to appease protests from grassroots, afro-descendant, and indigenous groups, include state abuse of force during open protests, and selective paramilitary assassinations of trade unionists, leaders, and activists (McNeish, 2016). Real peace proposals for Colombians require that development stops being the driver of political decisions. In general, western economy can no longer be the compass for our way of advancement (Escobar, 1995; Latour, 2014b; Wright, 2009). Instead of progress, a stable and lasting peace require slow progression, the composition of a common world, following the precautionary principle (Latour, 2014b).

6.3 Roles to make more desirable futures possible (Research Objective 3)

Participants clearly defined the role of youth: they should finish their formal education and continue the traditional culture. Nevertheless, to achieve their agency they need support from relevant institutions to foster the development of their capabilities and harness their acquired skills. The Colombian state plays an ambiguous role in securing the interests of marginalised people. The government's peace discourse promises to guarantee minority people's rights, while at the same time its development plans clearly undermine the possibility of these population to regain control over

their environment. This ambiguous role suggests that the institutions to support and develop youth capabilities will be better fulfilled through the mediation of *ecological movement** groups.

Sen (2011) argues in favour of the paramount role of young people to achieve civil paths to peace. He agrees with the need to create scaffolding institutions that will allow young people to develop their capabilities, this mainly through education, but also through sports and direct political engagement. Creating youth ambassador programs and parliaments we can achieve political participation by young people (Sen, 2011). Although he does not emphasise a particular age group, Latour (2013, 2004a) also stresses the importance of the role of diplomats. A significant difference between Sen and Latour's approach to diplomacy is that for Sen (1999, 2011) the aim of representation is to empower disadvantaged people, particularly women and youth; whereas for Latour (2011), diplomacy is the work of *aspokesperson** who represents both humans and non-humans. In this case study, the concerns raised by young participants about the conditions of animals, the river, and the rainforest, make young participants viable candidates for ambassadors. These young representatives could go beyond the defence of the interests of their communities, indigenous peoples in general, to be good spokespersons in the name of non-humans.

6.4 Limitations

Using focus groups and individual interviews as the primary data construction strategies have the limitation of only gathering perceptions of people who have a previous interest in the topics. My results are not yet the workings of a collective, as the collective is still in the making. Additionally, participants should ideally be engaged in all stages of the scenario process, from generating the information and assembling the scenarios to interpreting them and presenting the information. Beyond fieldwork challenges, I experienced several methodological difficulties. Trying to combine approaches that have substantial ontological and epistemological differences often require a deeper understanding of what each author means by the key terms he uses. In a sense, there is no common language, yet they use the same terminology. I encountered this same difficulty when trying to adapt the capabilities approach to account for indigenous communities' capabilities. As much as Nussbaum (2003) sought to provide a loosely defined list of central human capabilities, the current list is too related to western conceptions of 'quality of life'. A Modern framing is especially evident in capabilities such as 'practical reason', 'other species' and 'control over one's environment'. Finally, although I agree with Schlosberg and Carruthers (2010), when they point out at the potential for the capabilities approach to be applied to indigenous communities about Environmental Justice struggles, the concept will need significant adaptations to be adequate in the context of communal capabilities.

6.5 Suggestions for further research

Through this research I have highlighted the crucial role that youth and ecological movements play in the construction of more desirable futures, to allow for the co-action between human and non-human assemblies in challenging ostensible conceptions of progress. Other case studies describing the ecological dynamics in Amazonian Forest Reserves are needed, to describe how humans and non-humans assemble in these areas. The goal should be to identify those agents with the biggest leverage and find out how their agency can be harnessed to contribute to the construction of common worlds. Future research in these areas can be enriched by finding points of intersection between Political Ecology and indigenous sciences and philosophies.

Applied research on indigenous youth parliaments, and on the mechanisms that we should implement to assemble humans and non-humans in a representative democracy are also needed. To this end, one theoretical approach that needs further exploration is how to extend the capabilities approach to the collectives formed by humans and non-humans. Nussbaum introduced a general expansion of the capabilities approach to non-human animals (Sunstein and Nussbaum, 2004), yet, to my knowledge, this approach has not been explored to encompass non-humans who do not belong to the animal kingdom²⁹.

7 Conclusion

The purpose of this research has been to describe the different futures envisioned by participants during the post-agreement period in Colombia, identifying the characteristics of more desirable futures, and the actions and roles needed to make those futures possible. The baseline scenario and the three future scenarios revolved around two main kinds of conflicts, namely, the conflict in the existential territory and the conflict in the physical territory. Through the existential conflict, the indigenous world has been deprived of the entitlement to participate in the composition and definition of the common world, and the values that are worth pursuing. Despite the absence of physical violence in the study area, the conflict in the physical territory is present through the protection of gold mining by armed groups. In turn, the dynamic of this conflict reduces participant's essential entitlements to life, bodily health, association, and control of their environment.

²⁹ Some examples of non-humans that should be taken into account according to the issues raised by participants are the river, the forest, and even chemicals, notably mercury.

More desirable futures for participants include the possibility to enjoy a positive peace. Such peace entails enhancing inhabitants' ability to develop their communal capabilities, notably, to recover control over the environment, be able to enjoy a natural environment free from mercury pollution, and have opportunities to define what the world is composed of and what kind of progression is worth striving for. Real peace proposals in the existential territory require the entitlement of the indigenous worlds to challenge Modernisation as the only possible path imposed by the western world. True peace proposals in the physical territory require a renegotiation of the meaning of progress, and a commitment to secure the natural environment. The actions that will help to make more desirable futures possible for Forest Reserve dwellers are related to formal education and strengthening traditional thought. In Colombia, the government has defined the way of advancement through its development plan, and the two mechanisms for progress are mining and the expansion of the energy sector. Peace in the existential and the physical territory require not progress but a precautionary progression, to allow for viable assemblages of humans and non-humans. The role of youth, alongside ecological movements, is crucial in the composition of a collective, to challenge Colombia's current development model. More than a stable and lasting peace, this model ensures the continuation of wars that have never been recognised as such, they are not even regarded as conflicts, but the inexorable advancement of Modernisation.

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Annexes

Annexe 1: Glossary

Agency*: Sen (1995, 1993, 1999) only attributes agency to humans, and sees non-humans as resources (Sen, 1984). Humans are agents because they have a capacity to reason, and reason is what sets humans apart from the the rest of the animal kingdom (Sen, 2002, 1999). Nevertheless, he acknowledges the role of values and the capacity humans have to develop a sense of responsibility towards other species (Sen, 2004). Latour (2004, 2005, 2013) refuses the claim that only humans possess reason and agency, non-humans are agents as well, although their action is of a different sort, their agency is as important as ours. Admittedly, our social life would be unthinkable without the co-action between humans and non-humans (Callon and Latour, 1992; Latour, 2013, 2005; Strum and Latour, 1987). Agency throughout this research is “the capacity to make other being(s) do something”³⁰ (Callon and Latour, 1992; Latour, 2013, 2004).

Agents*: Humans and non-humans who exercise agency, in other words, agents are all those being who are able to make others do something (Latour, 2005).

Ancestral thought*: Synonym for *traditional thought* (see definition below).

Balsa(s)* Gold dredging ship(s).

Collective: This is a key term in the Politics of Nature proposed by Latour (2004). Broadly, this word designates groups of humans and non-humans that assemble progressively. This term helps to break the link with ‘social’ and ‘society’ that are already constructed domains that only concern humans. In Latour’s words: “*The factors gathered in the past under the label of a ‘social domain’ are simply some of the elements to be assembled in the future in what I will call not a society but a collective*”(Latour, 2005, p. 14)

Colono(s)*: This is an expression generally used by indigenous people from the study are to designate Non-indigenous settlers. Participants referred to colons and *whites** interchangeably.

³⁰ On ‘How to make someone do something’ see Latour (2013).

Construction*: From Old French *-com* (with, together) + *-struere* (to pile up), the word means “to pile up together, accumulate; build, make, erect” (Harper, 2016). An adaptation of this term for the context of this research is “to build/create (arguments, ideas, scenarios), by systematically arranging participants’ interventions, with arguments from academic and official sources”. **Constructivism*:** is a philosophical approach to problems that emphasises either a *Critique of Pure Reason* or a cultural criticism. In recent history, the term constructivism was first used in mathematics. CONSTRUCTIVISM, CONSTRUCTIONISM, or CONSTRUCTIONALISM, are all terms used in different intellectual settings. The point of encounter among them is that they maintain the dichotomy between the world of ideas and the real world, established by Plato and formalized by Kant (Hacking, 1999). I took a different approach to constructivism, which is the one proposed by Latour (2002, 2013): Constructivism can be understood as a common ground to bring different domains (scientific, political, ethical, etc.) into fruitful communication. A good example is who a scientist, a politician, a moralist can start diplomatic conversations through the following affirmation: “*At least we can be sure of one thing: that your gods as much as ours, your worlds as much as ours, your sciences as much as ours, your selves as much as ours, are constructed.*” (Latour, 2002). From this approach, we can avoid getting entangled into fruitless Science Wars, asking whether Facts are rather fictions, and can instead engage in the really important questions: “*what is well or badly constructed?*” and “*how can we make better constructions?*” (Hacking, 1999; Latour, 2005, 2004b, 2002).

Deontology*: Of Greek origin, *dent-*, combined form of Deon “*that which is binding, duty,*” with *-ology* (Harper, 2016), this is a term that Latour (2014) suggests as a better fit for the task of ontology “*metaphysical science or study of being,*” (Harper, 2016). In our quest for composing a common world, our binding duty should be to first listen to the ‘beings’ in their language, before we divide them into subjects and objects (Latour, 2013, 2005). This ontological perspective was helpful in this research project because it allowed me to progressively understand non-humans not as non-subjects but as agents. A good example is that I came to understand the river, mercury pollution, and the forest as entities, who act and make other act.

Ecology movements*: This is a general term to designate communities and groups advocating for Environmental Justice³¹. The term is closely related to ‘social movements’ used by different authors

³¹ See (Barnett, 2001; Schlosberg and Carruthers, 2010) and Schlosberg, D., 2013. Theorising environmental justice: the expanding sphere of a discourse 22, 37–55. doi:10.1080/09644016.2013.755387

in this thesis (Escobar, 2007, 1995; McNeish, 2016; Sen, 1980; Wright, 2009), yet with a crucial difference: this term attempts to emphasise the ontological approach I took. I intentionally avoid using 'social' and replace it by 'ecology', to emphasise that the social is not an already defined domain, but it is under construction, thus allowing for the socialisation of excluded humans and non-humans (Latour, 2005, 2004).

Equality*: Different understandings of the root causes of the internal conflict in Colombia will dictated dissimilar actions. From the view that the insurgency in Colombia has its roots in social and political inequalities (Flores, 2014; LeGrand, 2003), congruent actions will be targeted to increase equality. Equality of what? This was the question that Sen (1980) setup to answer when he proposed his version of the capabilities approach. He argues that, from an ethical perspective, it is insufficient, and often misleading, to focus on income to measure inequality (Sen, 1995). Instead, focus should be place on the capabilities that individuals have to achieve their agency. For his part, Latour (2006) reminds us that disregarding non-humans' action amounts to ignoring the real root causes of inequality. From this perspective, there are two kinds of equality that we need to strive for. The first one is equality among peoples, meaning to abolish the difference between "us" (Moderns, non-ethnic, Scientific, Rational, *Homo-economicus*), and "them" (under-developed, ethnic, non-scientific, irrational, *homo-sentimentalis*) (Latour, 2002). The second one is equality among agents, in other words, humans and non-humans are part of the same team, and we all play the same role, which in his own words is "*group formation*" (Latour, 2005, p. 34). Equality then means, for this research, to provide humans and non-humans with the necessary conditions to assemble in ways that allow them to fulfil their capabilities.

External agents*: **(A)ex** stands for external agents. These are participants in this study who were not born in the Amazon, but have been working there for at least 2 years. The assumption behind the differentiation between *internal* and *external agents* is that given that they have different attachments and perceptions of the territory, external agents are expected to be less aware about the territorial dynamics that concern those people who were born and have been living longer in the study area.

Internal agents: **(A)in.** Given that not all the participants from the focus groups identified themselves as indigenous, notably some students from the Boarding School belong to the urban centre and did not share traditional cultural practices, it was difficult to talk about the participants from focus groups and interviewees in terms of indigenous and non-indigenous. This difficulty to refer to one or another

group of participants was resolved by introducing a 'Mobility qualifier', which stands for the capacity of those people to come in and out from the area with more or less ease³². This differentiation comes from the assumption that people with low 'mobility' will know the territory, the social norms and ties, better than those who come from other areas. Under this assumption, *internal agents* will have different expectations over what future would look like, because any threats will mean a direct undermining of their and their families' well-being, as they will have reduced capacity to flee in case of increased pressures. **(A)in**, then stands for internal agents. I decided not to use "local" agents, because in the end all agents and all places are local (Latour, 2005).

Mining locomotive*: In Colombia The General Policy for Mining Development (2010-2014) is widely known as the 'Mining Locomotive' (Corte Suprema de Justicia, 2012), or the 'energy-mining Express' (McNeish, 2016). In this document, the two pillars for growth and employment generation are mining development and energy expansion (Serna et al., 2011). However, through the law 685 of 2001 the Colombian government (Andrés Pastrana Presidency 1998-2002) declared as "*Public Utility and Social Interest the mining industry in all its branches and phases*" (Congreso de Colombia, 2001, p. 2).

Moderns*: (Also –Westerns, -Occidentals*, Whites*). It is difficult for me to try and define this in a few lines, Latour (2013) has devoted a whole research project for an ethnography of the *Moderns*. Some general features that can help to characterise them are monopolistic values: One Science, a unique Reason, a unifying Democracy, and an undemocratic Economy (Latour, 2014a, 2004). Their mode of advancement is through progress and development. They evaluate the desirability of interventions according to material well-being, and the principles of efficiency and effectivity.

Occidental world*: In Spanish 'Mundo Occidental'. This was the expression that on participants in this study used to referred to the other kind of world that undermines indigenous values. It is regular term in Colombia to refer to Industrialized vs Developed. See **Moderns***.

Public Utility and Social Interest activities*: is a contested legal term in Colombia. A good example is that reforestation and hydro-forest works In the "Protective Forest Zone" were declared of General Interest and Public Utility (Presidencia Republica Colombia, 1953); and the zones established as 'National Natural Parks' were declared Public Utility zones through the 2nd law of 1959; these two contexts give the idea that 'Public Utility and General Interest' activities are those in line with

³² Given the remoteness of the area and the lack of access routes, the only two ways to come in and out from the place are through the river or by airplane, which increases the costs for transportation.

biodiversity conservation.

Spokesperson*: This is a key concept in the Latour's Political Ecology. This is the role that concerned parties play when they represent the formation of assemblies formed by humans and non-humans. *"The sharp difference that seemed so important between those who represented things and those who represented people has simply vanished. What counts is that all those spokespersons are in the same room, engaged in the same collective experiment, talking at once about imbroglios of people and things."*(Latour, 2011, p. 4)

Territory*: Throughout the literature I used for this research project there are several definitions of territory. On the one hand, territory brings to mind ideas connected to administrative demarcations, or with special confinements (Latour, 2014b). On the other hand, for the indigenous world the definition of territory is not confined to special limits: *"the territory is all the world that the ancestral thought covers in the shamanistic vision"* (Matapí and Yucuna, 2012, p. 8). My usage of the word is a combination of the concepts: 'landscape', borrowed from Hägerstrand (2001), in combination with other concepts more related to the indigenous vision, notably Guattari's (1989) framing of the **physical** and **existential territories**. In my view, existential and physical territories are a continuum, the mental devices we have to define the outside world in many ways shape the world. Likewise, the 'outside' in many ways determine what we can believe, be and think in the 'inside'. Dividing these two territories was only useful to show how the Colombian conflict is not only manifest in armed confrontations, but it also manifests in those areas we cannot see.

Traditional(s)*: The original word in Spanish is 'Tradicional' which in this case does not designate an adjective, but an important role within the indigenous community. A *Traditional* is a man, who has accomplished training of the Yurupari³³, and through his training he is able to give advice to people on very diverse aspects such as health, communal life, and in general both social and ecological aspects. **Traditional thought:** *"el pensamiento tradicional"* also referred to as *"ancestral thought"*, is a concept that escapes my understanding, yet what I was able to grasp from my interaction with participants', this is the act of guidance and reflexion that traditional teach in their communities to guide their decisions to attain a good life.

³³ This is a male driven traditional training and preparation that young men are expected to complete if they want to become *Traditional*s*. Specific information about this practice was not shared with me because this is only reserved for men.

White(s)*: In general, indigenous people and settlers in the Colombian Amazon refer to non-indigenous people as 'whites'. This is clearly not a skin colour identifier; it rather establishes the difference between people who follows the traditional culture and those who do not follow it.

Whites'* culture: Synonyms would be *Modern** and Western culture. **White knowledge:** When participants referred to this kind of knowledge they made references to writing, accounting and the use of computers. **Whiten*:** Become *white**. This is how some participants and other local researchers in the Amazon referred to the adoption of western values by indigenous peoples (Andoque Macuna et al., 2011)

Annexe 2: Area of Territorial Entities in the Amazon

Table 4: Territorial Entities in the Colombian Amazon by area

Territorial Entities	Area (Ha)	%
Water and soil conservation District	272,603.6	0.56
National Natural Parks	4,240,687.5	8.78
National Natural Parks and Indigenous Reserve	1,690,402.2	3.5
Amazonian Forest Reserve (2nd Law 1959)	9,969,580.6	20.63
National Forest Reserve	31,152.6	0.06
National Natural Reserve	468,216.3	0.97
National Natural Reserve and Indigenous Reserve	1,514,454.0	3.13
Indigenous Reserve	22,519,546.6	46.61
Flora sanctuary	9,926.8	0.02
Flora and fauna sanctuary	16.1	0
Flora Sanctuary and Indigenous Reserve	278.1	0
Subtracted lands	3,479,248.5	7.2
Integral Management District	1,399,037.0	2.9
Other figures	2,721,223.0	5.63
Total	48,316,372.9	100

Source: Murcia-García, U., Castellanos, H., Rodriguez, J., 2012. Monitoreo De Los Bosques Y Otras Coberturas De La Amazonia Colombiana.

Annexe 3: Participant characterization

3.1 Co-researchers

As I briefly described in the scenarios section, my my co-researchers in this project were 40 *internal agents* from two locations, Barrio Nuevo and the Boarding School; and with 6 *external agents*. Barrio Nuevo is located in the peri-urban area, at 15 minutes' walk from La Pedrera, between the urban centre and the Camaritagua Indigenous Reserve (Figure 5). Families living in Barrio Nuevo organised themselves under the figure of a Community Action Council, about 50 people are registered and live in the neighbourhood. 21 members, from the ethnic groups Matapí, Yucuna, Tanimuca and Letuama participated in Focus Groups.

Approximately 226 students are enrolled at the Boarding School, 106 women and 120 men (In-person communication with Institution’s Secretary 14.03.16). From the total eight mixed groups, from 6th to 11th grade, I invited two students from each group, 8 women and 8 men joined the Focus Groups. Finally, the six *external agents* are people who had been working in La Pedrera, either with the official government, with indigenous organizations or independently. Participants in individual interviews include the Military Base Commander, the representative for the Women’s Organization, a Lawyer who had been working with the OPIAC for over thirty years, a professor working with the Regional Government, a consultant for an international NGO, and an artisanal miner.

Table 5: Co-researchers’ characterisation

Traditional name/name	Code	Mobility qualifier	Main role characterisation	Institutional affiliation	Men / Women	Birth date	Lives in	Time living or working in the territory	Originally from
Jimet	FG1p1	(A)in	<i>Young man Barrio Nuevo</i>	Neighbourhood Council member	Man	1986	Barrio Nuevo, La Pedrera	6 years	La Playa
Henry	FG1p2	(A)in	<i>Young man Barrio Nuevo</i>	Neighbourhood Council member	Man	1996	Barrio Nuevo, La Pedrera	6 years	La Playa
Juan	FG1p3	(A)in	<i>Young man Barrio Nuevo</i>	Neighbourhood Council member	Man	1984	Barrio Nuevo, La Pedrera	10 years	La Playa
Álvaro	FG1p4	(A)in	<i>Young man Barrio Nuevo</i>	Neighbourhood Council member	Man	1994	Barrio Nuevo, La Pedrera	10 years	Guacayá
Tobías	FG1p5	(A)in	<i>Young man Barrio Nuevo</i>	Neighbourhood Council member	Man	1986	Barrio Nuevo, La Pedrera	3 years	Guacayá
Alexander	FG1p6	(A)in	<i>Young man Barrio Nuevo</i>	Neighbourhood Council member	Man	2002	Barrio Nuevo, La Pedrera	13 years	La Pedrera
NICOCO	FG2p7	(A)in	<i>Adult woman Barrio Nuevo</i>	Neighbourhood Council member	Woman	1960	Barrio Nuevo, La Pedrera	10 years	Oyacá
Deicy	FG2p8	(A)in	<i>Adult woman Barrio Nuevo</i>	Neighbourhood Council member	Woman	1989	Barrio Nuevo, La Pedrera	10 years	La Pedrera

MAÑARU	FG2p9	(A)in	Adult woman Barrio Nuevo	Neighbourhood Council member	Woman	1963	Barrio Nuevo, La Pedrera	13 years	Guacayá
KOÑEMA	FG2p10	(A)in	Adult woman Barrio Nuevo	Neighbourhood Council member	Woman	1961	Barrio Nuevo, La Pedrera	11 years	Guacayá
Yuber	FG2p11	(A)in	Adult woman Barrio Nuevo	Neighbourhood Council member	Woman	1986	Barrio Nuevo, La Pedrera	9 years	Mirití
Dina	FG2p12	(A)in	Adult woman Barrio Nuevo	Neighbourhood Council member	Woman	1993	Barrio Nuevo, La Pedrera	10 years	Mirití
KECHARU	FG2p13	(A)in	Adult woman Barrio Nuevo	Neighbourhood Council member	Woman	1946	Barrio Nuevo, La Pedrera	35 years	Mirití
KEYACANARU	FG3p14	(A)in	Adult woman Barrio Nuevo	Neighbourhood Council member	Woman	1999	Barrio Nuevo, La Pedrera	10 years	Mirití
Ana	FG3p15	(A)in	Young woman Barrio Nuevo	Neighbourhood Council member	Woman	2002	Barrio Nuevo, La Pedrera	14 years	Limuero (Brazil)
KUACO	FG3p16	(A)in	Young woman Barrio Nuevo	Neighbourhood Council member	Woman	2000	Barrio Nuevo, La Pedrera	5 weeks	La Playa
BARi faico	FG3p17	(A)in	Young woman Barrio Nuevo	Neighbourhood Council member	Woman	2002	Barrio Nuevo, La Pedrera	11 years	La Playa
KU'URI	FG3p18	(A)in	Young woman Barrio Nuevo	Neighbourhood Council member	Woman	2001	Barrio Nuevo, La Pedrera	11 years	La Playa
JARIMAKARU	FG3p19	(A)in	Young woman Barrio Nuevo	Neighbourhood Council member	Woman	2009	Barrio Nuevo, La Pedrera	6 weeks	La Playa
KAÑAWIRU	FG4p20	(A)in	Adult man Barrio Nuevo	Neighbourhood Council member	Man	1984	Barrio Nuevo, La Pedrera	6 years	Mirití
GUSMA	FG4p21	(A)in	Adult man Barrio Nuevo	President Neighbourhood council	Man	1958	Barrio Nuevo, La Pedrera	16 years	Mirití
ALAUMA	FG4p22	(A)in	Adult man Barrio Nuevo	Maloquero	Man	1949	Barrio Nuevo, La Pedrera	25 years	Mirití

WeñIRA	FG4p23	(A)in	Adult man Barrio Nuevo	Vice-president Neighbourhood council	Man	1954	Barrio Nuevo, La Pedrera	6 years	Guacayá, Apaporis
KAÑAWIRU	FG4p24	(A)in	Adult man Barrio Nuevo	Neighbourhood Council member	Man	1944	Barrio Nuevo, La Pedrera	35 years	Mirití
Luciana	FG5p25	(A)in	Young woman High School Student	Institución Educativa San José	Woman	2004	Barrio Nuevo, La Pedrera	11 years	La Pedrera
Helena	FG5p26	(A)in	Young woman High School Student	Institución Educativa San José	Woman	2002	Centro Providencia	7 years	Centro Providencia
Yurley	FG5p27	(A)in	Young woman High School Student	Institución Educativa San José	Woman	2003	La Pedrera	12 years	La Pedrera
Yolima	FG5p28	(A)in	Young woman High School Student	Institución Educativa San José	Woman	2003	La Pedrera	2 months	Vista hermosa
Luisa Andrea	FG5p29	(A)in	Young woman High School Student	Institución Educativa San José	Woman	2002	La Pedrera	2 years	Puerto Córdoba
Andrea	FG5p30	(A)in	Young woman High School Student	Institución Educativa San José	Woman	1999	La Pedrera	15 years	La Pedrera
Tamara	FG5p31	(A)in	Young woman High School Student	Institución Educativa San José	Woman	2001	La Pedrera	13 years	La Pedrera
Kóqueru	FG5p32	(A)in	Young woman High School Student	Institución Educativa San José	Woman	2000	Vereda	years	La Pedrera
Bryan Stiven	FG6p33	(A)in	Young man High School Student	Institución Educativa San José	Man	1999	La Pedrera	4 years	Leticia
Leandro	FG6p34	(A)in	Young man High School Student	Institución Educativa San José	Man	2003	La Pedrera	12 years	La Pedrera
John Anderson	FG6p35	(A)in	Young man High School Student	Institución Educativa San José	Man	2003	La Pedrera	13 years	La Pedrera
Fabián	FG6p36	(A)in	Young man High School Student	Institución Educativa San José	Man	2001	La Pedrera	11 years	La Pedrera
Gilberto	FG6p37	(A)in	Young man High School Student	Institución Educativa San José	Man	2004	La Pedrera	4 years	Araracuara
Luiz Angel	FG6p38	(A)in	Young man High School Student	Institución Educativa San José	Man	1996	La Pedrera	17 years	La Pedrera
Wilmer	FG6p39	(A)in	Young man High School Student	Institución Educativa San José	Man	1999	La Pedrera	15 years	0
Nicolás	FG6p40	(A)in	Young man High School Student	Institución Educativa San José	Man	1999	Camaritagua	5 months	La Pedrera
AM	Ip41(PAM1)	(A)ex	Man Artisanal Miner	N/A	Man	1948	La Pedrera	30 years	Cali

Juan	Ip42(PG3)	(A)ex	Man Lawyer working with indigenous communities since 1990s	Independent/ advisor in Yaigojé Indigenous Resguard case against Cosigo	Man	1964	Bogotá	26 years	Bogotá
Javier	Ip43(PMil1)	(A)ex	Man Military Base Commander	Colombian Military Forces	Man	1989	La Pedrera	2 years	Boyacá
Germán	Ip44(PNG1)	(A)ex	Man Biologist NGO Consultant	ACT	Man	1974	Armenia	23 years	Bogotá
Carlos	Ip45(PEdu1)	(A)ex	Man Limnologist/Professor working with the regional government	Director of Innovation & Technology SENA	Man	1944	Leticia	20 years	Socorro
Adriana	Ip46(PEdu2)	(A)ex	Woman school Teacher and leader of the local women's organisation	Primary School Bartolomé de Iguazada	Woman	1970	La Pedrera	13 years	0
Castellanos	Inp47	(A)ex	Woman Regional Director PNN	Regional Director PNN	Woman	1964	Bogotá	30 years	Bogotá
Muñoz Sosa	Inp48	(A)ex	Man Park Yaigojé Director PNN	Park Yaigojé Director PNN	Man	1963	Bogotá	30 years	Bogotá
Alfonso Segura	Inp49	(A)ex	Man Park Puré Director PNN	Park Puré Director PNN	Man	1970	Leticia	15 years	Bogotá
Tucano	Inp50	(A)in	Man Operator PNN	Operator PNN	Man	1975	La Pedrera	40 years	Mirití
Lancheros Neva	Inp51	(A)ex	Woman	Biologist consultant Corpoamazonía	Woman	1984	La Pedrera	2 years	Bogotá
Cardona Ospina	Inp52	(A)ex	Woman	Development and Environment Consultant CI	Woman	1985	La Pedrera	3 years	Manizales
Palacios	Inp53	(A)ex	Man Social Sciences Consultant CI	Social Sciences Consultant CI	Man	1967	Bogotá	13 years	Bogotá
Arévalo Gonzáles	Inp54	(A)ex	Woman visiting researcher biological monitoring CI	Biologist and visiting researcher biological monitoring CI	Woman	1986	Bogotá	2w	Bogotá
Rey Goyeneche	Inp55	(A)ex	Woman leading researcher biological monitoring CI	Primatologist and leading researcher biological monitoring CI	Woman	1989	La Pedrera	2 years	Bogotá
Danna	Inp56	(A)ex	Woman Sustainability Scientist candidate LUMES	Visiting researcher with CI	Woman	1987	Sweden	2 months	Medellin

Coding

FGp: Focus Group participant

Ip: Interview participant

Inp: Informal participant

Annexe 4: Consent form

CONSENTIMIENTO PARA PARTICIPAR EN PROYECTO DE INVESTIGACIÓN

“Construyendo escenarios en el Amazonas: Periodo de post-acuerdo en Colombia y sus implicaciones para la Biodiversidad”

Introducción

Estimado participante, mi nombre es Danna Villada Orozco, soy estudiante de la maestría en Estudios Ambientales y Ciencias de la Sostenibilidad en la Universidad de Lund, Suecia. Actualmente me encuentro llevando a cabo una investigación como requisito de grado. La investigación tiene como fin crear escenarios de los probables desarrollos que se pueden presentar en el casco urbano de la Pedrera, las reservas forestales, y/o los Parques Nacionales Naturales ubicados en el Departamento del Amazonas. Específicamente, se analizarán las implicaciones de los escenarios probables para la biodiversidad, particularmente en el período posterior al acuerdo de Paz. Estos escenarios serán generados a través de grupos focales con actores claves.

Por favor tómese el tiempo necesario para estudiar el contenido de este documento antes de decidir si va a participar. Igualmente le invitamos a discutir el estudio con sus familiares o amigos, o con cualquier otra persona con quien desee hablar sobre el tema. La decisión de participar, o de no hacerlo, depende completamente de usted. A continuación se presenta la información necesaria para tomar la decisión de participar voluntariamente:

Si usted accede a participar en este estudio, se espera que participe en una entrevista individual o en un grupo focal. Estas dos actividades pueden incluir registros audiovisuales. La entrevista tendrá una duración aproximada de 20 a 30 minutos, mientras que el tiempo estimado del grupo focal es aproximadamente 2 horas.

Durante la entrevista o el grupo focal se le preguntará sobre sus percepciones acerca de las oportunidades y amenazas para la biodiversidad que usted puede identificar desde su experiencia personal o laboral, en el territorio del Amazonas.

El resultado final del proyecto de investigación será compartido con usted al final del proceso vía correo electrónico, y la tesis resultante será propiedad intelectual con derechos reservados de la investigadora.

Los resultados del estudio propuesto tendrán la finalidad principal de entregarse como trabajo de tesis, para optar por el título de Magister en Ciencias del programa en Estudios Ambientales y

Ciencias de la Sostenibilidad, sin embargo, la información podrá ser utilizada total o parcialmente, entre otros, en publicaciones de revistas, actividades con fines académicos, y/o investigaciones posteriores.

Su participación en la investigación, y en las actividades derivadas de ésta, no implica ningún riesgo para su salud mental y física. Aunque acepte participar en este estudio, usted tiene derecho a renunciar a su participación en cualquier momento, sin temor a ser penalizado de manera alguna. Por su participación voluntaria no se generará ningún tipo de compensación económica, como tampoco generará costos para usted o los demás participantes.

De ser requerido por usted, la participación en este estudio puede mantenerse completamente anónima y la responsable de la investigación mantendrá su confidencialidad en todos los documentos relacionados con su participación.

Podrá contactar a Danna Villada a través del correo electrónico <ess14dvi@student.lu.se> si tiene alguna pregunta acerca del estudio. Si desea conocer información adicional sobre el programa de Maestría o la universidad, por favor comuníquese al correo electrónico info@lucsus.lu.se o ingrese a la página web <http://www.lumes.lu.se>.

ACTA CONSENTIMIENTO INFORMADO

Yo _____ identificado con documento de identidad _____ acepto participar voluntariamente en el Proyecto de Investigación **“Construyendo escenarios en el Amazonas: Periodo de post-acuerdo en Colombia y sus implicaciones para la Biodiversidad”**, dirigido por Danna Villada Orozco, investigadora responsable, estudiante del programa de Maestría en Estudios Ambientales y Ciencias de la Sostenibilidad, a cargo del Centro de Estudios en Sostenibilidad en la Universidad de Lund, Suecia.

Declaro haber sido informada/o de los objetivos y procedimientos del estudio y del tipo de participación. En relación a ello, acepto **responder una entrevista, o participar en un grupo focal, y permitir la generación de material de registro, audios, videos, fotografías**, sobre el tema de escenarios probables de cambios en el territorio del Amazonas y las implicaciones para la biodiversidad, desde mi conocimiento, experiencias y percepciones personales que sean pertinentes para la investigación.

Declaro haber sido informada/o de los posibles usos del registro de mis opiniones, del material

audiovisula, y de las representaciones visuales que se puedan generar en el ejercicio de la entrevista o del grupo focal, que servirán para análisis, o con fines ilustrativos y/o educativos y no comerciales.

Declaro haber sido informada/o de que mi participación no involucra ningún daño o peligro para mi salud física o mental, que es voluntaria y que puedo negarme a participar o dejar de participar en cualquier momento sin dar explicaciones o recibir sanción alguna.

Declaro saber que la información entregada será **confidencial y anónima**. Entiendo que la información será analizada por el investigador y que no se podrán identificar las respuestas y

Nombre Participante

Firma

Fecha

Correo electrónico del Participante

Danna Villada

Nombre Investigador Responsable

Firma

Fecha

opiniones de cada participante de modo personal.

Tras la firma del presente documento el participante, o su representante legal, recibirá copia de este formato, y el original será adjuntado a la carpeta de documentos relacionados con el participante

Annexe 5: Semi-structured interviews

“Construyendo escenarios en el Amazonas: Periodo de post-acuerdo en Colombia y sus implicaciones para la Biodiversidad”

Preguntas guía para las entrevistas semi-estructuradas:

Población: Funcionarios de instituciones gubernamentales y no-gubernamentales

Nota: Libertad de no responder alguna pregunta

No hay preguntas correctas o incorrectas, lo importante es

1. Presentación personal

1. ¿Me puede dar una descripción general de usted y de su trabajo? ¿Qué edad tiene? ¿Qué estudió? ¿Cuál es su Profesión? En general cuáles son las funciones de su cargo?
1. ¿Cuánto tiempo lleva trabajando en el Amazonas? ¿En qué lugares ha trabajado dentro del departamento? ¿Cuál es su impresión general sobre el trabajo en la zona?

II. Conceptos

1. ¿Qué significa para usted el período de “post-acuerdo”? En qué piensa cuando se menciona este período?
2. ¿Qué entiende usted por biodiversidad? ¿Qué relación tiene este concepto con su trabajo?

III. Territorio

1. Con qué población trabaja? ¿Qué cambios a visto en el territorio durante sus años de trabajo?
1. ¿Qué tendencias de desarrollo a podido identificar durante su trabajo?/ ¿Qué diferencias hay entre el sitio que encontró cuando llegó al área y el sitio en el que trabaja hoy?

IV. Escenarios

1. Basado en las tendencias que ha identificado, ¿Qué se imagina que va a suceder con el territorio en los próximos 15 años si se firma el acuerdo de paz? ¿Qué oportunidades y amenazas puede prever?
1. Si tuviera la posibilidad de influir en el futuro, ¿Qué desearía que sucediera en el territorio del departamento del Amazonas en los próximos años?

V. Postura Institucional

1. Conoce usted la visión institucional sobre los cambios que se pretenden en los próximos años? Se le ha informado de algún plan, en la institución para la cual trabaja, que se pretenda implementar en el periodo del post-acuerdo?
1. ¿¿Cómo cree usted que la institución para la cual trabaja puede contribuir a crear el escenario ideal que usted se imagina?

Población:

I. Presentación personal

1. ¿Me puede dar una descripción general de usted? ¿Qué edad tiene? ¿A qué dedica la mayor parte de su tiempo? ¿Qué actividad realiza para subsistir?
1. ¿Cuánto tiempo lleva viviendo en este lugar? ¿En qué lugares ha vivido dentro del departamento? Cuál es su impresión general sobre la vida en la zona?

II. Conceptos

1. ¿Qué significa para usted el período de “post-acuerdo”? En qué piensa cuando se menciona este período? ¿A escuchado usted sobre el proceso del acuerdo de Paz?
1. ¿Qué es para usted la selva? ¿Qué entiende usted por biodiversidad? ¿Qué relación tiene este concepto con su trabajo?

III. Territorio

1. Con qué población trabaja? ¿Qué cambios a visto en el territorio durante sus años de trabajo?
1. ¿Qué tendencias de desarrollo a podido identificar durante su trabajo?/ ¿Qué diferencias hay entre el sitio que encontró cuando llegó al área y el sitio en el que trabaja hoy?

IV. Escenarios

1. Basado en las tendencias que ha identificado, ¿Qué se imagina que va a suceder con el territorio en los próximos 15 años si se firma el acuerdo de paz?
1. Si tuviera la posibilidad de influir en el futuro, ¿Qué desearía que sucediera en el territorio del departamento del Amazonas en los próximos años?

V. Postura Institucional

1. ¿Conoce usted la visión institucional sobre los cambios que se pretenden en los próximos años? Se le ha informado de algún plan, en la institución para la cual trabaja, que se pretenda implementar en el periodo del post-acuerdo?
1. ¿Cómo cree usted que la institución para la cual trabaja puede contribuir a crear el escenario ideal que usted se imagina?

Población: Pobladores y comerciantes establecidos en La Pedrera

I. Presentación personal

1. ¿Me puede dar una descripción general de usted? ¿Qué edad tiene? ¿A qué dedica la mayor parte de su tiempo? ¿Qué actividad realiza para subsistir?
1. ¿Cuánto tiempo lleva viviendo en este lugar? ¿En qué lugares ha vivido dentro del departamento?

Cuál es su impresión general sobre la vida en la zona?

II. Conceptos

1. ¿Qué significa para usted el período de “post-acuerdo”? En qué piensa cuando se menciona este período? ¿A escuchado usted sobre el proceso del acuerdo de Paz?
1. ¿Qué es para usted la selva? ¿Qué entiende usted por biodiversidad? ¿Qué relación tiene este concepto con su trabajo?

Población: Miembros de etnias indígenas

I. Presentación personal

1. ¿Me puede dar una descripción general de usted? ¿Qué edad tiene? ¿A qué labor dedica la mayor parte de su tiempo? ¿Qué actividad realiza para subsistir?
1. ¿Cuánto tiempo lleva viviendo en este lugar? ¿En qué lugares ha vivido dentro del departamento? ¿Cuál es su impresión general sobre la vida en la zona?

II. Conceptos

1. ¿Qué significa para usted el período de “post-acuerdo”? En qué piensa cuando se menciona este período?
1. ¿Qué entiende usted por biodiversidad? ¿Qué relación tiene este concepto con su trabajo?

III. Territorio

1. ¿Por qué se vino a vivir a esta zona? ¿A qué etnia pertenece?

Annexe 6: Protocol for Scenario exercises

Introducción

Este taller fue realizado el 5 de Marzo de 2016, en la comunidad de Barrio Nuevo, La Pedrera, Amazonas. Este ejercicio de construcción de escenarios fue diseñado e implementado en el marco de la investigación “Construyendo escenarios en el Amazonas: Periodo de post-acuerdo en Colombia y sus implicaciones para la Biodiversidad”, con la autorización de los miembros de la Junta de Acción Comunal, quienes autorizaron a la investigadora Danna Villada para realizar 4 grupos focales con hombres y mujeres quienes quisieran voluntariamente participar en la investigación, bajo la condición de que la estudiante apoyara de alguna manera el proceso organizativo de la comunidad. Este acuerdo se cumplió por medio del primer taller, realizado el 27 de febrero, y la entrega de documentos realizada el 16 de Marzo de 2016. El presente documento fue adaptado de una guía para construcción de escenarios con comunidades en bosques tropicales, este documento es de acceso público a través de internet en el siguiente link:

http://www.cifor.org/publications/pdf_files/Books/BCronkleton0601.pdf

Objetivos

- I. Identificar los cambios que se han dado en el territorio del Departamento del Amazonas, más específicamente en el casco urbano de La Pedrera, las zonas de reserva forestal y las áreas de los Parques Nacionales Naturales.
- II. Conocer las percepciones de los participantes acerca de los cambios probables que pueden darse en el territorio en los próximos 15 años.
- III. Crear escenarios futuros de posibles transformaciones que se darán en el territorio, incluyendo un futuro deseable.

Productos

Entre dos y cuatro escenarios, en forma de narrativas, mapas, modelos, dibujos, dependiendo del formato deseado.

Tiempo y materiales

La primera sección del taller tiene una duración de 1 día de trabajo

Marcadores, papel, lapiceros, papel reciclado en forma de tarjetas, cinta.

Una grabadora de voz y una libreta de apuntes para el facilitador

Participantes

Un/a facilitador/a

Una persona que tome los apuntes

Entre 6 y 8 participantes

Presupuesto

Alimentación (Desayuno y almuerzo)

Concepto	Cantidad	Costo	Total
TOTAL			0

Detalle de actividades con cada grupo focal

1 sesión de 2 horas (actividades repartidas en 1h 45 min con 1 descanso de 15 min)

Preguntas guía para la Construcción de escenarios

Paso 1: Presentación personal

En parejas cada participante presenta a su compañero

1. Nombre completo, ¿dónde y en qué año nació?
- I. ¿Cuánto tiempo lleva viviendo en el territorio?

Paso 2: Conceptos

El grupo responde cuáles son sus percepciones acerca de los siguientes conceptos

¿Qué significa para ustedes el período de “post-acuerdo”? ¿En qué piensan cuando se menciona el periodo de paz?

¿Qué es para ustedes la selva? ¿Qué entienden ustedes por biodiversidad?

Paso 3: Identificar los cambio en el territorio

Construir una línea del tiempo hasta hoy, respondiendo a las siguientes preguntas

5. ¿Cuáles son los cambios importantes que han visto en el territorio en los últimos 5, 10, 15, 30 años?

6. ¿Qué diferencia hay entre el lugar que encontraron cuando llegaron y el lugar donde viven hoy? (acceso a alimentos, recursos, agua, bosque, animales, qué hace la gente, transporte, salud, bienestar, cultura, cantidad de gente)

Paso 4: Construir un concepto común sobre escenarios

Aunque hay varias definiciones de la palabra, a lo que nos referimos en este ejercicio son escenarios como narraciones de lo que los habitantes se imaginan que va a suceder en el territorio. Así, para este caso, escenarios son respuestas creativas a la pregunta “¿Qué pasaría si...?”.

Paso 5: Crear narraciones de posibles futuros

En este estudio se está investigando los impactos para la biodiversidad en el marco del post-acuerdo, de tal manera que la pregunta del paso 6 sería entonces la siguiente:

7. ¿Qué se imaginan que va a pasar con el territorio que habitan en los próximos 15 años, si se firma el acuerdo de paz?

8. ¿Qué va a pasar con la población, las vías de acceso, la cultura, el idioma, el bosque, los animales?

9. Si tuvieran la posibilidad de influir en el futuro, ¿qué desearían que sucediera en el territorio?

Paso 6: “Oportunidades” vs “Amenazas”

10. Cada grupo identifica 3 oportunidades y 3 amenazas que pueden prever en el futuro.

Oportunidades
1.
2.
3.
Amenazas
1.
2.
3.

Taller: Construcción de escenarios

Segunda Sesión

Paso 7: Presentación y discusión

2. ¿La historia tiene sentido? ¿Por qué y por qué no?
3. ¿Qué puntos de la historia pueden ser controlados por la comunidad y cuáles no?
4. ¿Cuáles son algunas de las lecciones que se pueden aprender de esta historia?
5. ¿Cuáles son los puntos clave que la comunidad podría monitorear para ver si esta historia está ocurriendo realmente?
6. ¿Cómo sería diferente la comunidad en cada uno de los escenarios? ¿Qué sería similar?

Paso 8: Refinar las narraciones y analizar los impactos

Introducir un evento sorpresivo

Discutir los impactos de los escenarios

Oportunidades	¿Cómo podemos aprovechar esta oportunidad? ¿Cómo podemos prepararnos para esto?

Amenazas	¿Qué puede hacer la comunidad para prevenir esta amenaza? ¿Si no es posible prevenir esta amenaza, cómo se pueden mitigar los impactos negativos?

7. ¿Qué acciones pueden tomar las comunidades?
8. ¿Hay acciones que ustedes pueden tomar para alcanzar el futuro deseable, o para mitigar uno negativo? (Para mitigar los impactos del escenario negativos en mí, mi familia, y mi comunidad?)

Annexe 7: Codes for interpretative content analysis

1. Temporal categories (x axis in data matrix)

I used these categories to code the data according to past and present events, and what people think could happen in the future. For the past and present time frame I use the **Expanded (C) + (D)(P)(S)(I)(R) scheme**. My source for basic categories definition was: (Ness et al., 2010). The first addition to the scheme was (C)changes, that I needed to create the baseline scenario, using the territorial changes that participants described. General additions to the basic scheme were time qualifiers (past and present), alongside actors' motives as possible driving causes. To explore the future, I distinguished between (D) Driver in the present and (D)F Driving Force.

Table 6: Expanded DPSIR Temporal Categories

Time frame	Temporal Category Name	No.	Code	Definition	Sub-categories
Past & Present (Recent past / Remote past)	Changes and Past trends	1	(C)	Changes in the territory perceived by participants during the last 15 years. These changes are not restricted to any particular subject, but to those things they judge important.	
	Driver	2	(D)	Drivers are the perceived external or internal causes, or agents' motivations or drives ³⁴ , that have steered movements toward or away from desired states in the past or continue to do it in the present.	
	Pressure	3	(P)	Pressures are the influence or effect of someone or something. In relation to the previous category, they can be thought of as consequences of the Drivers, in other words, they are the concrete processes or activities that agents perform under the influence of a Driver. Pressures can be positive or negative, they are positive when they help achieving a desired state, and are negative when they result in undesirable states.	+(P) positive pressure that counterbalances negative pressures or drivers

³⁴ Motivations are not included in the original framework, only external and internal forces situated in both Social and Ecological Systems.

	State	4	(S)	State is the resulting perceived condition the territory, people or metaphysic domains.	
	Impacts	5	(I)	Impact is the negative consequence of a state; it can entail effects to Humans or non-Humans alike. As most of the consequences addressed by participants were negative the symbol used was (I), in turn those positive consequences were differentiated with the + symbol.	+(I) is a positive consequence
	Response	6	(R)	Responses are the reactions to the previous phases. They can be targeted towards addressing any of the prior categories. They can aim at avoiding or mitigating the effects of any of the other phases, and can be both lead by actors affected or not, or by institutions ³⁵	
Future (Short term / Long term)	Driving Forces	7	(D)F	Driving Forces or Drivers into the Future, is what participants perceive as situations, choices, behaviours or events that could change the course of a trend, generally to either improve or reduce their perceived well-being.	
	Opportunities	8	(Op)	Opportunities are future possibilities to improve living conditions of individuals, families or communities, that participants could imagine for the post-agreement period.	(Op)Econo Economical opportunity
	Threats	9	(T)	Threats are what participants perceived as future events or acts that could represent a physical or symbolical menace to individuals or communities. They could also be thought of as pressures into the future.	
	Uncertainties	10	(U)	Uncertainties represent what participants expressed as unknown to them about current or future states. These unknown issues were important as long as they were thought to affect in some way the	

³⁵ As outlined in section 2 (Theoretical Foundation), the original scheme focuses on policy-making, this stresses the role of institutions and policy-makers in the issuing and application of responses, for instance in the form of taxes, subsidies, regulations, etc. Nevertheless, as this study focuses on actors in the bases of Hågerstrand nested domains (does who ultimately follow or refuse to follow norms and directives issued by upper ecosystem's management domains), the stress here is placed on actors directly affected by the situations.

				picture of participants' considered futures.	
	Future detached from knowledge (Dystopian Future)	11	(DF)	This scenario is where I assembled all the descriptions of the undesirable future for participants.	
	Business-as-usual	12	(BAU)	In this scenario I grouped participant's description of a future where things will continue to be as they currently are, and nothing would drastically change.	
	Future reattached to knowledge (Utopian future)	13	(UF)	This scenario contains what participants described when asked about what changes they would like to see in the territory. This consider future represents participants' ideal future.	

2. Atemporal categories (y axis in data matrix)

Table 7: Atemporal categories (Natural and built environment, capabilities, and actors)

Atemporal Category Name	No.	Code	Definition	Sub-categories	Sub-category definition
Natural environment	14	N(A) / (nH)	Nature, wilderness, in general all non-Humans that are not man-made.	N(A) Nature agents (nH) Non-Humans	
Built environment	15	--	Man built physical structures and artefacts.	--	--
Capabilities	16	Capabilities	What people is able to do and to become, using their social and political, economic freedoms and protection, alongside freedom of opportunity.	C1 Life C2 Bodily Health C3 Bodily Integrity C4 Senses, Imagination, and Thought C5 Emotions C6 Practical Reason C7 Affiliation C8 Other Species C9 Play C10 Control Over One's Environment	These are the tenth Central Human Capabilities proposed by Martha Nussbaum (2003), based in Sen's (1999) Capabilities approach. See the definition of each category in table 8 below
Actors	17	(A)I	Actors are mainly groups or institutions that participants mentioned, but who did not directly participate in this research project	(ACT)	

--	--	--	--	--	--

Table 8: Human Central Capabilities

Human Central Capabilities	
Sub-category	Sub-category definition
C1 Life	Being able to live to the end of a human life of normal length; not dying prematurely, or before one's life is so reduced as to be not worth living.
C2 Bodily Health	Being able to have good health, including reproductive health; to be adequately nourished; to have adequate shelter.
C3 Bodily Integrity	Being able to move freely from place to place; to be secure against violent assault, including sexual assault and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction.
C4 Senses, Imagination, and Thought	Being able to use the senses, to imagine, think, and reason – and to do these things in a “truly human” way, a way informed and cultivated by an adequate education, including, but by no means limited to, literacy and basic mathematical and scientific training. Being able to use imagination and thought in connection with experiencing and producing works and events of one's own choice, religious, literary, musical, and so forth. Being able to use one's mind in ways protected by guarantees of freedom of expression with respect to both political and artistic speech, and freedom of religious exercise. Being able to have pleasurable experiences and to avoid non-beneficial pain.
C5 Emotions	Being able to have attachments to things and people outside ourselves; to love those who love and care for us, to grieve at their absence; in general, to love, to grieve, to experience longing, gratitude, and justified anger. Not having one's emotional development blighted by fear and anxiety. (Supporting this capability means supporting forms of human association that can be shown to be crucial in their development.)
C6 Practical Reason	Being able to form a conception of the good and to engage in critical reflection about the planning of one's life. (This entails protection for the liberty of conscience and religious observance.)
C7 Affiliation	A. Being able to live with and toward others, to recognize and show concern for other human beings, to engage in various forms of social interaction; to be able to imagine the situation of another. (Protecting this capability means protecting institutions that constitute and nourish such forms of affiliation, and also protecting the freedom of assembly and political speech.) B. Having the social bases of self-respect and non humiliation; being able to be treated as a dignified being whose worth is equal to that of others. This entails provisions of nondiscrimination on the basis of race, sex, sexual orientation, ethnicity, caste, religion, national origin.
C8 Other Species	Being able to live with concern for and in relation to animals, plants, and the world of nature.
C9 Play	Being able to laugh, to play, to enjoy recreational activities.
C10 Control Over One's Environment	A. Political. Being able to participate effectively in political choices that govern one's life; having the right of political participation, protections of free speech and association. B. Material. Being able to hold property (both land and movable goods), and having property rights on an equal basis with others; having the right to seek employment on an equal basis with others; having the freedom from unwarranted search and seizure. In work, being able to work as a human being, exercising practical reason, and entering into meaningful relationships of mutual recognition with other workers.

Source: Nussbaum, 2003

Annexe 8: Samples from interpretative content analysis

3.1 Applied expanded DPSIR to analyse past and present trends

Table 7 contains aggregated results from Past & present trends identified by participants. I used this information to create the Baseline scenario, or point of departure for the imagined futures, This is a summary of the most salient trends mentioned by people when asked about the changes that they had seen in the territory of La Pedrera, and by extension to the Department of Amazonas, Colombia during the last 15 to 30 years. We constructed raw data through scenario exercises with internal actors (A)*in* living in the areas of Forest Reserves and the non-municipalised area and external actors (A)*ex*, who had been working in La Pedrera or the Amazonas Department for at least 2 years.

Table 8: Applied (C) + (D)(P)(S)(I)(R)

Atemporal Categories	Time Frame: Past & Present (Remote past 30 years/ Recent past 15 years / Present: 2016)					
	Temporal Categories					
	1. Changes (C)	2. Driver (D)	3. Pressure (P)	4. State (S)	5. Impacts (I)	6. Response (R)
14. Natural environment	Considerable reduction of animals and trees in Peri-urban and Forest Reserve areas (C)	Men are hunting and overfishing to sell animals in town (D) (V)economic	Overhunting and overfishing is the main reason to see less and less animals (P)	Now it is more difficult to find animals like charapas, peccary, chachalacas, parrots and macaws. Fish are also getting scarce (S)	Animals are not allowed to reproduce and are getting extinct (I)nH (A)inM&WYouth vs Animals are now hiding from humans (A)inMAdults	Now there are institutions that help to protect animals (C) +(P) (R) and some of them give economic incentives to people to help in conservation efforts (V)economic
15. Built environment	(A)in Many changes in infrastructure and building materials	More families migrating to the area and also the influence of white settlers machinery have produced many of these changes (D)	There is more commercialisation in the urban area, this can be both a good and a bad thing +(P)/(P)	Unlike the urban area where streets have been asphalted, in the peri-urban area roads are in a very poor condition (S)	The forest that was cleared up for building houses will never grow back (I)	People have gather in the past and they have cleared up roads and the soccer court in Barrio Nuevo (R)
16. Capabilities	Several changes in culture and customs. Indigenous communities are requesting formal education and access to "technical knowledge" (C)	Western culture is seen as the main cause for culture loss but at the same time it is the way in which young people can improved their well-being and help their families (D)	Settlers came with a very different way of thinking. Indigenous people could no longer keep the same costumes and customs (P)	Indigenous people have been adopting settlers' culture, but they still depend on the forest and traditional ways of harvest and hunting to feed their families. (S) (V)No-economic	Through the influence of western culture, indigenous culture is increasingly lost (I)	Barrio Nuevo Neighbourhood members decided to organise evening meetings to strengthen culture (R). Indigenous communities are interested in strengthening their culture (R)
17. Actors	Families have been migrating from remote areas to have access to education. Miners are mainly external actors (C). (V)economic	Gold mining is a good business for the external actors who come to extract it. These actors do not care about what happens to locals, they only mind about what they can extract (D) (V)economic	Miners throw the mercury used to extract gold into the river (P)	There is increased pollution in water streams. Non-human and human contamination with mercury (S)	Mercury passes through the food web. People can get deformities due to an excess in mercury. This is transmitted from one generation to the next (I)	Official armed actors (The military) has bombarded the miner's balsas* (R)

Annexe 9: Co-relation between participants' perceptions and the post-agreement period

There were four degrees of awareness among participants about the peace negotiations between the Colombian government and the FARC (Figure 10). These degrees of awareness were: **(a)** Participants who openly said they had never heard anything about the peace agreement, but mentioned general things like the need to respect the terms of the mutual accord if peace is to be maintained: FG2 Adult women & FG3- Young women in Barrio Nuevo; **(b)** Those who mentioned general things about the armed conflict, and elaborated on the possibility for improving their living conditions if there is peace: FG1-Young men & FG4-Adult men in Barrio Nuevo; **(c)** one person who was acquainted with the period and could talk about some threats and some opportunities it could pose for people living in the area (Ip46- Woman school Teacher and leader of the local women's organisation); and **(d)** Those who had a high level of awareness, meaning that they were not only able to identify the "post-agreement period" with the current negotiations between the Colombian Government and the FARC, but they could also discuss about the territorial, economic or social possible implications of it, at a local, regional or national scale. This group includes all the remaining participants: FG5- Young women (High School Students), FG6- Young men (High School Students), and all of the (A)ex- interviewees, both formal and informal, except for the women's organisation leader. Even when some participants had a poor level of awareness about the peace agreement process, they all related future threats to the

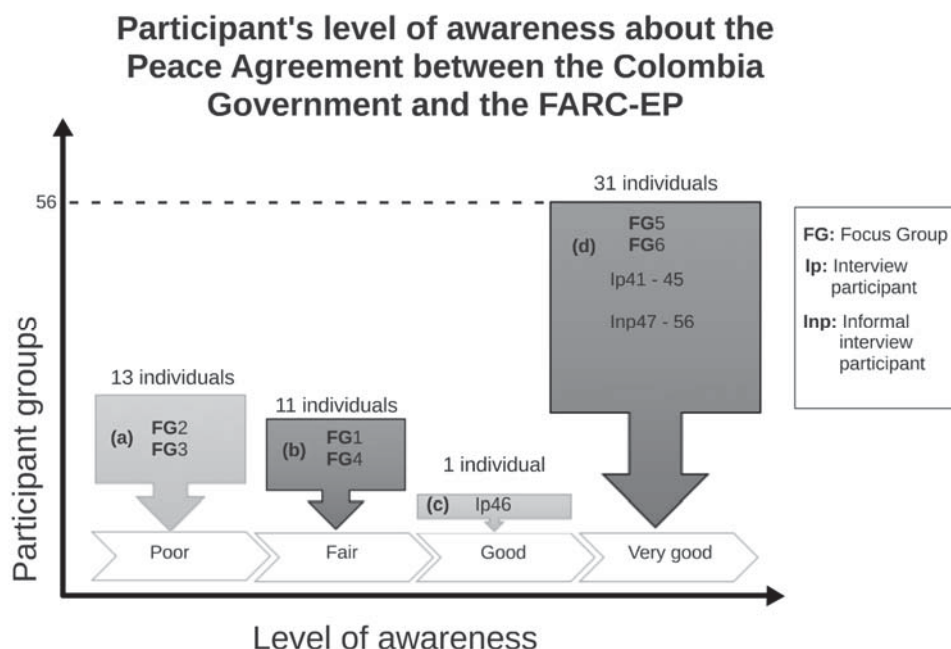


Figure 10: Degrees of awareness about the post-agreement period

This graph shows the four degrees of awareness about the peace agreement among participants from Focus Groups, formal and informal interviews. Focus Groups are taken here as a unity. Awareness of the peace agreement was varied within the Focus Groups. Nevertheless, group discussions helped to level out those informational base discrepancies, therefore focus groups are taken as a unity.

commodification of the forest, which they related to the incursion of whites with their machinery into the area, and those with higher levels of awareness about the peace process named “commercialisation”, and “mercantilisation”. Given that 43 participants out of 56 (77%), had between fair and very good awareness of the peace negotiations, participants’ future scenarios are correlated with their perceptions about the effects that the peace agreement can produce in the territory.