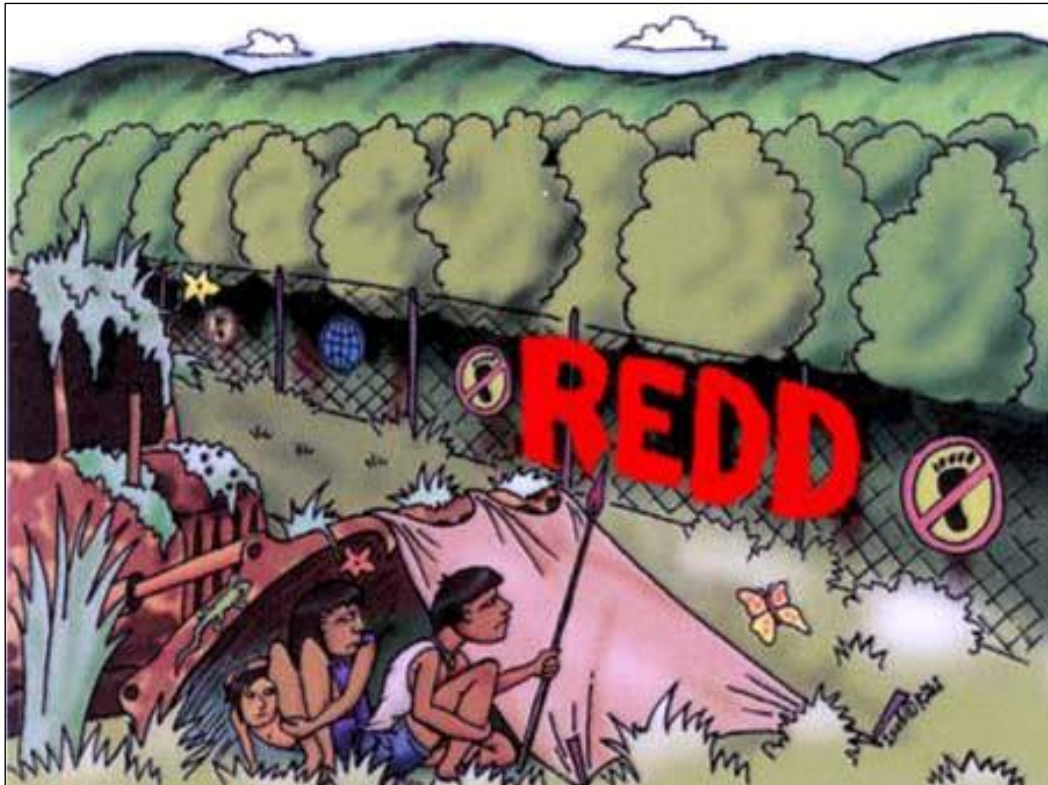# Sharing the benefits of REDD+

Balancing forest conservation with pro-poor development

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31-01-2014

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Acknowledgements

I would like to thank the following individuals and institutions for their help and collaboration in carrying out this research. First I would like to thank Dr. Guus van Westen from the University of Utrecht, who has been my supervisor during the research period and advised me when I was having difficulties.

In addition, I would like to thank Jaime Ma Romero for providing me the opportunity to do my research about Maderacre and facilitating my stay in Iñapari. I also would like to thank José Luis Canchaya from the national office in Lima, who was my contact-person and has guided me during the process of my research. I am grateful for the advice and recommendations he has given me.

I also would like to express my gratitude to the staff of Maderacre, who welcomed me in their office and enabled me to carry out my research in a safe manner. I especially want to thank Pierina Gonzales for introducing me to the stakeholders of Maderacre and helping me with transportation. I am also grateful to Lorenzo Lu, who picked me up every morning in order to go to the office and provided me with transportation in case Pierina was occupied. In addition to this, I want to thank other staff-members of the office in Iñapari who were willing to answer my questions and provided me with the documentation I needed for my research.

An last, I would like to express my gratitude to all the workers of Maderacre, local suppliers and other stakeholders for taking time to talk to me and answer (long) lists of questions. This has given me the opportunity to obtain insight in their perception of the company. Without them, this research would not have been possible.

Contents

Acronyms

CCBA: Climate Community and Biodiversity Alliance

CDM: Clean Development Mechanism

CO2: Carbon Dioxide

FSC: Forest Stewardship Council

FAO: Food and Agricultural Organization

GHG: Green House Gas

HCVF: High Conservation Value Forests

ICDPs: Integrated Conservation and Development Projects

PES: Payments for Environmental Services

REDD+: Reducing Emissions from Deforestation and Forest degradation

SFM: Sustainable Forest Management

VCS: Voluntary Carbon Standard

WWF: World Wildlife Fund

Introduction

With global climate change looming over the world, there is an increasing need to reduce tropical deforestation and forest degradation. In the last 5000 years, an estimated amount of 1.8 billion hectares of forest has been lost world-wide, which is an average loss of 360.000 hectares per year (FAO, 2012: p9, Williams, 2002). This poses a great threat to biodiversity and the existence of rural forest communities, who depend on the forest for their livelihoods. Over the years, different strategies have been developed in order to address the issues of deforestation and rural poverty, but most approaches have not been able to create a long-lasting effect. This is mainly due to the complex relation between poverty and deforestation and many other factors that directly or indirectly influence these processes. Most forest conservation approaches tend to emphasize one objective over the other, or have not been able to integrate both objectives effectively. In addition to this, a common problem of most conservation approaches is the lack of funding that is necessary in order to protect large forested areas against external influences. With the introduction of th e market-based conservation mechanism REDD+, the aim is to provide economic funding to governments in order to protect their tropical forests. Nevertheless, although the idea is to compensate forest users for protecting their forest, due to the centralized and market-based character of REDD+, there is a risk that these benefits will not reach the rural poor. In the literature, it is indicated that certification standards that emphasize human rights and pro-poor development may play an important role in safeguarding the social benefits of REDD+. This may even be further enhanced when the concept of shared value creation is applied, which means that the social aspects become part of the core-objective of the project. Nevertheless, due to the recent character of REDD+, more empirical evidence is necessary regarding the impact of these principles in a real life situation. Therefore, I have carried out a social impact assessment of Maderacre, a forestry company in the South-East jungle of Peru that exports timber to the international market and that has implemented a REDD+ project in 2009. The company has been certified by the social certification standards FSC and CCBA and emphasizes the importance of creating shared value at the local level. By analyzing the social impact of the company on local stakeholders groups, the objective is to obtain more knowledge on how to effectively balance the objectives of forest conservation with poverty alleviation. Therefore, the following research question has been developed:

> *What has been the social impact of project Maderacre on the related target groups and to what extent has Maderacre been able to create shared value at the local level?*

In the first chapter, an overview will be given of the different forest conservation approaches that have been implemented over the years and the different implications of these approaches. Chapter two provides information regarding the regional context and the local stakeholders of the company. In chapter three and four, the research framework and methodology are presented, on which the social impact assessment is based. Chapter five provides an overview of the main results and chapter six concludes the report and gives an answer to the research question.

1. Thematic framework

1.1 Deforestation and forest degradation

Deforestation – the radical removal of forest cover in order to use the land for other purposes – is one of the main impacts the human population has had on the surface of the earth. Although once extended over half the planet, forests now only cover 31 percent of the land's surface (FAO, 2012: p9). In the last 5000 years, an estimated amount of 1.8 billion hectares of forest has been lost world-wide, which is an average loss of 360.000 hectares per year (FAO, 2012: p9, Williams, 2002). Although the net loss of forest is decreasing due to reforestation and the natural expansion of forests, the rate of tropical deforestation remains high. Especially in the Amazon region, which is home to the largest remaining tracts of primary forest in the world, deforestation is increasingly rapidly. Over the years, the Amazon countries have lost over 1 million square kilometers of forest, which is around 16 percent of their original forest cover (Hall, 2011: p185, WWF, 2009). In addition to deforestation, another important impact is forest degradation, which is the impoverishment of forests caused by human activities, such as overgrazing, logging, fires and overhunting (FAO, 2007: p10). Although forest is not completely removed, forest degradation is a gradual destructive process that reduces the supply of forest benefits and often leads to deforestation in the long-term (FAO, 2007: p10).

The importance of reducing tropical deforestation and forest degradation has long been recognized. In addition to providing for scenic beauty and leisure opportunities, tropical forests are also important suppliers of a wide range of ecosystem services (Hall, 2011: p184). Not only are they home to a large variety of wildlife species, they are also important for the purification of air, the preservation of watersheds, the regulation of rainfall, the stabilization of soil and the provision of natural resources, such as many timber and non-timber products (WWF website, 2014). One important function of forests is the absorption of carbon dioxide (CO_2), a major greenhouse gas. It is estimated that forests store more than 289 gigatonnes of carbon in their biomass (FAO, 2012: p28), which is more than the current amount of carbon contained in the atmosphere (Pokorny et al, 2013: p2). However, this function is increasingly threatened by deforestation and forest degradation, which turn tropical forests into a source rather than a stock of carbon dioxide. Although estimations vary, it has been indicated that forest conversion generates between 15 to 20 percent of global CO_2 emissions, which is greater than the emissions produced by the global transport sector (WWF, 2007: p1-2). Conserving carbon stocks by reducing deforestation and forest degradation is therefore an important means for mitigating global warming. This becomes even more important now that studies have indicated that the costs of controlling climate change through reducing forest loss is relatively low, compared to other climate-change related solutions (Hall, 2011: p193).

In addition to providing eco-system services that are essential to the human population at a global level, natural forest also provide many benefits to people who live in or adjacent to forest areas. According to FAO, 1.6 billion people world-wide – including 60 million indigenous people – depend on forests for their livelihoods, as an economic safety-net or as an essential survival mechanism (FAO, 2012: p27). This ranges from native forest dwellers that have a long tradition of forest extraction, to small-scale settlers who have come to the area in search for economic opportunities. Because forest people often engage in activities such as hunting, gathering or shifting cultivation, they tend to depend heavily on the forest and its resources (Wunder, 2001: p1818). Not only do forests provide them with essential services such as fresh water and soil fertility, they also supply a range of benefits in the form of tradable goods (Arnold and Bird, 1999: p5). While some products are converted into monetary income, by selling timber products on the market, others are collected for household

consumption, such as medicinal plants or edible products in order to balance their diet (Wunder, 2001: p1818). Generally, is the often the disadvantaged and politically vulnerable people who depend on forests for their livelihoods and evidence exists that they obtain a larger share of their income from the environment than wealthier households in the same community (Wunder, 2001: p1818). Based upon different studies, it can be argued that forests provide for 'the poor man's overcoat', providing essential benefits in times of need (Wunder, 2001: p1818).

Although there is a relation between forest use (including deforestation) and development, it is important to distinguish between the direct causes and indirect causes for forest loss. Direct causes are human activities that immediately impact forest cover and the quality of the forest, such as agricultural activities (commercial and subsistence), logging, mining, livestock grazing, infrastructure extension and urban expansion. Underlying causes are more complex interactions of social, economic, political, cultural and technological processes, which take place at a distant level from the area of impact (Kissinger et al, 2012: p10). These may either occur at the international level (fluctuating commodity prices), at the national level (population growth, weak governance, domestic markets) or at the local level (poverty, subsistence needs) (Kissinger et al, 2012: p5). While the conversion of forest for subsistence agriculture or livestock grazing is a direct cause of deforestation, it is often the result of a more indirect process, such as population growth or poverty. In addition to this, although for many years subsistence agriculture was considered to be the main cause of deforestation, it is increasingly recognized that commercial agriculture plays a fundamental role in the clearing of tropical forest (Dooley et al, 2011: p22). The need for agricultural expansion is driven by the strong interest of tropical forest governments to achieve national economic development, thereby facilitating large-scale commercial agriculture and other extractive activities for the export of primary products. This is again driven by complex processes at the international level, which create demand for these products and provide an incentive to governments to stimulate these activities.

1.2 Protected areas

Over the years, different efforts have been undertaking in order to protect tropical forests from deforestation and forest degradation. One approach that emerged in the nineteenth century is the establishment of protected areas, which has been defined by the World Conservation Union (IUCN) as 'an area of land especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means (Hayes, 2012: p2064, UNEP WCMC, 2004). Approximately 12 percent of the earth's surface is part of a protected area, ranging from areas where human activities are strictly prohibited, to those that allow sustainable forest management (Hall, 2011: p187). In Latin America, 4.3 million square kilometres of land has been placed under protection, which is approximately 22 percent of the total surface area (Hall, 2011: p187). A large part of protected land is located in the Amazon region, where more than 41 percent of its 7.8 million square kilometres falls under some form of protection (Hall, 2011: p187). Especially in the Brazilian Amazon, the level of protection has risen sharply. Currently, more than one-fifth of the region's 5.2 million square kilometres is part of a conservation unit, while an additional 1.08 million square kilometres is reserved for indigenous communities (Hall, 2011: p188).

For many years, national parks and other forms of protected areas has been the standard approach for conserving forests and biodiversity (Cifor, 2007: p2). Although protected areas have been established for different reasons, they are especially important in the context of climate change mitigation. While covering only 12 percent of the land's surface, they store around 15 percent of the world's carbon (Hall, 2011: p187). This

impact is even more important in Latin America, where they retain almost 27 percent of the region's carbon stocks (Hall, 2011: p187). Nevertheless, although protected areas are in better condition than surrounding areas, they are increasingly threatened by anthropogenic pressures, such as illegal logging, hunting and land-clearing for agricultural and live-stock activities (Hall, 2011: p188, Bruner et al, 2001). This is because many developing country governments do not have the resources or interest to implement sufficient forest personnel, which means that many conservation parks remain 'paper parks' (Hall, 2011: p189). Also in Latin America, there has been a lack of political constituency regarding the conservation of the Amazon, since none of the powerful actors have been truly interested in investing in permanent and effective conservation (Hall, 2011: p198). One example is the Brazilian Amazon, where many officially protected areas do not have an inspector, while others do not have a unit manager or even a management plan (Hall, 2011: p189). It has been estimated that approximately two thousand forest employees are currently implemented to manage protected areas, while at least nine thousand are needed in order to carry out these activities effectively (Hall, 2011: p189).

Another criticism of the park model is that it brings social costs to the people who depend on forests for their livelihoods. According to different actors, conservation parks are incompatible with the needs and aspirations of the rural poor, who are denied access to forestland in the name of conservation. This can be placed in the context of a long history of poor access rights of forest people, which have always been weak and difficult to protect against external interests (Wunder, 2001: p1818). It is estimated that the majority of indigenous people and other long-term forest residents manage their land according to customary law, which is the set of customs, practices and beliefs that are accepted as obligatory rules of conduct by a community (WIPO, 2014). Nevertheless, many governments consider forests to be State-assets and tend to ignore customary rights in the benefit of the private sector (Colchester, 2006: p3). This can be traced back to colonial times, when privileged access to forest resources was monopolized by powerful actors and counter-appropriation by the poor was actively prevented (Colchester, 2006: p3). Many present-day exclusionary forest policies directly come from these early methods, which further contribute to the impoverishment of the rural poor. Forest communities often suffer from the commercial exploitation in their environment, which creates high profit margins for private actors but leaves little behind at the local level. Not only are they less able to benefit from their environment due to unequal access to land, resources and capital, they are also negatively affected by the arrival of opportunistic - and sometimes violent - newcomers. According to Colchester, indigenous people have suffered from disruption of their habitats, denial of their customary rights, forced resettlements and exploitative patron-client relations with forestry authorities, which has led to the breakdown of traditional social structures (Colchester, 2006: p3). Also in the Amazon region, forest people have been undermined in their rights at a structural basis. In the 19th century, private landownership was introduced and a large proportion of land was transferred to the local elites at the expense of the more disadvantaged forest communities. In the second half of the 20th century, their situation was further undermined due to agrarian reforms that encouraged the privatization of land and the construction of roads that opened up the area to external actors (Pokorny et al, 2013: p3).

1.3 Land tenure reform

Under influence of international human rights laws and conservation norms, several governments have started to revise their forest management system and recognize the territories of long-term forest residents. Especially in countries where large numbers of indigenous people were mobilized by a strong civil society, significant land reform has been achieved (Colchester, 2006: p6). In one decade, the forest area that is legally owned or controlled by indigenous people in developing countries has increased with 21 percent in 2002 to 31 percent in

2012 (RRI, 2012: p1). In addition to this, new legislation has been developed that recognizes and strengthens the rights of indigenous communities and other long-term forest residents, with over 50 laws currently implemented since the year 1992 (RRI, 2012: p1). Nevertheless, despite these attempts to improve the situation of forest people, real change has not been achieved. While progress has been made in a few countries, mostly in Latin America, the majority of tropical forest countries continue to ignore the rights of long-term forest people (RRI, 2012: p1). In addition to this, when land-tenure reform is implemented, this is often compromised by conflicting ownership claims and long-term bureaucratic processes, which delay the issuing of land-titles to forest dwellers (Pokorny et al, 2013: p3). The rights of forest people are therefore implemented at very limited scales, or sometimes only exist on paper. Even when forest people have received legal ownership rights over their land, they may still not be able to benefit from this economically. Many governments require a management plan and compliance with strict regulations and procedures in order to legally extract timber and non-timber products. However, most forest people find it difficult to comply with these regulations and may not be able to obtain external support (Pokorny et al, 2013: p3). Even when governments have established simplified norms, they are often still incompatible with the local reality. For example, in Peru and Bolivia, smallholders were not allowed to use chainsaws for the processing of timber within the forest area, which required them to depend on commercial actors for the transport of trees (Pokorny et al, 2013: p2).

In addition to this, another factor that tends to undermine the ability of forest people to benefit from land reform is the strong influence of powerful commercial actors on public and private investments, which are often exclusionary to forest people. Even when forest policies seem neutral or fair, the situation of forest dwellers will not meaningfully improve as long as inequalities regarding access to capital, labour, credit and decision-making power are not addressed. According to Ribot and Larson, the effectiveness of reform is affected by ingrained rural inequalities embedded in social, political-economic and legal hierarchies (Ribot and Larson, 2012: p236). The rural poor have to compete with powerful actors on an uneven playing field of class, ethnic and other social and economic inequities, which reshape the intention and effects of legal land reform (Ribot and Larson, 2012: 236). Even when forest people have obtained legal rights over their land, they may not be able to generate economic income due to the many obstacles they face for participating on the market. Their transaction costs are often higher than those of private companies, who are better able to negotiate prices and access resource inputs. This is of essential importance in the context of tropical forest areas, where local obstacles such as poor infrastructure, low availability of technical and management skills, lack of policy support and large distances to potential markets already create high costs of forest extraction. As a result, forest people may be susceptible to the influence of external actors, who try to negotiate with local leaders in order to extract from their land in exchange of individual benefits. In other cases, indigenous and non-indigenous lands have been threatened by invasions of illegal gold seekers or settlers or by dispossession for mining purposes and infrastructure projects (Pokorny et al, 2013: p2).

1.4 Poverty and deforestation
Also in conservation policy-making, there has been the growing realization that the needs of impoverished forest communities need to be reconciled with the objective of forest conservation. For a long time, there was the belief that poverty was the main cause of forest loss, due to the underlying idea that weak access to resources triggered environmental degradation. Because forest people depend on their environment for their livelihoods, forest loss increases poverty and therefore leads to a higher rate of deforestation and forest degradation (Wunder, 2001: p1820). This belief in a negative downward spiral of poverty and environmental degradation (Arnold and Bird, 1999: p4) originated in the 1950s, but was prominently advocated in the Brundtland report of

1978 (Wunder, 2001: p1819). This report was written by the independent Brundtland Commission, which was established by the United Nations in order to identify sustainability issues and provide solutions that would lead to a more sustainable future. The main conclusion of the report was that poverty in the South and unsustainable production and consumption in the North were the main causes of global environmental degradation. The concept of sustainable development was introduced in order to promote economic development that could alleviate poverty in a manner that would meet the needs of current generations without compromising the ability of future generations to meet their own needs. Regarding the issue of deforestation and forest degradation, the report indicated that improving the situation of the rural poor would be an important pathway for conserving forests in the long-term (United Nations, 1987). By providing local people with an alternative and 'sustainable' (non-degrading) way to provide in their livelihoods, people no longer directly depend on forests for their survival and therefore make a more rational use of their environment (Wunder, 2001: p1819). In addition to this, forest people may also be able to help protect forests against external pressures.

The conclusions of the report strongly influenced the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992, where the integration of development and conservation was further emphasized. The notion of poverty-driven environmental degradation provided a convenient point of consensus between the need of developing countries to strive for economic progress and the concern of developed countries to protect global natural resources (Wunder, 2001: p1819). By means of 'sustainable development', it was believed that both the objectives of poverty-alleviation and conservation could be achieved, creating a 'win-win' solution that could satisfy both parties' needs (Wunder, 2001: p1819). The conference resulted in the adoption of a number of legally and non-legally binding documents in order to facilitate the implementation of sustainable development at a global scale. Regarding the topic of tropical deforestation, two documents were especially important. First, there is the Convention on Biological Diversity, a legally binding document that has the objective to develop national policies for the conservation and sustainable management of biological diversity. It is considered the key document regarding sustainable development. Second, there is the document of Forest Principles, a non-legally binding document that set the framework for sustainable forest management (SFM). FAO defines sustainable forest management as the 'stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems' (FAO, 2012).

1.5 Integrated Conservation and Development Projects

In the years following the Brundtland report and the Earth Summit in Rio de Janeiro, tropical forest conservation gradually obtained a more people-centred approach (Wunder, 2001: p1819). The principle of SFM strongly influenced the design of a number of forestry and community-based conservation projects, grouped under the umbrella term of Integrated Development and Conservation Projects (ICDPs). These projects were first introduced in the mid-1980s by the World Wide Fund for Nature (WWF), in order to address the social problems related to the park-model (Hughes and Flintan, 2001: p4). ICDPs distinguish themselves from other approaches by combining the dual objectives of development and conservation and enable them to reinforce each other. Although the main goal is to protect forests and biodiversity, they also aim to improve the quality of life of the rural poor by integrating natural resource management with economic development opportunities (Hughes and Flintan, 2001: p5). The idea behind this is to enhance livelihood options in and around protected areas, which will reduce the pressure on forests and biodiversity. There are

different types of ICDPs that can be distinguished. First, there are projects that provide compensation to forest people who are no longer able to access forestland due to the establishment of a protected area. This compensation is often provided in the form of a development project, such as the construction of a school, health-clinic or other infrastructure. Second, there are projects that aim to enhance the value of a forest area, which makes it more profitable for local people to keep the forest intact. These are for example projects related to eco-tourism or other market opportunities, which motivates people to protect their forest in order to generate economic income. And third, another approach is the creation of an alternative income-source for local forest people, which will reduce their dependency on the forest for their daily survival. This may be done by means of intensifying agriculture or by the sustainable production and export of forest products (Cifor, 2007: p7).

Fuelled by a large amount of donor-funding, ICDPs were quickly promoted by NGO's and other international funding agencies (Christensen, 2004: p3). In less than 10 years, ICDPs multiplied all over the developing world and remained the main approach for tropical conservation for over 20 years (Alpert, 1996: p1). Development practitioners considered them the long-lost solution to the mutual problem of deforestation and poverty, creating a win-win situation for all parties' involved. In this context, a culture developed in which it was not permitted to express criticism or report negative results (Christensen, 2004: p7). According to Redford and Sandersen, two of the few critics of that time, ICDPs were 'a deadly combination of wishful thinking, which led policy makers to believe that biodiversity conservation was defacto compatible with sustainable economic development' (Christensen, 2004: p3). They considered this 'win-win happy talk' to be unrealistic, and eventually, their concerns proved to be true. After 20 years of implementation, the track-record of ICDPs has proven to be less positive than was initially predicted.

In the literature, different reasons have been identified that can explain the negative results of ICDPs. First, many projects were not financially sustainable, due to the low availability of resources and capacities at the local level. The majority of projects made use of a professional business-model and required the application of externally defined technical and legal standards for sustainable resource management (Pokorny et al, 2013: p2). In the initial stage of implementation, these projects were often heavily funded by NGO's and other development agencies, which had put in place qualified personnel for the management of the project. Nevertheless, the aim was to make these projects self-supportive and enable the local population to continue the project activity in the long-term. Although some smallholders were able to comply with externally defined modes of operation, the majority of forest people lacked organizational and administrative skills to carry out these activities effectively (Pokorny et al, 2013: p2). Many smallholders suffered competitive disadvantages in comparison with professional private companies, which had skilled personnel and were better able to compete on the market. Even when revenues were generated, this was often not sufficient to cover the costs of operation and provide sufficient income to the local population. As a result, many forest people returned to their traditional land-use activities (Pokorny et al, 2013: p3).

Another reason why many ICDPs did not have a positive outcome, is because the relation between poverty and deforestation is more complex than was initially believed. Although the notion of poverty-driven deforestation is still true in some situations, different authors have questioned the self-evidency of this causal relation. According to Wunder, 'to be poor is a static condition that cannot explain the dynamic processes of forest loss and degradation' (Wunder, 2001: p1819). Only when poverty is combined with other factors such as population growth, land conflict or external pressures, poverty may contribute to the process of land clearing (Wunder, 2001: p1819). For example, there are many forest communities who have conserved their forest for

many years, despite their impoverished situation (Rutt, 2012: p14). At the same time, different authors have argued that poverty alleviation does not necessarily lead to environmental sustainability, since rural development may lead to life-style changes or investments that facilitate the clearing of forest. For example, when welfare grows there may be a higher demand for certain products and services, which often attract migrants to the region (Wunder, 2001: p1824). Although ICDPs were designed to alleviate poverty by means of sustainable resource management, many projects have not been able to balance both objectives effectively. According to Redford et al, when projects have a strong focus upon poverty alleviation, forest conservation is often undermined. They argue that protected forest areas are more effective when they function on their own, without having to satisfy economic development goals (Christensen, 2004: p3). According to Redford et al, the 'win-win solution' of ICDPs proved to be illusive, since combining the separate objectives of forest conservation and poverty alleviation always lead to trade-offs, which need to be recognized and balanced carefully (Christensen, 2004: p6).

Even when ICDPs were able to balance the objectives of poverty alleviation and sustainable resource management, this did not always reduce the threat of deforestation. For many years, there existed the idea that small farmers and subsistence agriculture was the primary cause of forest loss, driven by land hunger and rural poverty (Hall, 2011: p185). Nevertheless, according to Hall, the stereotype of smallholders as destructors of the environment has been strongly influenced by powerful commercial actors, who benefit from disgracing forest people in order to monopolize government support (Hall, 2011: p185). Over the years, it has become clear that forest loss is not merely caused by rural poverty, but is strongly driven by economic pressures coming from outside the area. One important factor is the increasing international demand for timber and non-timber products, which makes forest-extraction a profitable undertaking. Although most governments are aware of the need to protect their tropical forests, there exists tension between forest conservation and national economic development. Many governments stimulate the expansion of commercial agriculture and the exploration of soils in tropical forest areas, while at the same time they implement policies for the mitigation of climate change (Pokorny et al, 2013: p2). These complex and politically motivated underlying causes of deforestation were generally not addressed by ICDPs, which were mainly based upon the assumption that deforestation is a poverty-driven process.

1.6 Forest certification

When governments do not have the resources or expertise to exploit economic opportunities, they often outsource this to private actors in exchange for royalties. In comparison with governmental institutions, private companies are generally better able to extract forest resources in an efficient manner, due to their professional expertise and ability to access resource inputs. Moreover, they are better able to protect the area against external influences, since they invest more resources in vigilance and surveillance. Nevertheless, private actors often have a negative track-record regarding social and environmental aspects of forest management. This is also true for the Amazon region, where several governments introduced concession areas in the 1990s, in order to facilitate commercial timber extraction (Pokorny et al, 2013: p3). Although concession areas are generally distributed in public auctions, they are often obtained by large commercial actors, which are better able to comply with regulations and access investment capital. However, many governments do not have the ability to control these actors, which often use unsustainable methods for forest extraction (Pokorny et al, 2013: p3). Almost always, forest people living within or adjacent to forest concessions are limited in carrying out their traditional land-use activities (Pokorny et al, 2013: p2). Although some forest concessions provide local employment opportunities, these are often fulfilled in urban areas or by temporary staff coming from outside

the region (Pokorny et al, 2013: p2). Only companies certified by FSC generally apply more sustainable environmental and social forest management practices (Pokorny et al, 2013: p3).

In order to make the practice of commercial forest extraction more sustainable, a number of certification and labelling initiatives have been developed. In contrast to internationally defined norms, forest certification is a civil society initiative and is therefore strictly voluntary (Merger et al, 2011: p552). It is a market-based instrument that aims to create another win-win solution to the mutual objective of forest protection and economic development (Taylor, 2005: p129). For one part, it focuses upon the process of globalization, by addressing the negative impact of international demand for forest products with increasing awareness in the developed world of unsustainable production methods. Although market interests remain the priority, there is also attention for the social and environmental aspects at the local level, for which standards have been developed that indicate a certain level of sustainability. When commercial actors are able to comply with these standards, they can obtain a certification label and access certain niche markets in the developed world. Nevertheless, this means that a significant amount time and resources is needed in order to adapt production methods and undergo a continuous process of validation and verification (Merger et al, 2011: p562).

Over the years, various certification standards have been developed that cover a wide range of objectives, including carbon sequestration, sustainable forest management, poverty alleviation and the protection of biodiversity. However, there does not exist one universal framework that encompasses all aspects of forest management, since most standards focus upon selection of topics. In order to give an overview of ten certification standards, Merger et al carried out a comparative analysis based upon five topics: *Sustainable Forest Management, Biodiversity Conservation, Poverty Alleviation, GHG Benefits Assessment, Monitoring & Reporting and Certification* (Merger et al, 2011). *Sustainable Forest Management* means that standards require compliance with national forestry policies, the development of long-term forest management plans and the protection of ecosystem services. In addition to this, indicators are incorporated in order to promote land-use planning and avoid the conversion of forest into other land-uses (Merger et al, 2011: p553). *Biodiversity Conservation* implies that standards apply the High Conservation Value (HCV) approach, a concept that is commonly used to identify forest areas that are important for biodiversity, ecosystem services or are of cultural, ecological, economic or religious importance (Merger et al, 2011: p560). The topic of *Poverty Alleviation* evaluates to what extent project activities affect the situation of the local population and consider the rights of indigenous and non-indigenous people, including land use rights, indigenous peoples' rights, worker rights and legal compliance. In addition to this, it refers to indicators regarding capacity building, employment generation, food security and the promotion of fair benefit sharing mechanisms (Merger et al, 2011: p553). *GHG Benefits Assessment* requires projects to make sure that GHG reductions are real, measurable, reportable, verifiable and secured at a continuous basis (Merger et al, 2011: p553). *Monitoring & Reporting* implies that standards establish monitoring and reporting requirements, which can measure and verify the positive social and environmental impacts of project activities (Merger et al, 2011: p557). And *Certification* indicates that standards have adopted different certification procedures in order to ensure credibility of compliance with respective criteria (Merger et al, 2011: p557). This often means that standards require the involvement of licensed third-party auditors, continuous verification and stakeholder meetings during the certification process (Merger et al, 2011: p557).

For the case-study of this research, three certification standards are relevant. First, there is the Forest Stewardship Council (FSC), which was founded in 1993 in order to motivate private companies and other forest users to manage their forests in a more environmentally appropriate, socially responsible and economically viable manner (Merger et al, 2011: p554). The standard is based upon 10 principles, which require forest owners

and managers to comply with national and international laws, define and establish tenure and user rights, respect indigenous peoples' rights, enhance community relations and workers' rights, maintain long-term economic, social and environmental benefits from the forest, reduce the impact on the environment, monitoring and carrying out assessments, maintaining High Conservation Value Forests and planning and managing plantations according to FSC Principles and Criteria (FSC website, 2014). As shown in figure 1, the certification standard has a strong focus upon *Forest Management, Certification, Monitoring & Reporting and Biodiversity Conservation*. Regarding the topic of *Poverty Alleviation*, the standard scores relatively high, because it does not provide clear guidance on the sharing of benefits but does include indicators related to legal compliance to laws and rights, stakeholder participation and consultation, conflict resolution and capacity building (Merger et al, 2011: p566).

Figure 1. Summary Forest Stewardship Council

Source: Merger et al, 2011: p566

Second, there is the CCB standard from the Climate, Community and Biodiversity Alliance (CCBA). This standard has been developed as a partnership between environmental groups, research institutions and corporations in order to provide guidance for the development of subnational land-based projects (Merger et al, 2011: p554). This standard ensures that forest carbon projects are designed and implemented in a participatory manner and that projects meet the criteria on biodiversity, climate additionally and community effects (Merger et al, 2011 p:567). Compared to other certification standards, CCBA places a higher emphasis on *Poverty Alleviation* and the *Biodiversity Conservation*, which are the two main objectives of the standard. Compared to other certification standards, CCBA is the only standard that requires project designers to also assess the impact of the project outside the project area. Moreover, there is a strong focus upon *Certification* and *Monitoring & Reporting*. Regarding the topic of *Sustainable Forest Management* and *GHG Benefits Assessment*, the standard has a lower score (Merger et al, 2011: p567).

Figure 2: Summary of Climate, Community and Biodiversity Standards

And third, there is the Voluntary Carbon Standard (VCS), which was founded in 2005 by the Climate Group, the International Emission Trading Association and the World Economic forum (Merger et al, 2011: p556). VCS is mainly used as a GHG accounting standard for different types of land-based projects and provides strong requirements for the generation of real, measurable and verifiable carbon credits for the voluntary market (Merger et al, 2011: p571). VCS therefore scores high for *GHG Benefits Assessment*, *Certification* and *Monitoring & Reporting*, but does not provide guidelines on *Sustainable Forest Management, Poverty Alleviation* or *Biodiversity Conservation*. According to Merger, the VCS standard should be combined with other standards in order to include more social and environmental aspects into the certification process (Merger et al, 2011: 571).

Figure 3: Summary of Voluntary Carbon Standard (VCS)

1.7 Introducing REDD+

For the last few decades, the approach for tropical forest conservation has had a prominently people-centered approach. Based upon the assumption that deforestation is a poverty-driven process, instruments such as ICDPs and sustainable forest management were introduced in order to simultaneously address the issue of deforestation and rural poverty (Wunder, 2005: p1). Nevertheless, although some success stories can be found, these methods have not been able to significantly reduce the rate of deforestation and improve the situation of the rural poor. It is recognized that the relation between poverty and deforestation is more complex than was initially believed, which means that the trade-offs are sometimes higher than the benefits. In addition to this, these approaches generally do not provide sufficient funding to effectively protect large forest areas, which continue to be threatened by external influences.

Due to increasing rate of tropical deforestation, different actors called for a more direct approach of forest conservation. As a result, the concept of Payments for Environmental Services (PES) was developed, which recognizes the value of ecosystem services that are provided for free by Mother Nature. Due to deforestation and climate change, ecosystem services are becoming increasingly scarce, which make them suitable to trade. The core idea is that external beneficiaries of ecosystem services pay local land-owners and users to protect their natural environment, for example by reducing their land-use activities or actively investing in conservation (Wunder, 2005: p1). This approach differs fundamentally from previous conservation approaches, since it does not propose a win-win solution, but actually recognizes the trade-offs between poverty alleviation and forest conservation. Instead of trying to integrate the needs of the rural poor with natural resource management, local forest people are compensated for conserving their environment. The concept of PES can be applied to protect a wide range of ecosystem services, including the protection of biodiversity, watershed preservation, maintaining landscape beauty and the sequestration and storage of carbon (Wunder, 2005: p2).

In the context of global climate change, projects related to carbon sequestration gained increasing importance in the international realm, which led to the creation of a global market mechanism for carbon storage and sequestration. These projects are currently grouped under the umbrella term of Reduced Emissions from Deforestation and Forest Degradation (REDD+), a global financial mechanism that compensates governments for decreasing carbon emissions by protecting their forests. By implementing projects that reduce the threat of deforestation and forest degradation, large amounts of carbon dioxide are stored into forest bio-mass that otherwise would have been released into the atmosphere. At the same time, reforestation or afforestation projects can be implemented in order to compensate for greenhouse gas emissions that have been released in a previous stage. The amount of carbon dioxide that is stored by these projects can be turned into certified carbon credits, which are tradable permits or certifications that represent the right to emit one ton of carbon dioxide (Collins English Dictionary, 2012). External actors in the developed world, such as private companies or governments with a commitment to reduce their emissions, can buy these carbon credits if they are not able to reduce their emissions directly. REDD+ strategies therefore aim to make forests more valuable standing than being cut down, by creating financial value for the carbon dioxide that is stored in the biomass of forests (UN-REDD website, 2009).

The first idea behind REDD+ was introduced in the Kyoto protocol of 1997, with the incorporation of reforestation and afforestation projects for the generation of certified emission reduction credits (CER). These credits were traded under the Clean Development Mechanism (CDM), the first global, environmental

investment and credit scheme designed to help developed countries to meet their emissions reduction targets (UNFCCC website, 2014). The concept of RED was formally introduced during the 11th COP in Montreal in 2005, which enabled developing countries to access potential carbon markets through credits generated by reducing emissions from deforestation (Rutt, 2012: p10). In 2007, RED expanded to REDD, when African countries proposed to integrate emissions reductions from forest degradation, which is the main cause of forest carbon emissions in Africa (Rutt, 2012: p11). By including the concept of forest degradation, REDD expanded to include a wider range of countries that could benefit from the mechanism. At the COP 14 in Poznan in 2008, REDD was transformed into REDD+, which includes the role of conservation, sustainable forest management and the conservation and enhancement of forest carbon stocks (Rutt, 2012: p11). This led to the identification of other co-benefits of REDD+, such as biodiversity conservation, sustainable forest management, provision and quality of soil and water, improved forest governance and pro-poor development (Mustalahti, 2012: p1). During the COP meetings in 2009 (Copenhagen) and 2010 (Cancun), REDD+ was further formalized and strengthened, by establishing safeguards and regulations that would facilitate the implementation and verification of REDD+. Countries required to develop national REDD+ strategies and action plans, establish reference levels for forest carbon emissions, create a national monitoring system and report on safeguards (Rutt, 2012: p13). In addition to this, the Green Climate Fund was developed, which is used to transfer money from the developed world to the developing world in order to support countries to adapt to climate change (Rutt, 2012: p13).

Despite the uncertainty whether or not the mechanism will be incorporated into a post-Kyoto climate change agreement, various REDD+ initiatives have been developed in the last few years. In order to support countries in this process, different funds and initiatives have been established, such as the UN-REDD Programme, the World Bank's Forest Investment Programme (FIP), the World Bank's Forest Carbon Partnership Facility (FCPF) and different bilateral initiatives (Dooley et al, 2011: p9). Many initiatives were established in order to provide funding and technical support for the development of policies, legislation and organizational capacities. Nevertheless, REDD+ is not merely a governmental initiative, but has been designed as a multi-level (global-national-local) system. Therefore, a variety of options are possible, including multilateral schemes (designed and implemented by multilateral organizations such as the World Bank or the United Nations), bilateral schemes (a project implemented by one government in a developing country), nongovernmental organization initiatives (a project implemented by a national or international NGO), and private-public partnerships (a private company implementing a project in cooperation with a public institution) (Rutt, 2012: p5).

Although REDD+ is gaining popularity as a strategy to reduce global climate change, there is also criticism and debate regarding different aspects of REDD+. First, there is the problem of leakage, which means that illegal activities are displaced from protected areas to unprotected areas, which are located outside the REDD+ project. This means that the process of carbon sequestration is neutralized, since deforestation and forest degradation activities that are avoided in one place, will continue to occur in another place. This may either happen directly, by pushing local forest users to another forested area, or indirectly, by forcing up prices of timber and non-timber products in the international market (Hall, 2011: p200). As a result, the rate of deforestation may increase in other places in the world, which makes it very difficult to control and measure the incidence of leakage. Second, another issue is the problem of additionally, which is the measurement of reduced deforestation against an established baseline. REDD+ projects need to demonstrate 'additionally', which means that they need to contribute to real, measurable and long-term benefits in reducing carbon emissions (Wunder,

2005: p8). When the risk of deforestation is already low, the question remains whether or not REDD+ funding can be applied, since REDD+ requires additional reductions in forest carbon emissions.

In addition to this, there are also increasing concerns regarding the social implications of the mechanism. Although REDD+ identifies potential side-benefits such as poverty alleviation and improved forest governance, these benefits are not guaranteed. In the literature, different risks have been identified. First, with the introduction of REDD+, conservation policy is increasingly dominated by a market-oriented approach and the commodification of natural resources (Hall, 2001: p198). This may lead to a strong emphasis on the creation of financial benefits, while undermining issues such as human rights and the needs of the rural poor. By decoupling the objectives of conservation and development, there is the risk that forest people will be deprived of their legitimate land-development aspirations by denying them access to forest land in the name of conservation (Ribot and Larson, 2012: p234). Although proponents of REDD+ argue that a premium can be obtained for the creation of social benefits, Ribot and Larson argue that in the context of a competitive market this premium is likely to be competed down to nothing (Ribot and Larson, 2011: p234). Even when additional financing is obtained for social benefits, there is still a risk that their livelihood needs will not be addressed. This is mainly due to the centralized and top-down character of REDD+, which often results in a one-size fits-all approach that does not take into account the complexity of micro-economics at the local level (Hall, 2011: p198). Therefore, if the local population is not included in project design and management plans, their access to forest land may be restrained without being provided with a viable livelihood alternative. Moreover, due to the central role of governments in REDD+, scholars argue that the recent decentralization process in many developing countries may be reversed (Mustalahti et al, 2012: p1). This will lead to further exclusion of the rural poor in decision-making processes in the forest sector.

Although a variety of social safeguards have been designed at the international level to reduce the negative impact of REDD+, these safeguards are not compulsory and do not lead to consequences when not applied (Ribot and Larson, 2012: p236). According to Ribot et al, social safeguards adopted during the COP meeting in Cancun in 2010 called for 'transparent… national forest governance structures', 'respect for the knowledge and rights of indigenous people and members of local communities', and 'the full and effective participation of relevant stakeholders, in particular indigenous people and local communities' (Ribot and Larson, 2012: p235). Underlying to these safeguards is the principle of Free Prior and Informed Consent (FPIC), which means that a community has the right to give or withhold its consent to proposed projects that may affect their land rights (FPP website, 2014). Although these safeguards seem promising, they are voluntary and allow governments to decide if and when they are implemented (Ribot and Larson, 2012: p236). The idea behind these safeguards is therefore to *motivate* governments 'not to deviate too far' from universally established norms (Ribot and Larson, 2012: p236). However, according to Ribot and Larson, this is not sufficient in order to protect the rights of the rural poor (Ribot and Larson, 2012: p235). They argue that transparency without sanctions will not lead to the accountability of unethical or corrupt actors, because 'shame is not enough for the shameless' (Ribot and Larson, 2012: p235). In the same way, stakeholder participation does not necessarily imply a democratic decision-making process, since the 'local community' is often represented by one vote among a large variety of stakeholders (Ribot and Larson, 2012: p235). When this vote is given to a dictator or another unaccountable leader, the concept of democracy is further undermined. Moreover, participation may be of little value when local forest people are allowed to express their opinion, but do not have influence on the final decision (Ribot and Larson, 2012: p235).

In the literature, the need is expressed to make safeguards stronger, universal and mandatory, in order to meaningfully protect the rights of local forest people (Agrawal, 2011, Ribot and Larson, 2012). In addition to this, there has been debate whether or not safeguards should be based upon the principle of 'do-no-harm', or if they should actively contribute to poverty alleviation. According to Pesket et al, the decision is either moral as pragmatic, since REDD+ is primarily designed for environmental purposes and may become ineffective when a large number of social criteria is incorporated (Pesket et al, 2008: p10). However, according to Ribot and Larson, REDD+ should not merely strive for neutrality but should aim to meet the dual objectives of poverty alleviation and forest conservation, by channelling back some of the benefits to the people living in the area (Arnold and Bird, 1999: p14). Primacy needs to be given to meeting the interests of forest users, who will more likely refrain from forest clearing if there is a viable and more sustainable alternative for providing in their income. REDD+ projects should therefore use a targeted and location-specific approach and include the local population in the decision-making process. According to Ribot and Larson, forestry must aim to be emancipatory, which means that REDD+ should work through local democratic institutions that can be held accountable by the local population (Ribot and Larson, 2012: p240).

Although safeguards developed at the international level are voluntary and may not lead to real benefits, there are also other initiatives that may reduce the negative impact of REDD+ at the local level. In the voluntary market, different social and environmental certification schemes are currently accepted for the qualification of tradable carbon credits. Examples are the Voluntary Carbon Standard (VCS), the Community Carbon and Biodiversity Standard (CCBA) and the Forest Stewardship Council (FSC). Although these certification schemes are voluntary, project implementers may be motivated to apply to these standards in order to increase the value of their carbon credits. For example, it is argued that carbon projects certified by VCS and CCBA enjoy a premium of US$10-20 in the voluntary carbon market (Agrawal et al, 2011: p384). By combining environmental certification schemes with social standards that emphasize human rights and poverty alleviation, it is possible to design projects that generate real co-benefits for the local population (Merger, 2011: p566).

1.8 Shared value creation

Although the application of a social certification scheme can lead to co-benefits for the local population, it is also possible to bring the social aspect to a higher level and include it as an essential objective of the project. This means that creating benefits for the local community is no longer a side-effect, but becomes important for the sustainability of the project in the long-term. In the corporate sector, this is called *shared value creation,* which means that a company creates economic value in a way that also leads to social value by addressing societal needs and challenges (Porter and Kramer, 2011: p2). By identifying societal needs in a disadvantaged area and looking for opportunities in order to meet these needs, it may be possible to make profit while at the same time contributing to the development of the community. There are three distinct ways to do this. First, companies may create economic value by providing services and products to disadvantaged communities in developing countries that have been overlooked in the past. Although they are resource-poor and have low purchasing power, providing low-cost products that fit their societal needs may actually create substantial profit for a company. Second, opportunities for creating shared value may arise when societal problems create economic costs in the firm's value chain (Porter and Kramer, 2011: p5). There are many factors that may affect the quality and efficiency of a value-chain, such as the use of natural resources, health and safety of workers and the level of training and knowledge among workers. Environmental problems and societal issues are not only a problem for the community itself, but also create internal costs for the company in terms of low productivity and high energy costs. By addressing these problems, a company might not only improve the situation of the local

community, but also enhance profit-making by reducing costs and increasing productivity and quality of supply. And third, shared value can be created by supporting local cluster development, which is a geographical concentration of firms and institutions that are needed for producing and selling a certain product (Porter and Kramer, 2011: p13). A company may increase the efficiency of the value-chain by investing in local circumstances, for example by improving transportation and infrastructure, reducing security problems or investing in education and health care.

Although the local community benefits directly from the investments the company makes, the intention of the company is still to make profit. The concept is therefore not merely about *sharing the value* the company already has created, but about *increasing value* by innovating and finding profitable solutions for societal needs. The link between for-profit and non-profit therefore becomes blurred; since creating shared value is no philanthropy but a new way of achieving economic progress. According to Porter and Kramer, it represents a higher form of capitalism, which enables companies to grow and make profits that are sustainable for both the company and the local community. "The result is a positive cycle of company and community prosperity, which leads to profits that endure" (Porter and Kramer, 2011: p10).

The benefits of creating shared value are often profound for the local community. According to Porter and Kramer, 'businesses acting as businesses, not as charitable donors, are the most powerful force for addressing societal issues' (Porter and Kramer, 2011: p2). Because of the traditional division between economic objectives and social issues, actors in the corporate and social sector have enjoyed different educational backgrounds and experiences. Many social leaders lack managerial training and do not have an entrepreneurial mind-set in order to implement business-models efficiently, while few corporate actors have sufficient comprehension of social and environmental issues at the local level (Porter and Kramer, 2011: p13). The concept of shared value creation therefore aims to cut across both disciplines and motivate companies to apply their expertise, resources and managerial capacities to create social benefits that exceed the results of many NGO's and other social institutions (Porter and Kramer, 2011: p13). When societal issues are at the core of a company's strategy for profit-making, social issues are addressed more effectively, since the main purpose of the company is still to make profit. There is a stronger focus on efficiency and productivity, which may eventually lead to a more sustainable result than social projects that are carried out from a philanthropic point of view.

Also for market-based conservation initiative of REDD+, it may be possible to apply the concept of shared value creation. Instead of excluding the rural poor and other local stakeholders from project design and considering them as a threat, it may be more sustainable to include them in the decision-making process and distribute the benefits at the local level. For example, this can be done by creating employment opportunities and paying fair wages, investing in capacity-building and other educational opportunities, or by improving health-care services for workers and the local community. Moreover, the implementation of REDD+ generally leads to higher vigilance and control in the forest area, which may improve security and reduce the threat of deforestation and forest degradation. Other possible benefits are investments in local infrastructure, or the stimulation of the economy by spending in local stores and paying taxes to the local government. When this is done in an honest and transparent manner, the project may function as an example to other actors in the region and strengthen the local value-chain. According to the principle of shared value creation, these benefits are not only positive for the local community, but also contribute to the sustainability of the project in the long-term. When the project has in place qualified and physically strong employees who are motivated to carry out their work activities, the efficiency of the project will increase while the risk of internal tensions and conflict will be diminished. This will reduce internal costs and make the project more sustainable. The same is true regarding

the local community, which will be more likely to support the project and refrain from negative behaviour when they feel they benefit from the project. However, in order to be effective and create a meaningful impact in the local community, it is important to include them in the decision-making process and communicate with them in an interactive and transparent manner. Only when local stakeholders feel they are part of the project and the benefits are adapted to their interests and needs, will the benefits of shared value creation have a long-term effect. The concept of shared value creation therefore goes one step further than the compliance with a set of social indicators, since it requires a real and genuine interest in creating benefits for local stakeholders.

2. Regional context

2.1 Iñapari

The district of Iñapari was created on December 12th, 1912, through Law N° 1782. It is a provincial capital and one of the three districts that form the Tahuamanu province, in the department of Madre de Dios. It is situated to the far South-East of Peru, in the point of intersection of the Acre and Yaverija Rivers, which form the natural borders with Brazil and Bolivia (Greenoxx, 2012: p280). With a surface of 14,853 km2 and a number of 1,288 inhabitants, the district is one of the least populated districts of the country. As a result of this low population density, it has been possible to protect large areas of tropical forest and animal species. 6,350,000 hectares are still covered by tropical forest, which represents 71% of the total area (Maderacre, 2012: p4). Nevertheless, in the last few years, the region has seen an increase in population growth, which is mainly due to the growing number of migrants who come to the area via the newly constructed Interoceanic highway. This highway was constructed in order to connect the Peruvian ports with Brazil and was finalized in 2009. Although the highway may bring potential benefits to the area in the form of increased export activities, integration of markets, expansion of internal markets and better access to technology, there is also an increased risk of deforestation, forest degradation, reduction of environmental services and the illegal trade of drugs, animals, weapons and contraband (Greenoxx, 2012: p6). These risks will increase even further if the plans to construct a second highway in the region become real. Strong political interests are currently promoting the construction of a highway through the Alto-Purus park, a protected area with a high level of biodiversity and the living area of many isolated indigenous communities. If this area opens up, the existence of many animal species and indigenous tribes will be threatened due to the arrival of colonists and other migrants who come to the area for economic reasons. Currently, the project is still in process of approval by the Peruvian Congress, but the number of people in favour of the highway is gradually increasing.

Figure 4: Iñapari and surrounding areas

Figure 5: Amplification of figure 4

In figure 4, a view is presented of the area surrounding Iñapari, which is amplified in figure 5. To the bottom-right of the image are located the concession areas that are owned by different forestry companies (■), the territory of the indigenous community CCNN Bélgica (□) and the land of indigenous communities in Brazil (▨). The red broken line (- -) to the left represents the proposed highway between Iñapari and Puerto Esperanza, while the red line from Iñapari to below the image represents the existing Interoceanic highway (—).

2.2 Rural area

The perimeter of Iñapari is formed by two sectors, a rural settlement and an urbanisation. The rural area is constituted by four rural communities, *Nueva Esperanza*, *Villa Primavera*, *Chilina* and *Noaya*, which are mainly inhabited by colonists who have migrated from the highlands in search for economic opportunities. The principal activities are related to agriculture and livestock raising, and are mainly for subsistence use. The agricultural activities are carried out by applying traditional technologies – primarily shifting agriculture – and the most important crops are corn, yuca, beans, grass, papaya and bananas, among others. Generally, production volumes are low and are generated by single-family farming practices (Greenoxx, 2012: 301). Livestock raising involves cattle, pigs, sheep and poultry, but most farmers do not take care of the management and recovering of their pastures (Greenoxx, 2012: 301). Although the inhabitants of the rural communities are resource-poor and live in basic conditions, they are the official owners of their land and are able to use forest products in order to complement their subsistence needs. Generally, basic services such as electricity and running water can only be accessed in the most populated part of the settlements, where also other communal services are located, such as health-care and (primary) education. Nevertheless, it needs to be indicated that the quality of these services are generally low, due to the lack of governmental support in the area. Residents often have to go to the nearest town in order to access (a better quality) of these services.

Figure 6: Community of Chilina

Source: Pictures taken during research period

2.3 Indigenous community Bélgica

Another important community is the indigenous community CCNN Bélgica, which is located next to the border between Peru and Brazil. The community was officially recognized by the Peruvian government in 1992, when it was granted legal ownership rights over a territory of 53,394 hectares. This includes 17.620 hectares for agriculture and livestock activities, 31.502 hectares for forestry production and 4,272 hectares for protection purposes. The Belgium Community is a community of the Yine indigenous tribe and has approximately 70 inhabitants, distributed among 16 families that live in three sites called Japan, Belgium and High Belgium. The most populous site is Belgium, where 11 families are living and the services for the community are concentrated. The main activities of the community are subsistence agriculture, collecting of forest products, hunting, fishing, livestock breeding and the development of tools and crafts. Every year, each family slashes and burns a plot of approximately two hectares in order to install their crops, which includes rice, beans, bananas and yuca, among others (Greenoxx, 2012: 308). Although their production is for subsistence use, in times of over-production they often their crops on the market in order to obtain income for school supplies, medicines and other family necessities. Other monetary income is derived from the employment in the forestry sector, where young men work as woodcutters, loggers, assistants or guides (Greenoxx, 2012: p312). In addition to this, since the year 2005, the community also carries out its own commercial logging activities, in cooperation with the local forestry company Maderyja. According to the agreement, the company extracts wood in exchange for monthly payments of 400 soles to each member of the community, in addition to 20% of the total profit of timber production (Greenoxx, 2012: p312). In addition to this, the company supports the community with technical assistance and capacity-building, by enabling young men to participate in this process. Moreover, with support of WWF Perú, the community has been able to obtain FSC certification, which has enabled them to increase the value of their timber and ensure the sustainable management of their forest. Also, the community has initiated its own REDD+ project in 2009, in order to sell carbon-credits on the international market and obtain resources for forest protection. However, due to absence of support at this moment, the project is currently interrupted.

The support from NGO's and other external actors has also improved the situation in the community in other ways. In the past, there were many problems due to a high poverty rate, alcohol abuse and a lack of social cohesion, which facilitated exploitative relations with actors that extracted illegally from their territory. Due to training and other educational activities, the situation is gradually improving (Interview Coordinator

Community Bélgica). According to the coordinator of the community, internal relations have strengthened, alcohol consumption has reduced and there is more control and understanding of the management of their territory. Issues that still need improving, however, are health-care and education. 70% of household heads are illiterate and few members of the community have finished primary school. The community has one primary school in the Belgium site, with only one Spanish language teacher. There is no bilingual education nor facilities for secondary education. Moreover, it is difficult to find a good teacher willing to stay in the area for a longer time-period, due to the remoteness of the area and the low salary that is paid by the government. The same is true regarding the local health-post, which lacks medical equipment and is often abandoned due to the same problem as the local school. This obliges community members to travel to the nearest health-post in another village in order to access health-care services. In case of emergency, this has frequently led to casualties among elderly people and children (Interview Coordinator Community Bélgica).

Figure 7: Indigenous community Bélgica

Source: Pictures taken during research period

2.4 Urban area

Two-third of the total population in Iñapari lives in the urban area, which is divided in four sectors: *Cercado*, *Virgen del Rosario*, *Barrio de la Colonia* and *Los Mangos*. In the last few years, the number of urban residents has increased significantly, due to the construction of the Interoceanic Highway and the growing local economy, which attracts migrants from other parts of the country. The majority of the population dedicates itself to activities in the secondary and tertiary sector, including manufacturing, retail or other types of service-provision, such as transportation and the transfer of knowledge. An increasing number of people are owner of a small restaurant or shop, or even a basic hotel. However, there is also a significant number of people who remain (partially) involved in agricultural and livestock activities, since many people who live in the urban area also own a small area of land in the rural area of Iñapari. Although the urban population does not extract from the forest for their daily livelihood, they do occasionally hunt animals or gather fruits in the forest surrounding Iñapari. In some cases, this is done in forest areas that are freely accessible, but in other cases people enter forest areas illegally, which includes land that is owned by someone else but is not sufficiently protected against external influences. Most people choose to live in the urban area because of better living conditions and access to basic services, such as health-care, education, electricity and running water. In the urbanisation, there is a pre-school, a primary and a secondary school, as well as a health-centre that is better equipped than the small health-posts in the rural area. In addition to this, there are 2 TV broadcast channels, 2 radio stations, different telephone providers, Internet (although slow) a SERPOST agency (mail-service) and a local bank office

(Greenoxx, 2012: p296). Moreover, there is direct access to the local market and a better connection to other urban areas and markets. Nevertheless, although the situation has improved significantly in the last few years due to the construction of the Interoceanic Highway, there are still many necessities due to low availability of public funding and capacity-building. While the quality of health-care and education is higher compared to the rural areas, these public institutions still lack many materials and supplies in order to carry out their activities effectively.

Figure 8: Urbanisation of Iñapari

Source: Pictures taken during research period

2.5 General situation

In 2007, a census was carried out in order to obtain information regarding the socio-economic situation in the district of Iñapari. Although these numbers are relatively out-dated, it does give an indication of the current situation in Iñapari. According to the census, the district (including both the rural and urban area) contains a relatively young population. With an average age of 26.3 years, 84.3% of the population is younger than 45 years, while 31.9% belongs to the group between 0 and 14 years. The young population also forms the majority of the Economically Active Population (EAP), which corresponds to 53.6% of the total population. The main economic activities are activities related to agriculture, live-stock raising and forestry (43.8%), followed by the commercial sector (10.3%), the technical sector (8.6%), construction (9.5%) and administration (5.3%). In monetary terms, only 10.4% of the population lives below the poverty line, while 1.7% lives in extreme poverty. This percentage is significantly lower compared to the provincial level (16.5% and 2.4%), regional level (15.6% and 1.8%) and national level (19.3% and 13.7%). Compared to other districts, Madre de Dios is the second least poor department of Peru, while Iñapari is the least poor district of the country. This is also demonstrated in the HDI. According to the census, Iñapari has an HDI of 0.6570, which is higher than the HDI at the provincial level (0.6540), departmental level (0.6304) and the national level (0.6234). Also life expectancy is relatively high. In Iñapari, people reach an average age of 76.8 years, compared to 76.7 years at the provincial level, 71.6 years at the departmental level and 73.1 years at the national level (Greenoxx, 2012: p295).

Regarding education, the district has lower results compared to other areas in Peru. While the majority of the population has followed primary education, completion rates of primary and secondary education are significantly below the provincial, departmental and national level. 79.5% of the population between 15 and 19 years old has at least primary school completed, but only 31.3% of the population has completed secondary
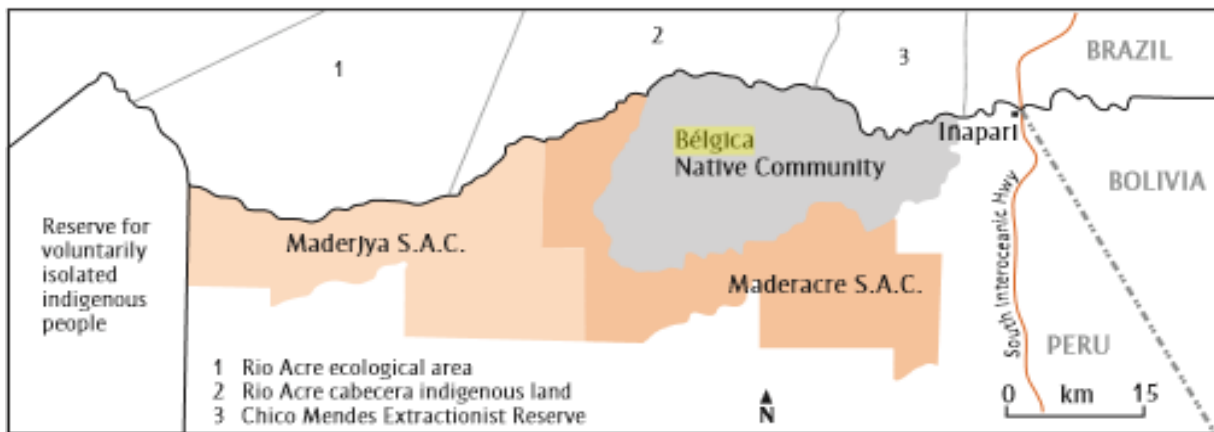
school. However, only a small percentage of the population older than 15 years is illiterate (3.6%), which is below the national average of 7.1%. It is argued that the Iñapari district, as well as the Tahuamanu province and the Madre de Dios department, are considered to be free of illiteracy (Greenoxx, 2012: p285). However, it is within the rural and feminine population where significant rates of illiteracy can be observed. Of the rural population, 7.3% does not know how to read or write, of which 5.6% are women. This can be explained by the relatively low percentage of women who attend secondary school (40.3%) compared to male students (59.7%) (Greenoxx, 2012: p287).

The main health-issues within the district are related to infections of the respiratory tract (17.2%) diseases of the oral cavity (18.4%), and intestinal infectious diseases (7.5%) (Greenoxx, 2012: p289). The main causes of these health-issues are environmental factors, such as sudden temperature changes during the dry season, dust on the road due to a lack of asphalt and smoke from the burning of open fields for agricultural purposes. Moreover, due to the high temperatures in the region, people often become sick because of spoiled food (Greenoxx, 2012: p290).

2.6 Introducing Maderacre

The companies Maderera Río Acre S.A.C. (Maderacre) and Maderera Río Yaverija S.A.C (Maderyja) were established in 2001 by the family Cardozo, a local family that has been involved in (informal) forestry activities since the early beginning. In the past, forest land in Peru was divided in small areas of 1.000 hectares, for which 1 year contracts were provided for forest extraction purposes (Interview WWF). Because of this short time-period, forest users were not motivated to apply long-term forest management strategies and generally extracted as much value as possible, leaving the land degraded after the contract ended. In early 2000, a new Forest Law N°27.308 was enacted, which has led to the establishment of large concession areas (5.000 to 50.000 hectares) that are rented out for a time-period of 40 years, renewable for another 40 years. In order to promote long-term management of the forest area, concession-holders are required to develop a General Forest Management plan and an Operational Plan and good forest management is promoted by means of Voluntary Forest Certification (Greenoxx, 2012: 110). In May 2002, the companies Maderacre and Maderyja were the first to sign a long-term concession contract with the Peruvian government, which gave them access to a total area of 98.93234 hectares: 49.376 for Maderacre and 49.556 for Maderyja (Greenoxx, 2012: p5). In 2012, Maderacre was able to obtain the concession areas AMATEC (21.000 hectares) and PAUJIL (47.000 hectares). These concession areas were located in relatively untouched areas and no communities were living in the area at that moment. The companies have the legal right to access the concession area and all environmental services inherent to the land, including forest carbon (Greenoxx, 2012: p5). Both companies comply with international and national legislation and harvest and export timber according to the principles of sustainable forest management, for which they received the FSC certification in 2007. The Maderacre & Maderyja group existed until the year 2008, when Maderyja was sold to a group of Chinese investors (Greenoxx, 2012: p12). Maderacre remained in possession of family Cardozo, but was sold to the Chinese-Peruvian family Wong in 2011, which has continued the management of the company in the same manner. Although the new owners of the company are located in Lima, the company is still rooted in the community and 15% of the shares remains in the hands of local shareholders. The focus of this research will therefore be on Maderacre, due to its leading position in the region and its strong commitment to the local community.

Figure 9: Location of Maderyja and Maderacre

Source: Brotto et al, 2010: p113

The vision of Maderacre is to become the leading enterprise by the year 2016 in the sustainable management of certified forests and the export of forest products with a high-added value (Maderacre, 2012: p25). The company aims to continuously improve the quality and efficiency of its products and operations, in order to supply in the most convenient and reliable manner international markets of high social and environmental awareness. It strongly emphasizes its commitment to sustainable development, which means that the company aims to balance environmental, social and economic aspects of forest management. The social aspect therefore takes a prominent place in the core objective of the company. In the social responsibility plan, it is indicated that 'to work at the highest level regarding issues of health, safety and the management of the environment, while at the same time contributing to the development of local communities and initiating a transparent and horizontal dialogue, is the best way to create a competitive advantage for the company' (Maderacre, 2012: p25-26). It will enable the company to enhance productivity, reduce internal problems, access new resources, protect the concession area, attract and maintain the best professionals, access various sources of capital, identify and act upon new business opportunities, optimize management and prevent risks (Maderacre, 2012: p26). Not only does Maderacre comply with national legislation and carries out sustainable forest management according to the principles of FSC, it also aims to comply with the highest standards at the international level (Maderacre, 2012: p26). The company therefore subjects itself to internal and external audits on a frequent basis, in order to maintain its FSC certification and ensure compliance with social responsibility objectives.

There are a variety of target groups that are important to Maderacre at the local level. First, there are the workers of the company, which is an approximate number of 100 people. This group is divided between people who work on the processing plant and people who work inside the concession area. These job positions require low-skilled and physical labour and are mainly occupied by men. Regarding this stakeholder group, the company aims to provide fair and formal job opportunities, by paying fair wages, providing social benefits and complying with national and international labour rights. Moreover, the company aims to create a culture of safety, by providing training opportunities and monitoring its operations in order to detect situations that undermine health, hygiene or the safety of workers. In addition to this, equality and integrity within the company is highly valued, which means that the company does not allow any form of discrimination, abuse of power or violence among workers and other employees (Maderacre, 2012: p26).
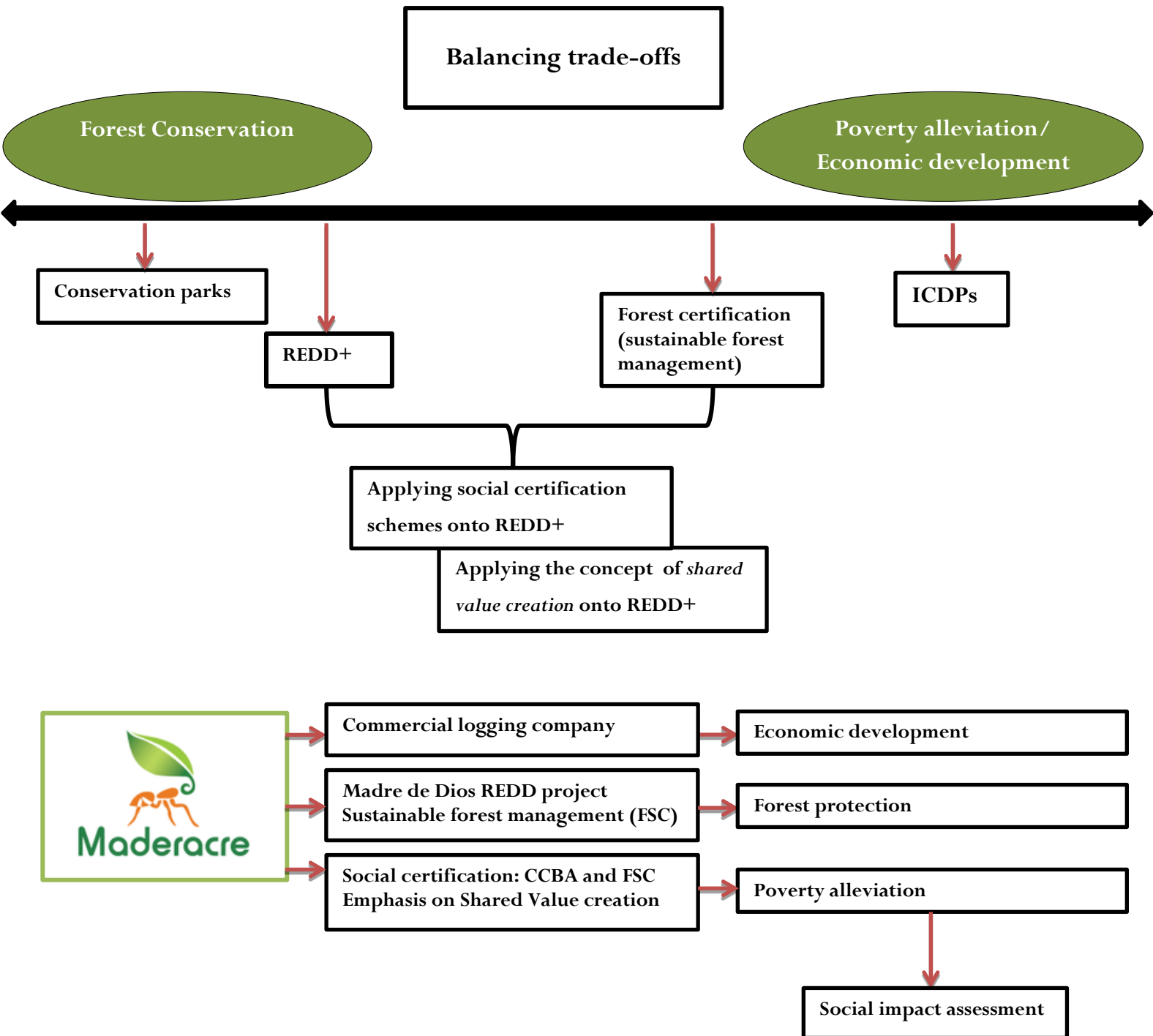
Another important stakeholder group for Maderacre is the local community. Although there are no communities living inside the concession area, Maderacre does want to actively engage and strengthen the relationship with the communities living in the buffer zones. This includes the rural settlements, the indigenous community Bélgica and the population living in the urbanisation. The aim is to contribute to their social and economic development and establish relations based upon mutual benefit and active participation. The company tries to do this in a transparent and culturally appropriate manner, by including local stakeholders in the decision-making process and establishing a horizontal dialogue. In addition to this, the company has the objective to contribute to the local economy by favouring local hiring of workers and suppliers. This provides people and their families with structural economic income, which will indirectly benefit the community in terms of local spending. At the same time, the company tries to minimize as much as possible the possible negative impact of its operations, by respecting rights of indigenous and other vulnerable stakeholders, avoiding pollution and promoting environmental sustainability among workers, suppliers and the local community (Maderacre, 2012: p27).

2.7 Madre de Dios Amazon REDD project

It is in this context that the Madre de Dios Amazon REDD Project is implemented, a joint initiative from Maderacre and Maderyja and the NGO Greenoxx that has been initiated in the year 2009. Although the region is still characterized for having forests of great importance for biodiversity and environmental services, with the construction of the Interoceanic highway, there is increasing risk of deforestation and forest degradation. This is mainly due to the arrival of migrants from the highlands in Peru, who come to the area in search for land and other economic opportunities. This will not only increase pressure on the forest surrounding the concession areas, but may also affect the concession areas directly. An environmental study of the Vilcabamba-Amboró Conservation Corridor concluded that current resources of forestry companies are not sufficient to protect the area from the impact of migration (Greenoxx, 2012: p6). Therefore, the Madre de Dios Amazon REDD Project was implemented, in order to obtain economic resources for increased control and surveillance. The project aims to achieve the required GHG emissions by means of continuing its sustainable forest management system and financing environmentally friendly productive projects. By contributing to sustainable development of the rural population, the aim is to reduce the need for additional forest-clearing in the buffer zone of the project area. This may be done by enhancing the productivity of existing agricultural land or by supporting them to install a wider variety of crops. The economic resources that will be obtained on the voluntary carbon market will be used to help finance these activities and invest in surveillance and monitoring of the forest.

While the main objective of the project is to protect the concession areas against external influences, there is also a commitment to involve the local community and distribute the benefits of forest conservation. The Madre de Dios Amazon REDD project has been certified by FSC and by the Climate, Community & Biodiversity Alliance (CCBA), of which it has obtained the maximum status Gold. Moreover, in 2013, the project has been certified by VCS, which means that carbon credits can now be traded on the international voluntary market. When this leads to economic revenues, a start will be made with the development of environmentally friendly productive projects and the implementation of increased surveillance and monitoring activities.

3. Research framework

Balancing trade-offs

Forest Conservation

Poverty alleviation/ Economic development

Conservation parks

REDD+

Forest certification (sustainable forest management)

ICDPs

Applying social certification schemes onto REDD+

Applying the concept of *shared value creation* onto REDD+

Maderacre

Commercial logging company

Economic development

Madre de Dios REDD project Sustainable forest management (FSC)

Forest protection

Social certification: CCBA and FSC Emphasis on Shared Value creation

Poverty alleviation

Social impact assessment

4. Methodology

4.1 Research question

In the literature overview, it has become clear that balancing the dual objectives of forest conservation and poverty alleviation is a great challenge. Over the years, different strategies have been developed in order to address these issues, but most approaches have not been able to create a long-lasting effect. This is mainly due to the complex relation between poverty and deforestation and many other factors that directly or indirectly influence these processes. For example, conservation parks were in some cases effective in protecting large forest areas, but at the same time restricted access to land of the rural poor. With the approach of ICDPs, the aim was to integrate the objectives of poverty alleviation and forest conservation, but this often did not prove to be effective due to a lack of understanding of the local reality. In most cases, forest people did not have the skills and resources in order to sustain the project activity in the long-term, while in other cases poverty alleviation actually led to more deforestation and forest degradation. While private actors are better able to exploit economic opportunities in tropical forest areas, they often have a negative track-record regarding environmental and social aspects of forest management. The development of voluntary certification and labelling initiatives aimed to improve the impact of private actors, but this has only been applied at a limited scale. Moreover, a common problem of most conservation approaches is the lack of funding in order to effectively protect large forested areas against external pressures. Even when the situation is stable at the local level, due to the inherent richness of tropical forest, there is always a risk of external actors coming to the area in search for economic opportunities. This means that continuous surveillance and monitoring activities are needed, which requires a significant amount of funding.

The global mechanism of REDD+ was developed in order to provide funding for forest protection, by compensating forest users for keeping their forest intact instead of using them for economic gain. Although the mechanism is gaining popularity in the context of global climate change, concerns have been expressed in the literature regarding the potential negative impact on the local population. Because of the top-down and market-based character of REDD+, there is a high risk that the needs and aspirations of the rural poor will not be taken into account. In order to reduce this risk, it is important to distribute the benefits of REDD+ more equally, in a way that is suitable to the needs and aspirations of the rural poor. This can be done by involving the local population in project design and enabling them to exercise certain decision-making power. Although social safeguards have been developed at the international level, they are not obligatory and therefore may not be effective in the long-term. In the literature, it has been indicated that the implementation of social certification standards may improve the performance of REDD+, since it requires project implementers to comply with a certain set of environmental and social principles. Another concept is the concept of shared value creation, which means that social aspects actually become part of the core objective of the project in order to reduce internal costs and enhance its sustainability in the long-term. This way, it may be possible to benefit from the efficiency and expertise of a market-based project, obtain funding for the protection of large forest areas and create social benefits for the local population. When shared value creation is achieved, the focus of REDD+ may shift more to the right, thereby finding a stronger balance between the mutual objectives of forest conservation and poverty alleviation.

Although the potential benefits of certification schemes and shared value creation on REDD+ have been recognized in the literature, there is a lack of empirical evidence due to the recent character of REDD+. Therefore, I have chosen the company Maderacre as the case-study of my research, in order to investigate the

impact of these principles in a real-life situation. Maderacre is a commercial logging company that exports timber to the national and international market, thereby focusing upon the objective of economic development. By carrying out sustainable forest management (FSC certified) and implementing a REDD+ project, the company aims to contribute to the protection of the concession area and the forestland in the buffer zone of the project area. While this is important for sustaining the commercial activity of the company, Maderacre also aims to distribute the benefits of REDD+ and create a positive impact at the local level. Not only is this required by the certification standards of FSC and CCBA, but this is also understood by the company as being essential to the sustainability of the project in the long-term.

Although the Madre de Dios Amazon REDD project has not been fully implemented and the environmentally friendly productive projects are still on paper, the main project activity of sustainable forest management has been carried out since the year 2007. This is the core activity of Maderacre, which it aims to protect by reducing pressure in the buffer zone of the concession area and increasing activities of surveillance and control. By carrying out a social impact assessment on the related stakeholder groups, this will provide insight in the current social impact of the company and provides the context in which the additional project activities of surveillance and environmentally friendly productive projects will be implemented.

The focus of this research will be mainly upon the social impact and less upon the environmental and economic performance of Maderacre. This is because of different reasons. First, there is a strong emphasis in the literature on the potential negative impact of REDD+ on the local population, which enhances the need for research in order to identify strategies to reduce this risk. Second, while more research may also be necessary regarding the environmental and economic aspects of REDD+, I have chosen to focus upon the social aspect because this relates directly to my background and current specialization within the Master of Sustainable Development. Third, because of time-limits, it was not feasible to carry out a thorough social impact assessment and also include the environmental and economic aspects of the project. And fourth, also Maderacre emphasized the need for a social impact assessment, since it has been strengthening the environmental and economic aspects the last few years but is currently interested in improving its social performance. Since the company undergoes continuous control from the certification standards FSC, CCBA and VCS and has been able to increase its business in the last few years, I have decided to focus mainly upon the social impact. Therefore, the following research question was developed:

What has been the social impact of project Maderacre on the related target groups and to what extent has Maderacre been able to create shared value at the local level?

Sub questions:

  - To what extent does Maderacre comply with the social criteria identified in the standards of FSC and CCBA?

  - To what extent does Maderacre carry out social activities that go beyond the social criteria identified by the certification standards?

  - What is the motivation of Maderacre to create a positive social impact at the local level?

  - What has been the social impact of the company on the related target groups? How is this perceived by the target groups?

- To what extent are the target groups able to exercise decision-making power regarding the activities of Maderacre?

- To what extent have the activities of Maderacre contributed to an enabling environment for the company to carry out its operations in an effective manner?

Hypotheses:

- *The application of social certification standards such as FSC and CCBA will reduce the risk of a negative social impact REDD+ and create benefits for local stakeholders.*

- *The implementation of shared value creation will enhance the positive impact of REDD+ at the local level in a way that goes beyond the requirements by law and social certification schemes.*

- *When local stakeholders perceive they benefit from REDD+ in a structural and adequate manner, they will be more likely to support the project in the long-term and refrain from behaviour that undermines the project.*

4.2 Operationalization

Social impact:

With social impact is meant the socio-economic impact Maderacre has on the related target-groups. This includes economic benefits, such as income and material support, but also non-monetary benefits, such as improved access to health-care, education and security. Also more indirect impact is included, such as the effect Maderacre may have on the local economy.

Project Maderacre:

With project Maderacre is meant the total activities of the company combined, which include the sustainable logging activities, social activities as indicated in the corporate social responsibility plan and the Madre de Dios REDD project.

Related target groups:

With related target groups is meant all target groups who are important to the company at the local level. These include the workers of the company, local suppliers, the rural settlements, the indigenous community Bélgica, the urban population, and other stakeholders such as local governmental institutions and NGO's.

Shared value creation:

Shared value creation means that economic value is created by addressing social issues and incorporating them into the business-activity, thereby strengthening the market-activity and enhancing its sustainability in the long-term.

Social activities:

With social activities is meant the activities Maderacre carries out in addition to its economic activities. These entail social activities that are required by the certification standards FSC and CCBA, but also activities the company carries out in the context of its social responsibility program.

4.3 Research methods and population

In order to answer the research question, I have used a combination of qualitative and quantitative methods, with an emphasis on qualitative research. First of all, I conducted a questionnaire with the workers of the company, which included the people who work on the processing plant and the people who work in the camp in the forest. I have decided to only include the workers in the questionnaire because they are generally low-skilled and come from a resource-poor background, which makes it important to analyse the impact of Maderacre on their daily situation. Regarding the administrative and managerial employees, they are generally middle-class and have been working in similar jobs, which means that including them into the questionnaire would distort the results. Instead, I have conducted interviews with a number of employees in the company. Since it was not be possible to question all workers in Maderacre (approximately 100 workers), a number of 44 questionnaires was carried out in order to obtain sufficient insight in the situation of this target group. The respondents were selected randomly from a list of names provided by the company. I have chosen for a questionnaire because this made it possible to obtain quantitative data that is representative for this stakeholder group and that can be compared over time. Nevertheless, a significant number of open questions was included as well, in order to obtain more qualitative information regarding their situation and how they perceive the company. Therefore, the questionnaires have been carried out in interview form, because most of the workers of Maderacre are illiterate and have difficulties with reading and writing. By asking the questions directly, it was possible to explain certain questions and obtain more qualitative information regarding certain topics.

Second, a questionnaire was carried out with 30 respondents from the urban population in Iñapari, in order to gain insight in its perception of the company and the impact on their situation. This information complemented the information obtained from interviews with representatives of community organisations and other key members of the community. Although these questionnaires contained fixed questions, they were mainly used as a structure in order to carry out more elaborated interviews with different inhabitants from Iñapari. The respondents were selected randomly from a map of Iñapari, by selecting the house-hold head of each 10th house.

Third, structured interviews were carried out with the local suppliers of Maderacre, which is total number of 7 persons. By carrying out a structured interview, it was possible to obtain quantitative information and compare the results from the different respondents. In addition to this, there was sufficient space for more in-depth questioning, which made it possible to obtain more specific and qualitative information of the impact of the company on their daily situation.

Fourth, interviews were conducted with representatives of stakeholders who benefit directly from the social support of Maderacre, which are the local school in Iñapari, the local health-centre, the rural settlements Primavera, Nueva Esperanza and Chilina, and the indigenous community CCNN Bélgica. The rural community of Noaya was not included because it does not fall under the area of impact of Maderacre. Also other important local stakeholders were interviewed, such as the municipality of Iñapari, the local governor, the chamber of commerce, civil society groups (neighbourhood associations, club of mothers), other forestry companies in the region and prominent members of the family Cardozo (former owners of Maderacre). These interviews have been carried out with the leaders and representatives of each stakeholder group, but have been complemented with interviews with other members of the group in order to obtain a variety of answers and sort out inconsistencies. I have chosen for interviews because the relationship between the company and community

stakeholders is less structural, which means that a more qualitative approach was necessary in order to gain insight in the impact of Maderacre on their daily situation.

Fifth, interviews were conducted with NGO's that operate in the area and work in the field of tropical forest conservation, such as Rainforest Alliance and WWF. Interviews have been carried out with these NGO's at the national and regional level. Moreover, interviews have been carried out with governmental institutions, such as the local municipality in Iñapari and other relevant institutions at the regional level. This way, information could be obtained regarding the reputation of Maderacre among governmental institutions.

And last, interviews were carried out with a number of employees of Maderacre, which included people with a managerial or administrative function, employees from the social responsibility department and staff-members with a long history of working for Maderacre. This information enabled me to clarify certain answers from questionnaires and interviews and provided me with a context in which the results could be placed.

In addition to this, I have revised documentation of the company that was relevant to the social objectives of the company, including the social responsibility plan, the communication plan, letters with local stakeholders, previous social impact assessment reports and other documentation. This made it possible to compare the results of the questionnaires and interviews with more formal documentation of the company.

I have chosen this combination of research methods with the objective to obtain a comprehensive overview of the expectations and perceptions the different target groups have of the company. The main focus has been on qualitative research, since investigating the social impact of the company is strongly based upon perceptions and opinions of people. However, the interviews were of a structured character, which will make it possible to reproduce the analysis and monitor the social impact of the company on a long-term basis.

Table 1: Overview respondents

	Interviews	**Questionnaire**
Respondents	- Employees Maderacre (5) - Local school Iñapari (2) - Local health-centre Iñapari (2) - Neighbourhood associations (2) - Chamber of Commerce (2) - Club of Mothers (1) - Indigenous community Bélgica (5) - Forestry companies (2) - Family members Cardozo (3) - Local and regional NGO's (4) - Local government (2) - Regional government (2) - Agricultural settlements Chilina, Primavera and Nueva Esperanza (6) - Local suppliers (7)	- Workers from the camp in the forest (22) - Workers from the processing plant (22) - Local population urban area (30)
Selection	- Selection based upon information from the company regarding the different target groups.	- Workers: selected randomly from an employee list provided by the company (every 3th name). - Local population: selected systematically 30 houses from a map of Iñapari (every 10th house, one house-hold head)

4.4 Social impact assessment

In order to structure the social impact assessment and develop relevant questions for every stakeholder, I used the guidelines for Social Life Cycle Assessment of Products, developed by the United Nations Environment Programme (UNEP) in 2009. These guidelines provide a comprehensive map for assessing the social impact of products on different types of stakeholders, including workers, value-chain actors, the local community and society in general. For each stakeholder, a number of impact categories are identified that are important for analysing the social impact on this target group, which can be analysed according to a set of indicators. For the social impact assessment of Maderacre, I selected for each target group the impact categories and indicators that were most relevant to the context of Maderacre and complemented these with social indicators from the certification schemes and the indicators the company was already using in the past. Moreover, more qualitative indicators were incorporated for each stakeholder group, which did not relate directly to the compliance with certain regulations, but would give more insight in the quality of these activities and how these are perceived by the respondents. This made it possible to fully comprehend the impact the company has had on the target groups, which may go beyond the compliance with national and international legislation and requirements identified in certification schemes.

Table 2: Social impact assessment framework

Stakeholder:	Impact categories:	Indicators:
Workers	Freedom of Association and Collective Bargaining Conflict resolution Equal opportunities/Discrimination Health and Safety Child Labour Fair Salary Working hours Forced Labour Social benefits Socio-economic impact	-Workers are free to join unions of their choosing -Presence of unions in the company -Workers perceive they can negotiate with the company -Number of internal conflicts -Etc. -Existence of formal policy regarding equal opportunities -Number of female workers compared to male workers -Number of workers from the indigenous community Bélgica -Existence of discrimination as perceived by workers - Etc. -Presence of formal policy regarding health and safety -Number of workers who have personal protection equipment -Number of accidents or health problems -Working conditions as perceived by the workers -Etc.
Suppliers	Commercial relation Promoting Social Responsibility Socio-economic impact	-Maderacre pays fair prices to local suppliers -Maderacre pays local suppliers on time -Maderacre informs local suppliers about novelties and other essential market-information - Etc. -Presence of a Code of Conduct that Maderacre

		distributes to its suppliers -Number of suppliers who have participated in training of Maderacre regarding social and environmental sustainability -Number of suppliers who have adopted at least one practice due to the influence of Maderacre -Etc.
Local community	Delocalization and Migration Community Engagement Cultural Heritage Respect of Indigenous Rights Local Employment Access to material resources Access to immaterial resources	-Number of individuals who have been relocated due to the presence of Maderacre -Presence of a formal policy regarding the relocation of individuals -Number of migrant workers inside the company -Presence of migrant workers as perceived by the local community -Etc. -Number of mechanisms for communicating with the local community -Number of Consultative Committees organized by Maderacre -Number or participants in each Consultative Committee -Quality of communication activities of Maderacre as perceived by the local community -Etc. -Number of local workers inside the company -Number of local suppliers -Number of mechanisms for enhancing local employment -Employment opportunities as perceived by the local community -Etc.
Society in general	Commitment to Sustainable Development Prevention and mitigation of conflicts Corruption Research	-Presence of a formal policy regarding the commitment to Sustainable Development -Number of activities related to environmental education -Awareness creation of environmental sustainability as perceived by the local community -Etc. -The company is operating in a region where there are conflicts -Presence of formal policy regarding conflict resolution -Mechanisms implemented in order to avoid social conflict in the area

4.5 Data analysis

After the social impact assessment was conducted in Iñapari, data-analysis was carried out back in the Netherlands. The answers of the questionnaires and structured interview were elaborated and analysed with the program SPSS (descriptive statistics), in order to compare the answers and provide an overview of the quantitative data (percentages). However, due to the qualitative nature of the research, the answers of the open questions were also interpreted, in order to complement the quantitative data with qualitative information. These answers were analysed in the same manner as the answers from the interviews; according to the impact categories and indicators of the social impact assessment framework. Each interview was recorded and transcribed, which made it possible to highlight the answers that were relevant to a certain topic. Then, for each stakeholder group and impact category, all relevant answers were collected from the total number of questionnaires and interviews and complemented with quantitative data and information from documentation. This large amount of data made it possible to compare different the answers regarding an impact category and place them into context, which enabled me to interpret the results more effectively. For example, a high number of migrant workers inside the company may give a certain insight in local employment opportunities, but will be better understood by also interpreting the answers given in in-depth interviews regarding this topic.

4.6 Limitations

There were different limitations I encountered when conducting my research. First, it was sometimes difficult to locate and interview all the workers I had selected from the list of employees. In some cases, the list had changed and the specific worker did not work for the company anymore. In addition to this, it was not always possible to find the workers inside the concession area, due to weather conditions and the isolated location of the camp. Therefore, I decided to save time by searching for them in their free time, when they were located in the village of Iñapari.

Second, another limitation was the involvement of the social responsibility coordinator. In the beginning, she wanted to help me with carrying out some of the questionnaires with the workers. However, I noticed that some workers were hesitant to answer critical questions, because of her position inside the company. Therefore, I decided to carry out the questionnaires myself in order to obtain more objective answers. In order to do this effectively, I explained at forehand the objective of my research and my independence from the company, as well as their anonymity.

The same situation occurred with a number of community members with whom the company has a more complicated relationship. While most stakeholders were (relatively) positive about the company, there were different people who were more critical of Maderacre. Because of this, the social responsibility coordinator was not really forthcoming with introducing me to them, while the respondents were reluctant to answer questions about the company. Fortunately, I have been able to solve this situation by visiting them in person and explaining the objective of my research, which was sufficient in order to obtain an interview.

Another limitation was the isolated location of many stakeholder groups and the lack of public transport in the region, which made me dependent upon the social responsibility coordinator for visiting these stakeholders. Although she has helped me significantly in facilitating my research, in other situations there was a delay because of other obligations she had to fulfil during the day. This was mainly due to the lack of understanding among other employees regarding her role inside the company, who often gave her (unrelated) tasks she needed to carry out before she could continue with her social responsibility activities.
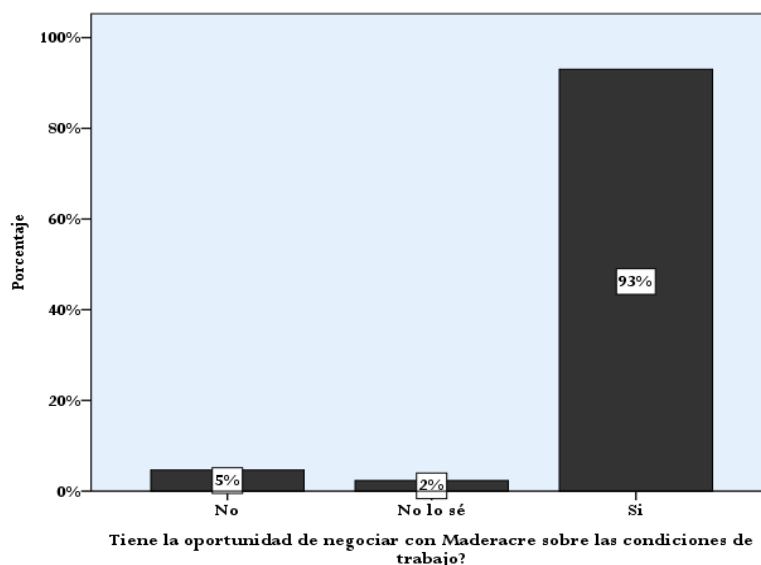
5. Results

5.1 Workers

5.1.1 Freedom of Association and Collective Bargaining

Maderacre does not actively promote or support the formation and membership of a labour organization among workers, which is mainly due to negative experiences with labour unions in Peru in the past. According to one respondent of Maderacre, union leaders in Peru were often highly populist and disrupted the daily relationship between employers and employees (Interview forest manager). Therefore, at this moment there are no worker unions present in the area and the workers of Maderacre are not formally organized.

However, according to Maderacre, workers do have the freedom to organize and negotiate with their employers about work matters and other aspects of their well-being, which is also legally determined in the current labour law in Peru. Nevertheless, the majority of workers questioned (91%) have never considered organizing formally in order to increase their negotiation power with the company. Respondents argued that there is already sufficient space for collective negotiation, due to informal group meetings that are held on a regular basis.

Although workers of Maderacre are not organized formally, they do perceive they have sufficient opportunity to negotiate with Maderacre or express their doubts and complaints. Of the 44 respondents, only 5% feel that they are not able to negotiate sufficiently with Maderacre, which is a number of 2 respondents. The majority of the respondents, 93%, feels that it is possible to negotiate about work matters and feels they are being heard by the company. Although most respondents argued that negotiation with Maderacre is often an individual matter, others argued that there is also sufficient space for interaction in informal group meetings. Some respondents indicated that there is not a strong hierarchy in the company, which means that there is proximity between the workers and other employees of the company, which makes it possible to discuss matters informally. Some respondents even described working for Maderacre as being part of a family.

Do you have the opportunity to negotiate with Maderacre about working conditions?
No - I don't know — Yes

5.1.2 Conflict resolution

Regarding neutral, binding and independent dispute resolution, the company does not have a written protocol on how to solve a conflict with workers. However, in the internal regalement of the company it is stated that internal conflicts will be resolved through conciliation based upon a sincere and constructive dialogue in order to come to an agreement that is satisfactory to all actors. In case this is not sufficient, it is argued that the case will be represented to competent jurisdiction.

The incidence of internal conflict in Maderacre is low. In 2013, no internal conflicts have been registered by the company. This has also been confirmed by the questionnaire conducted with the workers. Of the 44 respondents, only 5% argued they have had a (small) incident in the total time period of working for Maderacre, which was solved within a few days to the contentment of both actors. 95% of the respondents answered they never had a conflict with Maderacre since they started working for the company.
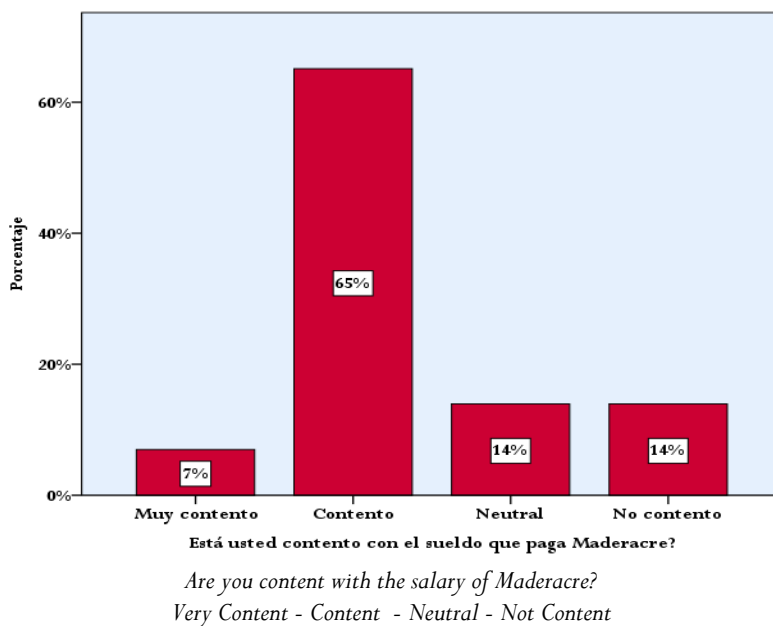
5.1.3 Child labour

Although the company keeps a data-base of its workers with information regarding their name, DNI, date of employment and payments made, there is no information on record regarding the age of the workers or their date of birth. However, when new workers are contracted by the company, their date of birth is verified in order to make sure they comply with the national minimum age of fifteen years (Interview general manager). Also in the questionnaire conducted with the workers, a question was included regarding their current age, of which the youngest respondent was 19 years old. It can be established that there are no children below the age of fifteen working for Maderacre, which means there is no child-labour present in the company.
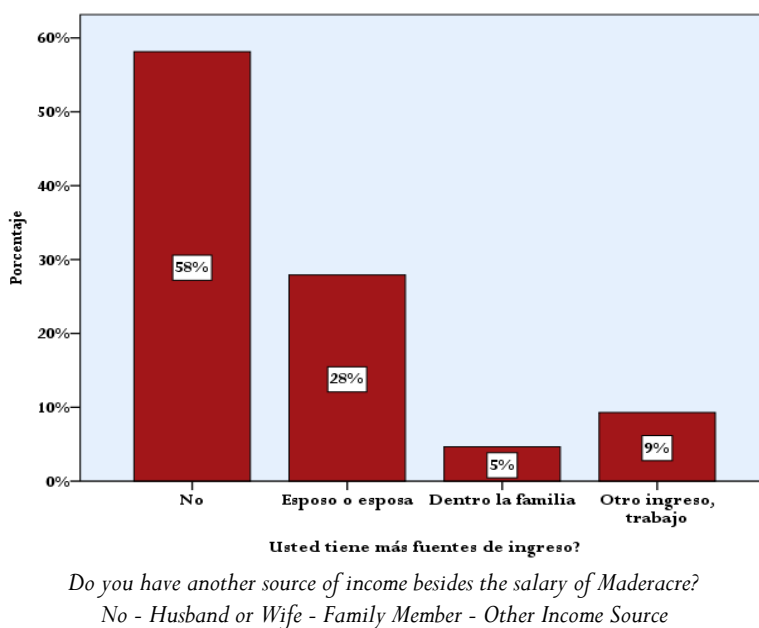
5.1.4 Fair salary

The minimum wage required by law in Peru is S./750 soles, which is also the local prevailing wage in the forestry sector. According to the salary record of Maderacre, the lowest salary paid to an employee is S./750 soles. However, the average gross wage paid by Maderacre is S./1795 soles (June 2013), which means that the company does not only comply with the national legal minimum wage, but also pays higher wages than S./750 soles. However, it needs to be indicated that this average salary also includes the salaries paid to administrative and management personnel. According to one respondent of Maderacre, Maderacre generally pays higher salaries compared to other forestry companies in Peru, due to the higher living costs in Madre de Dios (Interview forest manager).

According to the questionnaire carried out among the workers, 7% is highly content with the salary paid by Maderacre, 65% is content, 14% neutral, and 14% is discontent with their salary. No respondent was highly discontent with the salary paid by Maderacre. To the question whether the salary covers their basic living costs, the answers were more diversified. The majority of the respondents, 65%, argued that the salary of Maderacre covers the basic cost of living. However, 7% considered their salary to cover their expenses 'to a certain extent', while 28% of the respondents argued that their salary does not cover their basic cost of living. The two main reasons that were given for this were the higher cost of living in Madre de Dios and the costs related to maintaining a family, which includes (higher) education for their children. Some respondents argued that it is only possible to cover their costs of living because they are alone and therefore do not have mayor costs. Different respondents (12%) argued they would like to have the opportunity to work overtime and increase their income, or receive a premium when productivity increases. However, Maderacre currently does not provide for this opportunity. According to one employee of the company, the company has decided to pay all

workers a relatively high salary compared to other forestry companies, which means that extra incentives such as over-time and premiums are not provided (Interview forest manager).

Are you content with the salary of Maderacre?
Very Content - Content - Neutral - Not Content

The majority of the respondents, 58%, does not have an additional income source, which means that Maderacre is the only income source for them and their family. In 28% of the cases, the partner is working, 5% of the respondents live with their family and have another family member (brother, cousin, parent) providing for income and another 5% obtain additional income in the form of a second job or selling (agricultural) products. Nevertheless, for the majority of the respondents (80%) that have an additional income source, Maderacre remains the principal source of income.

Do you have another source of income besides the salary of Maderacre?
No - Husband or Wife - Family Member - Other Income Source

5.1.5 Socio-economic impact

In the questionnaire, a number of questions have been asked in order to establish a base-line of the current socio-economic situation of the workers of Maderacre. Because many workers come from other areas in Peru and live in a rented room or are provided with living space by the company, these questions were directed towards the house of their family, since this is the house they would likely to invest in due to the salary of Maderacre.
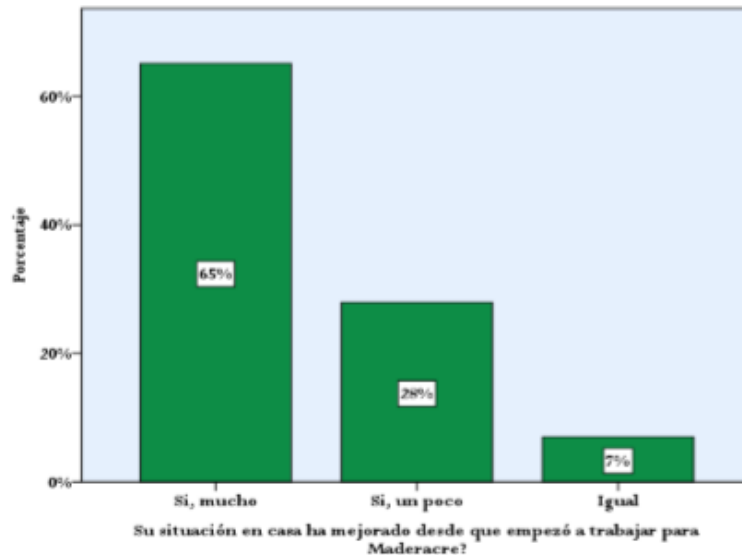
One of the questions asked was of what material their house, or the house of their family, is made off. The majority of the respondents, 53%, lives in a house made of timber, which is the main material used for construction in forested areas. 25% of the respondents are owner of a house made of stone, 13% own a house made of a combination of wood and stone and 6% live in a house made of wood and corrugated iron. Only 3% live in a house made of corrugated iron.

Regarding the ownership of their houses, 47% of the respondents are owner of their house, while in 29% of the cases the house is owned by their family (parents). 15% live in a rented house and 9% live in a rented room when they do not reside in the living space provided by the company. 85% of the respondents have access to basic services, such as electricity, water and sewage, 6% only have access to one or two basic services and 9% do not have access at all to water, sewage or electricity.

Another important indicator for the socio-economic well-being of the workers is the mode of transport they use in their daily life. While only one respondent (2%) owns a car, the majority of the respondents (58%) has a motor-cycle. Public transport is the main way of moving around for 26% of the respondents, while 9% walk to other places and 2% use an alternative mode of transport.

In addition to this, the survey included a question whether or not their children receive education, or have received education in the past. 92% of the respondents answered that their children currently go to school or have attended school in the past, while only in 8% of the cases the children are not in school or have not received education when they were little.

Although more in-depth research is necessary in order to obtain a comprehensive view of the socio-economic situation of the workers, these indicators give some insight in their current situation. Based upon the results, the majority of workers lives in basic conditions but is not extremely poor. In general, they have sufficient resources in order to fulfil their basic needs, such as housing, education and transportation. Within the survey, a question was included regarding the socio-economic impact of Maderacre on their daily situation. 65% of the respondents argued that their socio-economic situation has improved significantly since they started working for Maderacre. 28% of the respondents argued that there situation has improved to a small extent, while 7% answered their situation has remained equal. In terms of how their situation improved, 53% mentioned improvements to their house, followed by support to family (30%), education for their children (14%), alimentation (14%) and mobility (12%). Different respondents (5%) mentioned the payment of debts and other bills as an important improvement. Most respondents mentioned not only one aspect, but a mixture of aspects that have improved because of their job in Maderacre.

Has your situation at home improved since you started working for Maderacre?
Yes, a lot - Yes, a little - Remained equal
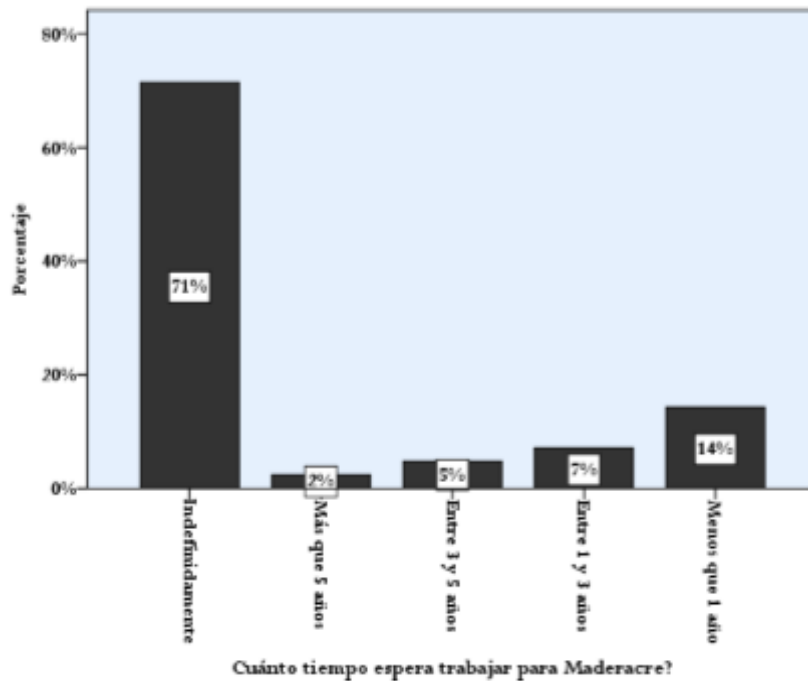
5.1.6 Hours of work

The workers of Maderacre work a total amount of 46 hours a week, from Monday to Friday from 09.00 to 18.00 with an hour lunch-time between 12.00 and 13:00 pm. At Saturday, workers work from 09.00 to 12.00 pm. Each worker has the right to take up 30 free days per year, which is provided to them according to established legal norms. Workers who prefer to leave the camp during their free days, are provided with transportation from the company. Information regarding working hours and free days is provided in the labour contract and the internal regalement of the company.

According to the internal regalement, extra hours of work are designated with written prior consent from the immediate responsible team leader, which needs to validate the need for extra working time. These hours are paid according to established legal norms. However, no workers has indicated to have worked over-time in the last year.

5.1.7 Forced labour

According to results of the questionnaire, all workers work voluntarily for the company. The employment contract of the workers provides information regarding working hours and remuneration and is complemented with the internal regalement, which indicates the rights and obligations of all workers. The terms of resignation are 30 days, which is communicated to them at the moment they sign the contract and is also indicated in their payment strokes. According to the company, the benefits and obligations of formal employment is generally known, but are explained verbally if necessary. At the time of hiring, there is a moment of negotiation, during which the worker is able to ask questions about working terms (Interview general manager). The company also does not retain any original documents of the employees, which might prohibit them to leave the company.

According to the survey, most workers (71%) would like to work for the company 'indefinitely' (depending on the company), 2% more than 5 years, 5% between 3 and 5 years, 7% between 1 and 3 years and 14% less than one year. However, most respondents who have indicated to stop working for Maderacre within one year, argue to do this because of family reasons.

How much time do you want/hope to work for Maderacre?
Indefinitely − More than 5 years − Between 3 and 5 years − Between 1 and 3 years − Less than one year

5.1.8 Equal opportunities

The company does not have a formal policy-document on providing equal opportunities to minority groups, such as women or members of the indigenous community Bélgica. Nevertheless, a section on this subject has been included in the social responsibility plan, which states that a safe environment is created for workers, based on mutual respect, equality and integrity. No form of discrimination or abuse of power is tolerated and equal opportunities are provided at all levels (Maderacre, 2012: p27).

Of the total number of 134 employees (including workers and employees), there are 15 female employees working for Maderacre. Due to the harsh physical conditions of working in the forestry sector, there are more male workers than female workers (Interview forest manager). The female workers mainly carry out less physical demanding activities, such as piling up and preparing wood for export. Other female employees occupy administrative functions or are in charge of providing food to workers. However, the company argues that in case of job vacancies that can be filled by either male or female personnel, no distinction is made between female and male applicants (Interview general manager). The average gross wage of female workers is S/. 1189, which is S/. 683 less than the average gross wage of the male workers (S/. 1872). According to the company, this difference can be explained because most management and leadership jobs are occupied by male personnel, which require higher compensation. However, it is argued that this discrepancy in salary will change in the medium-term, since mid-level job positions will take on more managerial functions (Interview general manager). Currently, 50% of mid-level job positions are occupied by women, which means that the difference in salary between male and female workers will be reduced.

Regarding opportunities related to capacity building and other benefits of the company, no distinction is made between male and female workers. All workers, including women, are required to participate in trainings and talks that are relevant to their work activities. In addition to this, female workers have the same opportunity to

participate in integration activities and other events organized by the company. Also regarding the loan program of Maderacre, no distinction is made between female workers and male workers (Interview social responsibility coordinator, Interview employee).
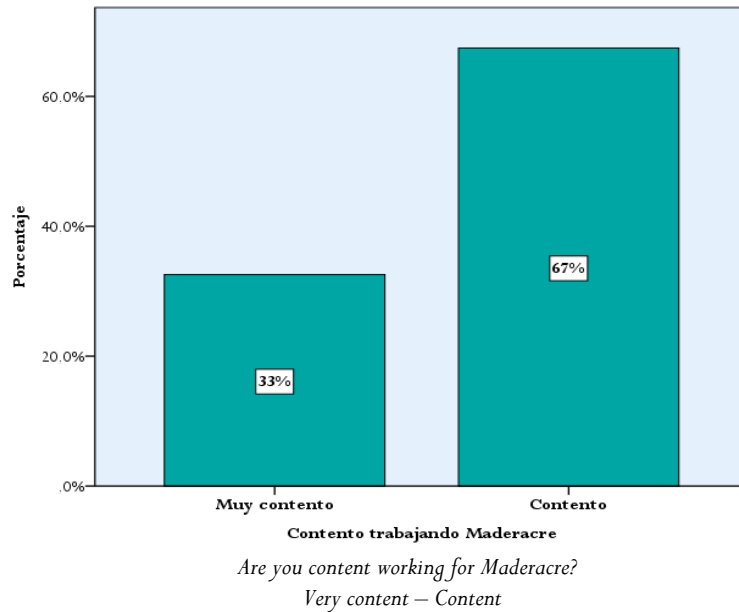
Currently, there are no workers from the indigenous community Bélgica working for the company, although they have worked for Maderacre in the past (Interview forest manager). According to the social responsibility coordinator, information regarding job opportunities are posted in the municipality of Iñapari, but are not published directly in the indigenous community. However, the company has sent a formal document to the community in order to inform them about the possibility of working for Maderacre. According to one respondent, there are currently no workers from the indigenous community in the company because the community has its own forestry operations, which means that there are few people looking for a job outside the community.

No incidents of discrimination have been recorded in the year 2013. According to the respondents of the questionnaire, 98% argued that the company treats all workers equally, and 98% answered there does not exist discrimination among the workers themselves. The only respondent who answered confirmatively to this question, explained that sometimes jokes between workers tend to cross the line, which he therefore considered to be a form of discrimination.

5.1.9 Treatment

According to the survey, the workers of Maderacre consider they are treated well by the company. Of 44 respondents, 19% answered they were treated 'very well', while 81% answered they were treated 'well' by Maderacre. No respondent considered the treatment of Maderacre as 'bad' or 'very bad'. One respondent argued that 'Maderacre treats us in a special manner, I feel grateful'. Another respondent said that the treatment is 'magnificent', and that there is respect among the workers and the company. 63% of the respondents also indicated that the treatment of Maderacre is better compared to the company they worked for in the past. They said that they are treated better, receive higher payment and social benefits according to the law, which was not always the case in their previous job.

Regarding the question whether the respondents are content working for Maderacre, 33% of the respondents answered they were highly content and 67% answered they were content working for the company. No respondent answered they were discontent with working for Maderacre.

Are you content working for Maderacre?
Very content – Content

5.1.10 Health and safety

In the social responsibility program of the company, Maderacre emphasizes the importance of becoming leader in the region regarding the subject of security (Maderacre, 2012: p26). Therefore, in order to reduce risks and prevent dangerous work conditions, the operations of the company are constantly analysed and monitored. This enables Maderacre to create a culture of security and safety, which will promote positive behaviour and pro-active attitudes among the workers and other actors involved with Maderacre (Maderacre, 2012: p27).
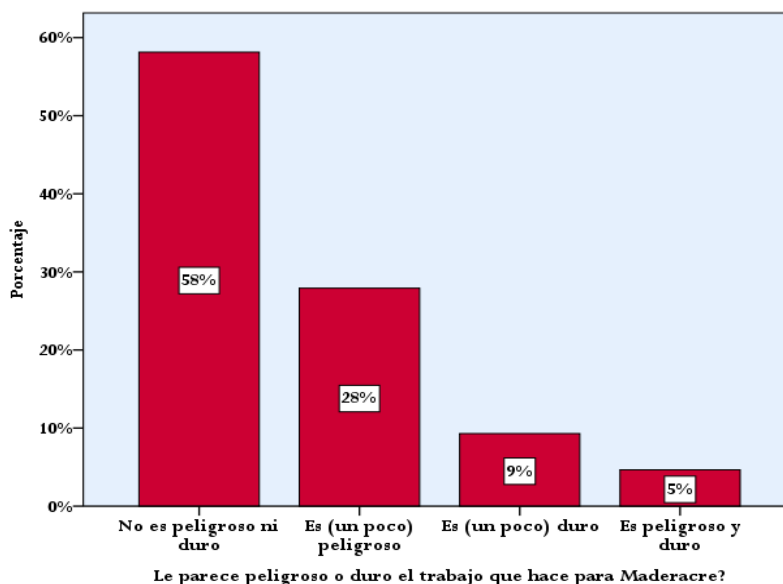
According to the document 'Industrial safety', the company aims to comply with all recommendations and rules established by the Peruvian law and international ILO standards. 100% of the workers in Maderacre have personal protection equipment that is adequate for carrying out their activities effectively. In addition to this, there is a first-aid kit present on the processing plants and in the camps in the forest, which can be used in case of emergency (FSC verification). Another mechanism that has been developed by the company, is a contingency plan, which enables the personnel to identify the gravity of a situation and take adequate measures. In addition to this, a monitoring program has been developed by Maderacre in order to protect and maintain physical, mental and social health of the workers by monitoring the working conditions. This means that inspections are carried out in order to identify risk factors that might affect the health of workers and take action in order to improve these conditions in cooperation with the social responsibility coordinator.

In order to reduce the risk of accidents, the company emphasizes the importance of training in general norms of industrial safety and the use of heavy machinery and other equipment. Other subjects of training are given in first aid, personal protection equipment and the recognition of signs and the prevention of risks (Contingency plan). These trainings are given once every harvesting season and generally last the entire day. Although trainings regarding forest management and the use of machinery are often given by company personnel, other trainings are given by external actors who are specialized in these subjects (Interview forestry manager). Other trainings are given last less time (around an hour) and are given after work-time, at least three times a week (Interview employee). In addition to these trainings, Maderacre also provides talks and instructions that are more informal and have the function to remind workers of safety and health-measures. These are often given prior to entering the field and last about 5 minutes.

According to the respondents of the questionnaire, 91% of the workers have received training and instructions since they started working for Maderacre. Most respondents mentioned the subjects of industrial safety, first aid, environmental protection and forest management as the main topics of training. To the question what they thought of the instructions given by Maderacre, various respondents argued that this is important because it helps to prevent accidents and increases knowledge of safety issues among workers. One respondent indicated that the trainings of Maderacre will increase his chance of finding employment in the future, due to the certifications he has obtained due to Maderacre.

Despite the safety and health measures the company takes, sometimes accidents and health-problems do occur because of the nature of the forestry sector. Nevertheless, these health problems have always been relatively minor and no mayor health-problems or fatal cases have been identified. In 2013, only one incident has occurred, which was a car accident on the road to the concession area, which caused injury to two persons who needed to go to Lima for treatment. Health-expenses and travel costs were paid by the company. Of the 44 respondents of the survey, 12% have had a (minor) work-related accident or health problem since they started working for Maderacre. The respondents argued that they were given a few days off in order to recover from the incident and health-expenses were paid by the company. They were content with the way the company acted upon the situation.
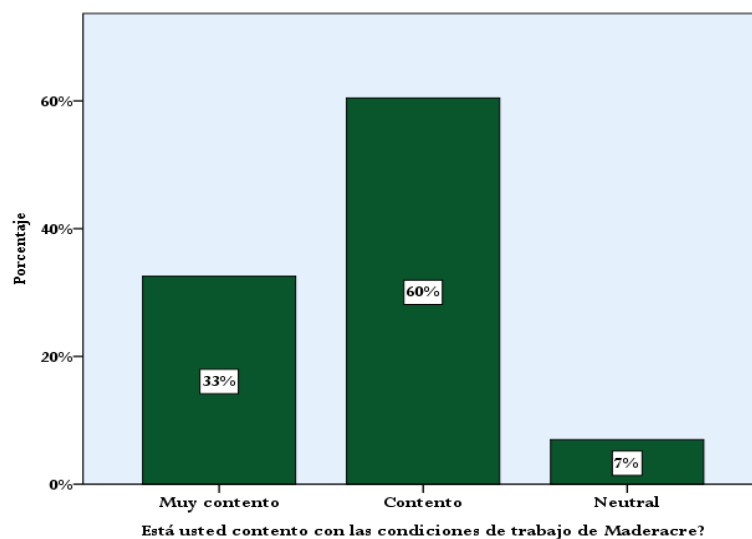
To the question asked whether the respondents considered their work activities as harsh or dangerous, only 5% of the respondents answered confirmatively. 9% of the respondents considered their activities as (a little) harsh, and 28% thought their activities were (a little) dangerous. The majority of the workers (58%) do not perceive their work for Maderacre as neither dangerous or harsh. Different respondents explained that they feel relatively safe because of the training and protection equipment they receive from the company.

Do you perceive the work you do for Maderacre to be dangerous or harsh?
Not dangerous nor harsh − A little bit dangerous − A little bit harsh − It is harsh and dangerous

In addition to this, a question was asked whether the workers thought the company takes sufficient safety measures in order to prevent accidents and health-risks. The majority of the respondents, 98%, argued that Maderacre takes sufficient safety measures, while 2% thought this could be improved. The only respondent who argued that improvement was necessary indicated that Maderacre could increase the amount of training in safety and health issues.

Regarding work conditions in general, the majority of the respondents (60%) is content with working and living conditions, 33% is highly content and 7% is neither content nor discontent (neutral). To the question what can be improved regarding working and living conditions, different issues were mentioned. 11% argued that the quality and quantity of food in the camp has decreased, due to the hiring of a new cook. They claimed that sometimes the food contains too much oil or is too raw and therefore gives stomach problems, which makes it more difficult to carry out their work activities. Another issue that was mentioned was the lack of mobility in order to leave the concession area, which is often due to climate-related problems or other circumstances that reduce the availability of vehicles. Another possible improvement mentioned by one respondent is related to first aid and the establishment of a nurse in the concession area, in order to have more security in the camp. Different respondents argued that the organization in itself can always be improved, but they also recognize that the company is relatively new and that implementing changes takes time.

Are you content with the working conditions in Maderacre?
Very Content – Content – Neutral

5.1.11 Social benefits
All the job functions in Maderacre are on pay-roll, which means that 100% of the workers receive social benefits determined by national law. These social benefits are 30 days of free days per year, ESSALUD (health-care insurance), insurance for all risks (additional to ESSALUD, in case of mayor accidents), AFP or Pension fund, 15 salaries per year (2 extra salaries in July and December) and deposit of CTS.

One important social benefit is the medical insurance Maderacre provides to its workers. 100% of the personnel of Maderacre benefit from ESSALUD, which means that work-related health-expenses are paid by the company. For this, Maderacre has an agreement with the local health-centre in Iñapari, which has agreed to attend the

workers of Maderacre in case of health problems. However, only workers with DNI from Iñapari can be attended by the local health-centre, while workers from other regions can only be attended in case of emergency. Other workers originated from other regions can be attended in the health-centres in Puerto Maldonado or Iberia, where the company also has an agreement (Interview social responsibility coordinator).

According to the survey, 48% of the respondents did not work on pay-roll in their previous job and therefore did not benefit from social security. This means that working for Maderacre has provided them with a higher social security compared to their previous situation. Although the majority of respondents (80%) considers the social benefits to be important, 20% of the respondents do not perceive this as such. They argued that they would rather have a higher salary instead of a higher social security. This can be explained by the culture of informality in Peru, in which the importance of social security is not fully recognized.

Another benefit the company provides to its workers in addition to the social benefits that are required by law, is a personal loan. 66% of the workers currently have benefitted from a loan of Maderacre, which range from S./100 to S./10.000. The workers are able to receive a loan depending on their time working for the company, but not every worker is making use of this opportunity. According to the respondents of the questionnaire, they mainly use this loan for improving their living conditions, supporting family members, improving mobility and investing in the education of their children.

Another benefit the company provides to its workers, are the integration activities that are organized in order to increase bonding among workers, their families and the company. These activities are held during holidays (labour-day, independency day, fathers/mother's day, Christmas) and often involves a sports competition or other social event, during which beverages and food is provided. In the year 2013, five integration activities have been organized, during which 78% of the workers participated.

The idea behind these integration activities is to enhance internal relations and interact with the company in an informal manner, which may contribute to a feeling of cohesion and pride among the workers of Maderacre. To the question what it means to be working for Maderacre, 63% of the respondents argued they feel proud, 31% argued they feel 'more calm' due to the positive treatment and the social security and 9% feel they are part of the company, like they are part of a family.
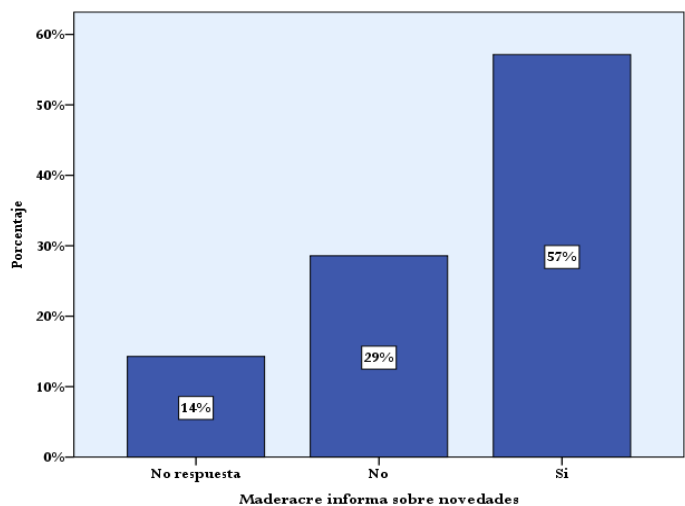
5.2 Local suppliers

5.2.1 Commercial relation

Maderacre has three different types of suppliers. First, there are local suppliers who are situated in the urbanisation of Iñapari, who mainly supply materials to the office, the processing plant, the camp and services related to transportation, alimentation and communication. At the regional level, suppliers provide more specialized services, such as the transportation of timber from the forest to the processing plant or to the stock pile. And at the national level, suppliers mainly supply heavy machinery and specialized services, such as consulting and management advice (Maderacre, 2012: p30). Although it is more expensive for Maderacre to purchase locally due to a lack of price competition, the company does have the policy to favour local suppliers in order to contribute to the local economy. Currently, Maderacre purchases from a number of seven local suppliers.

In the structured interview, a number of questions were included related to the price, negotiation and other factors that give insight in the commercial relation between Maderacre and the suppliers. First, of the 7 suppliers that have been interviewed, 29% are highly content with the price Maderacre pays, while 71% of the respondents are content. They argued that Maderacre generally pays according to the market-price, which is agreed upon in mutual understanding. The majority of the suppliers, 71%, argued that they have sufficient opportunity to negotiate with Maderacre about the price and other work-related issues. Only 14% answered they did not feel they could negotiate sufficiently with Maderacre.

To the question whether or not Maderacre always pays on time, 57% of the suppliers indicated that this is not always the case. However, they argued that this is mainly due to local bureaucracy and other delays in the local banking system, for which Maderacre cannot be held responsible. One respondent made the distinction of having the intention to pay or not, and he indicated that Maderacre does have the intention to pay on time. However, one supplier argued that the delay in payment occasionally creates a problem for him and his family, because Maderacre is his only client and therefore depends upon the company for his income.

Regarding the question whether or not Maderacre informs local suppliers on novelties and other important market information, 57% of the respondents answered confirmatively, while 29% argued they did not perceive this as such.

Does Maderacre inform you about novelties and other market-related information?
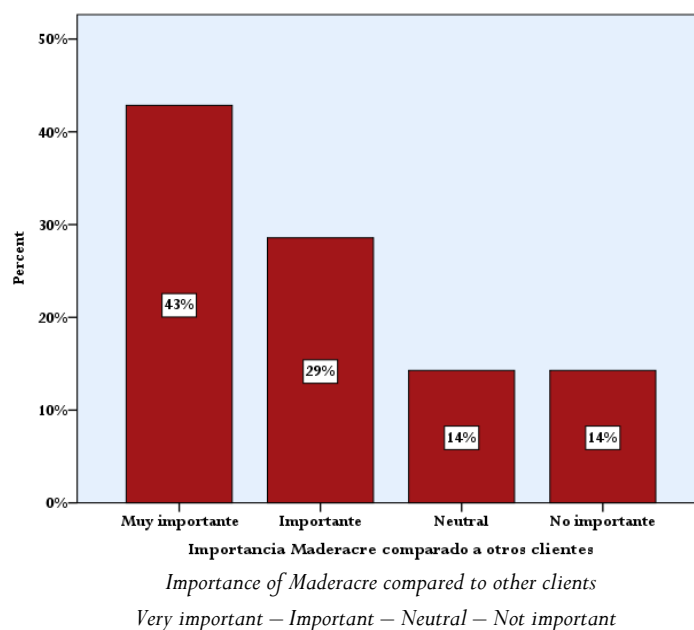No answer – No – Yes

No supplier has ever had a conflict or problem with Maderacre. 57% of the respondents argued that Maderacre treats them 'very well', and 43% said they are treated well by Maderacre. The same percentage (57%) indicated that they are highly content with having Maderacre as their client, while 43% answered they were content. No supplier said to be discontent with Maderacre.

5.2.2 Socio-economic impact

In order to establish a baseline of the socio-economic situation of the local suppliers, questions have been asked regarding their living conditions, mode of transport and other indicators related to their well-being. 43% of the respondents live in a house made of wood, while 57% lives in a house made of wood and stone (cement). 86% are direct owners of their house and only one supplier is renting his house, although he is currently constructing a new house at another location. 100% of the suppliers have access to basic services such as water, electricity

and sewage. Regarding the mode of transport suppliers use on a daily basis, 71% of the respondents owns a car and 29% uses a motorcycle for their daily transportation. 100% of the children of the suppliers are going to school or have received education in the past.

In order to analyse the impact of the company on the socio-economic situation of the local suppliers, it is necessary to measure the importance of Maderacre compared to other clients. Of the 7 respondents, only one supplier has only Maderacre as a client. The other suppliers all have both smaller and larger clients, which often also includes other forestry companies in the region. However, when it was asked how important Maderacre is regarding economic income, 43% of the respondents argued that Maderacre is very important, 29% answered important, 14% neutral and 14% said that Maderacre was not important in economic terms. Nevertheless, the two suppliers for whom Maderacre is not essential financially, did consider Maderacre to be important because of the high level of trust that exists between them and the company. They indicated that the relationship with Maderacre is based upon mutual benefit, which means that they help each other in case of emergency. Although Maderacre does not provide them with a constant income source, the company does give them a higher level of security. This friendship and proximity can be explained because many suppliers in Iñapari are from the Cardozo family, which is the former owner of Maderacre and still has a small percentage of stocks.

Importance of Maderacre compared to other clients
Very important — Important — Neutral — Not important

To the question if Maderacre has enabled them to improve their socio-economic situation, 71% argued that their situation has improved 'very much', while 29% answered that it has improved 'a little'. Different respondents also emphasized that their situation has improved because of the new concession law in general, although they argued that Maderacre has played an important part in this. Examples of how their situation has improved are the opportunity to travel more, purchase machinery and pay off previous debts. For one supplier, for whom Maderacre is the only client, it has been possible to construct a new house in Iñapari.

5.2.3 Social responsibility
According to Maderacre, it is important to increase the impact of social and environmental sustainable practices in the region and stimulate other chain-actors to adopt similar principles. According to the respondents,100% currently implement measures to prevent accidents and health-problems among their employees. Regarding the

prevention of contamination and protection of the environment, 86% argued they take special measures, such as separating garbage and discarding it accordingly. Of the 7 suppliers, 57% have participated in trainings given by Maderacre and 43% has changed their manner of working directly due to the influence of Maderacre.
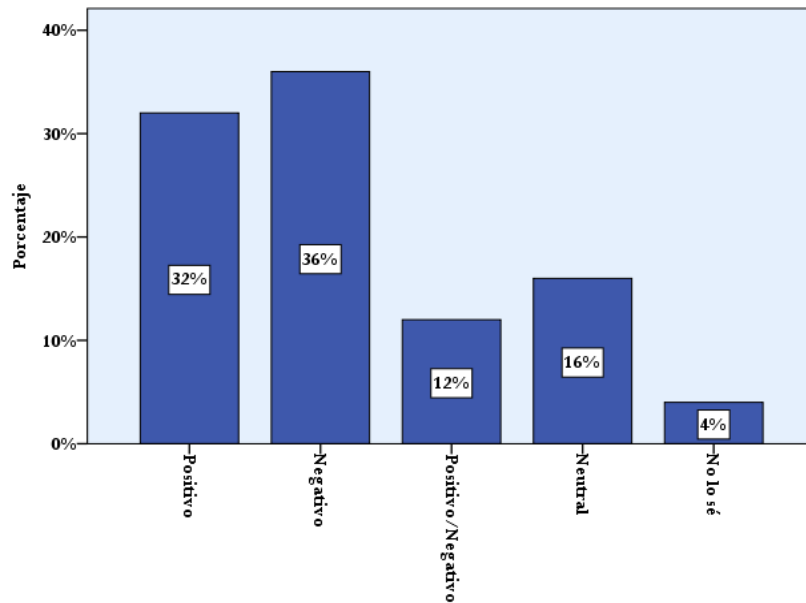
5.3 Local community

5.3.1 Delocalization and migration

When Maderacre signed the long-term concession contract with the Peruvian State in 2002 for an area of 49.376 hectares, the company was given the legal right to the whole concession area and to all the environmental services that are included in it (Greenoxx, 2012: p5). No conflicts regarding the use of the land were detected and no people were living inside the concessions area. The same was true when Maderacre obtained the concession area of AMATEC and PAUJIL in 2012, which added 21.000 and 47.000 hectares to the total area. Therefore, no people have been resettled voluntarily or involuntarily because of Maderacre.

Nevertheless, due to the presence of forestry companies in the area, the number of migrant workers in the region has increased substantially, which can also be attributed to Maderacre. Due to the low availability of local workforce, forestry companies need to attract migrant workers in order to fulfil the available job positions. Also the majority of the workers in Maderacre are migrant workers. From the 44 respondents, only 14% were originally from Iñapari, 5% were from Puerto Maldonado and 2% from Iberia, while the majority of the respondents (41%) had come from Pucallpa. Other regions mentioned were Iquitos (7%), San Martín (7%), Loreto (5%) and La Libertad (5%).

In order to avoid social conflict and integrate workers and suppliers with the local population, the company has elaborated a Code of Conduct, which is handed out to at the start of their contract. This document contains information on how to interact with the local population, the indigenous community Bélgica and local authorities and explains what actions are prohibited when working for Maderacre.

According to the questionnaire conducted among the urban population, 32% of the respondents considers the arrival of migrants to be a positive development, arguing that 'migrant workers have knowledge and experience', 'bring growth and income to Iñapari' and 'fulfil the work opportunities that cannot be fulfilled by local workers'. Nevertheless, 36% of the respondents perceive the arrival of migrant workers to be negative, arguing that 'they are strangers', 'drink too much alcohol', 'some are criminals and steal' and 'treat local women badly'. One respondent said that she feels less safe at night on the street and argues that there should be a filter in order to select workers more carefully. Other respondents said that the arrival of migrants bring both positive and negative effects to the community.

Cómo percibe el ingreso de migrantes a la zona?
How do you perceive the presence of migrants in the area?
Positive – Negative – Positive / Negative – Neutral – I don't know
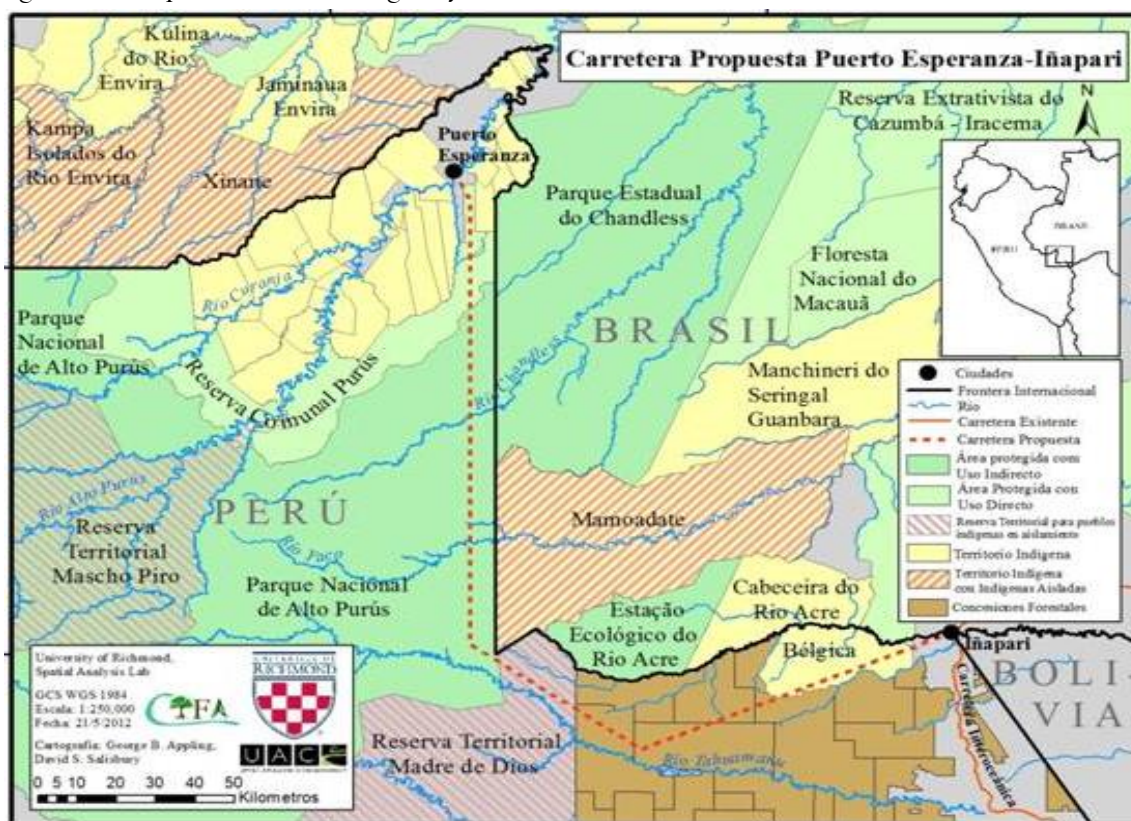
5.3.2 Cultural heritage

Areas of cultural, ecological, economic or religious importance for local communities are sites that fall under the High Conservation Value Forests number 4, 5 and 6, which is the forest management designation developed by FSC in order to protect highly valuable forest areas. HCVF 4 forests are areas that provide essential services in critical situations, such as fresh water and control of erosion. HCV5 are forest areas fundamental to meeting basic needs of local communities (subsistence and health), while HCV6 forest areas are critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities) (FSC, 2014).

In order to identify sites that relate to HCVF 4, HCVF 5 and HCV6 areas, Maderacre has carried out a field visit, during which interviews, a survey and a workshop was conducted with the indigenous community Bélgica and other rural communities living near the concession area. In the consultation process, a variety of sub-groups were incorporated, including leaders, women, youth and elderly people. During the workshop, community and village members elaborated maps of the territory and the use of resources from the forest. These maps were digitalized and complemented with cartographic information. During this phase, information was obtained regarding HCVF4 areas inside the concession area, which contain freshwater for human consumption, are critical for agriculture and fisheries and are needed for the control of erosion. Regarding HCVF5 forests, areas were identified that are important for food, fuel, clothing, medicines, apparels (pottery, weapons etc.) and construction materials. And regarding HCVF 6 forests, areas have been identified that have been indicated as sacred sites, cemeteries, prohibited places, initiation areas and shamanism areas. In addition to this, areas with presence (presumably or real) of voluntarily isolated or non-contacted indigenous people were also identified in the field. These areas within or near the concession areas are protected and are not subjected to forest extraction or other activities that might threaten these areas (Minutes reunion BAVC 31-01-2013).

Although the company has committed itself to protect High Conservation Value Forests within or near the concession area, there is a current threat that might undermine the ecological and cultural value of a larger

forest area. Strong political interests are currently promoting the construction of a highway through the Alto-Purus park, a protected area with a high level of biodiversity and the living space of many isolated indigenous communities. If this area opens up, it is feared that the existence of many animal species and indigenous people will be threatened. Also the concession area of Maderacre and the territory of the indigenous community Bélgica may become affected by the construction of the highway, since it will open up forestland within or near the concession area. Although the project is still in process of approval by the Peruvian Congress, the number of people in favour of the highway is gradually increasing. According to coordinator of the indigenous community Bélgica, it is highly important that forestry companies and other institutions organize themselves and take action against this initiative. Although Maderacre recognizes the possible threat of the highway, the company currently does not undertake specific action because the proposal has not yet been passed by the Peruvian Congress (Interview forestry manager).

Figure 10: Proposal Alto-Purus highway

Source: Peruvian times, 2014

5.3.3 Community engagement

Although there are no communities living in the concession area, Maderacre does try to actively engage and strengthen the relationship with the communities living in buffer zone of the concession area. This includes the urban population of Iñapari, the indigenous community Bélgica and the rural communities of Primavera, Chilina and Nueva Esperanza. In order to enhance the relation with the local community, Maderacre recently hired a new employee for the social responsibility area, who is responsible for coordinating meetings with stakeholders and implementing the social responsibility plan.

Consultative Committee

In order to engage the local community with its activities, Maderacre has been organizing two important meetings. First, there is the Consultative Committee. The company has organized this meeting since the year 2006 in order to create a transparent and horizontal dialogue with the main stakeholders in the local community. Participants of the Consultative Committee are currently the local school of Iñapari, the municipality, the indigenous community Bélgica and the neighbourhood association of Colonia. These meetings are organised every 3 months and give stakeholders the opportunity to discuss and give their opinion of the social responsibility activities. Based on these meetings, the company tailors its social responsibility program to the main needs in the community. Although it is not possible to implement all suggestions made by the stakeholders, there is evidence that the company has incorporated feedback from stakeholders. One example of this is the need of the indigenous community Bélgica to have a permanent health-care employee in the community, which Maderacre has enabled by providing an additional fee to the salary. This has made it possible for the community to find a nurse who is willing to stay on a more permanent basis (Interview Community Bélgica). Another example is the suggestion to create a panel at the municipality with information regarding the activities of Maderacre, which has been carried out as well.

Although the majority of the respondents argue that the Consultative Committee enable them to interact with Maderacre, one respondent has a more negative perception of the meeting. In his opinion, these meetings are only given when the company is expecting a visit from the certification company, which means that he does not perceive them as genuine. Because he has many other activities to carry out on a daily basis (he owns a radio station and is the representative of the neighbourhood association la Colonia), he does not want to lose time going to a meeting that does not really make a difference (Interview José Gabriel Gastelo). He also thinks that the company gives the same information each meeting and that there is no reflection on the results. Nevertheless, according to the social responsibility coordinator, he may also perceive this because he has not participated in the last few Consultative meetings, during which the results of the social responsibility program were presented (Interview social responsibility coordinator, Consultative Committee April 2013).

Nevertheless, it has been indicated by various respondents that when they do not participate in the meetings of Maderacre, they do not know about the results of the social responsibility program. José Gabriel Gastelo, for example indicated that although he is currently not interested in attending a meeting, he would be willing to read about the results if Maderacre would present him with a document or report. The same is true for other stakeholders, who are more positive about the meetings but are not always able to participate due to external reasons.

Participatory meeting

Another important meeting is the participatory meeting for the local community, which is organized once a year. The participatory meeting is open to everyone and is designed as a mechanism to empower the local population, by means of providing information, creating a dialogue and receiving feedback regarding the activities of the company. This will increase transparency towards to local community and give them the opportunity to control the activities of the company. People are invited by means of one of the local radio stations, the panel in the municipality and through their representatives, who are provided with a formal invitation for these meetings.

Nevertheless, according to the social responsibility coordinator, there are not many people who attend these meetings. There are various reasons that can explain this. First, there is not a culture in Iñapari of participating in events or meetings, different respondents have argued that this is a common problem in the area. One respondent explained that people are often busy with their work and other daily activities and are therefore not always willing to invest time in community gatherings. Another respondent argued that this might be because people are afraid to give their opinion, afraid of saying something wrong (Interview Chamber of Commerce). In addition to this, there are many different actors in the area who organize events or meetings, which means that people sometimes receive 2 to 3 invitations a week (Interview Abraham Cardozo). Therefore, people in Iñapari only go to a meeting when there is something to gain, or when they feel it is really worth it to invest their time.

Another reason why few people participate, is because the majority of the population has a negative perception of the forestry companies in the region, including Maderacre. Due to this negative perception, they are often not willing to invest time by participating in a meeting of Maderacre, which is generally perceived as a social obligation of the company to comply with the certification standards. According to different respondents, the meetings of Maderacre are perceived as 'mechanic' (not genuine) and they feel they are only invited in order to firm the participation list (Interview Veronica Cardozo, Abraham Cardozo, Chamber of Commerce).

Another reason why people in Iñapari do not always attend meetings of Maderacre, is because they do not always receive or hear the invitation. Generally, Maderacre uses one of the two radio stations in Iñapari in order to inform the population about meetings and events. However, the majority of the population listens to the radio of José Gabriel Gastelo (Interview Veronica Cardozo), with whom Maderacre has a difficult relationship. Therefore, Maderacre does not have a commercial relationship with him, which means that people who only listen to his radio station are not likely to hear the invitation. This is also deducted from the survey that has been carried out among the local population. Of the 30 respondents questioned, 52% have never heard or seen an invitation of Maderacre for a meeting or event. In addition to this, Gabriel indicated that he sometimes talks critically of Maderacre, which means that listeners might be influenced by his opinion and perceive Maderacre more negatively (Interview José Gabriel Gastelo).
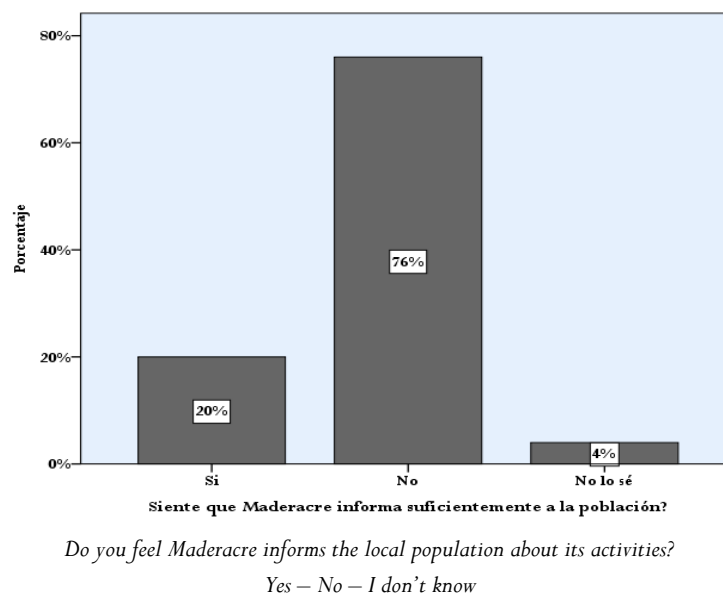
Communication

In addition to the meetings Maderacre organizes, the company also has the objective of carrying out additional communication activities in order to inform the local population. Therefore, the company has developed a communication plan in 2012, in which various communication activities have been indicated. Examples are the digital newsletter, a presentation of the social responsibility coordinator (once a year) and the placement of a box in order to receive complaints and suggestions from the local community (Communication plan, 2012). Other examples are the placement of panels with information regarding the protection of the natural environment and the diffusion of radio announcements regarding novelties of the company. Nevertheless, most of these activities are still on paper and have not been carried out yet.
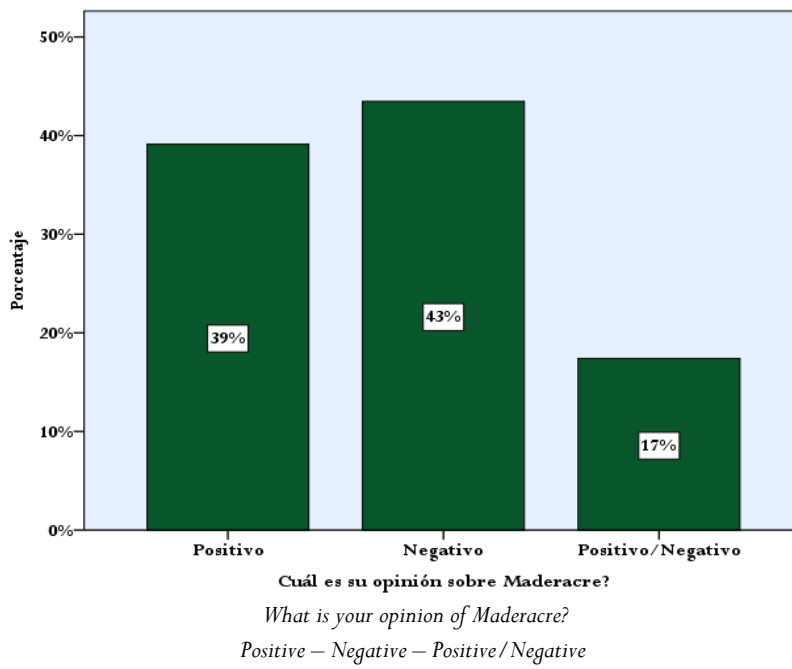
When asking the stakeholders of Maderacre, different respondents mention the lack of communication as an important weakness of Maderacre. It is argued that Maderacre should increase information about the results of the social responsibility program. The only visible evidence that is mentioned by respondents, is the logo of the company above the different medical rooms in the local health-centre. One respondent even argued that he does not believe Maderacre spends 5% of its utilities in social responsibility activities, because he does not see any evidence. He argued that 'or they are not doing anything, or they are not communicating about it sufficiently' (former Director local school). Also other key-respondents, including prominent members of Iñapari (Veronica

Cardozo, Chamber of Commerce) were not aware of the two main objectives of the social responsibility program regarding education and health-care.
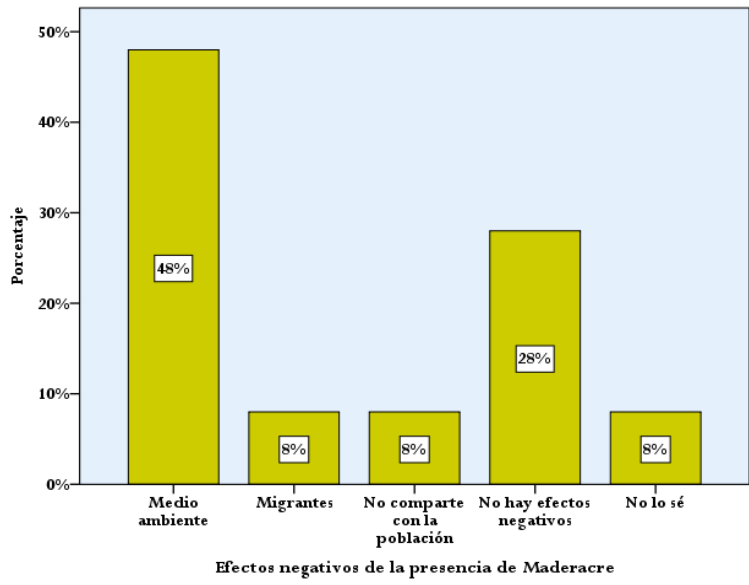
Also the majority of the local population (76%) feels that Maderacre does not inform them sufficiently. Although there is still a certain level of proximity with local stakeholders and other people that have a more direct relation with the company, different respondents argued that the local population has been left behind (Coordinator Community Bélgica, Veronica Cardozo). In the last few years, the population of Iñapari has increased significantly due to the arrival of migrants from other areas in Peru. While it was easier to communicate with the population in the initial years of the company, this has become more complicated (Interview general manager).

Do you feel Maderacre informs the local population about its activities?
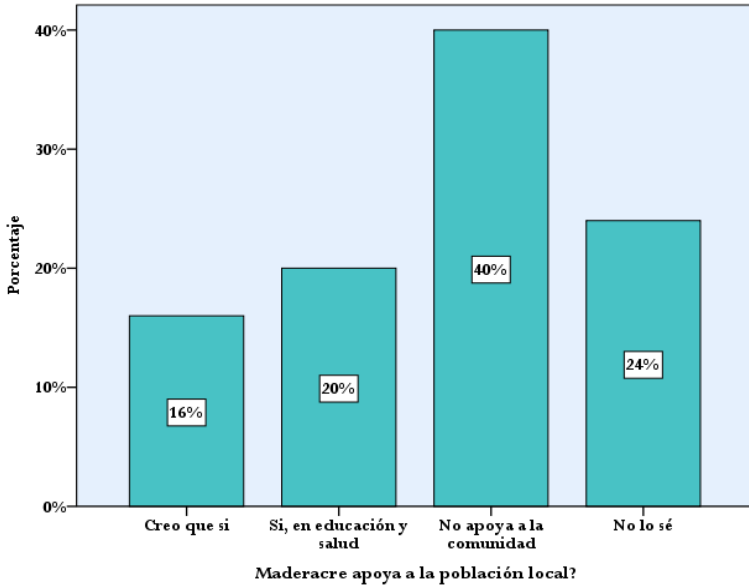*Yes − No − I don't know*

This is also confirmed by the negative image that exists among the local population of the forestry companies in the region. 64% of the respondents have a negative perception of the forestry companies in general, while 43% also have a negative perception of Maderacre. They feel that the forestry companies are deforesting the area and are not leaving anything behind for the local population. Although 21% of the respondents argued that Maderacre is different from other companies ('Maderacre is Peruvian', 'more responsible than the foreign companies'), a large part of the population (48%) thinks that Maderacre is also contributing to the process of deforestation. Regarding the social responsibility program, the majority of the population is not aware of any support that Maderacre provides to the community. 40% of the population argued that Maderacre is not supporting the local community in any way, arguing that it does not leave anything behind in Iñapari and does not invest in the development of the local community. 24% have not heard or seen anything of the social responsibility activities and therefore is not sure whether or not the company is contributing to the development of Iñapari. 16% does think Maderacre is carrying out certain social activities, and only 20% is aware of the social activities of Maderacre focused on improving health-care and education.

Opinion forestry companies in general
Positive − Negative − Positive/Negative − Neutral

What is your opinion of Maderacre?
Positive − Negative − Positive/Negative

Negative effects of the presence of Maderacre

Natural environment − Migrants − Does not share with community − No negative effect − I don't know

Does Maderacre provide support to the local community?

I think so − Yes, in education and health-care − No − I don't know

According to different respondents, the local population perceive Maderacre and other forestry companies as their enemy, and Maderacre is not doing sufficiently in order to change this negative perception (Interview Abraham Cardozo, Veronica Cardozo, Coordinator community Bélgica). There is a distance between the local population and Maderacre, which can be potentially dangerous for the company in the long-term. According to the coordinator of the Bélgica community, forestry companies in Iberia (nearby village) were forced to end their operations due to social protest from the local population, which could possibly occur as well in Iñapari. Although Maderacre organizes meetings in order to inform the local population, the negative image of the company is one of the main reasons why people do not participate. This therefore causes a vicious circle; although community members generally have a negative perception of Maderacre because they are not familiar with the manner the company operates (FSC certification/REDD+), they are also not inclined to attend a

meeting of Maderacre where information is provided. Respondents argued that the company should engage with the population on a more regular and informal basis, in order to improve the image of Maderacre among the local population and motivate people to invest their time by participating in the more formal meetings.

Participation of Maderacre
Another way in which Maderacre engages with the local community, is by participating in events that have been organized by community members themselves. Currently, Maderacre has a formal representative in ten local and national institutions. Other activities in which the company participates are cultural activities organized by the local municipality in order to create spaces of integration for the local community. Although Maderacre currently only participates in these activities, the company has planned a project of promoting recreational and cultural activities, which will support the local municipality in carrying out these activities. In addition to this, the company cooperates with the municipality and other forestry companies in the prevention of certain diseases, by carrying out health-campaigns. The first health-campaign was carried out on 30th of May. However, according to the municipality, Maderacre is mainly involved in activities related to the protection of the natural environment, which is the main issue that needs to be enhanced in the community according to the municipality (Interview Municipality).

Although Maderacre participates in different activities organized by local institutions and organizations, different respondents argued that the support of Maderacre is mainly incidental and could be more structural. According to the municipality, Maderacre should engage more with the community, interact with people on a regular basis and coordinate better with other organizations in order to solve the needs of the community (Interview Municipality). Different respondents indicated the need for Maderacre to participate in more initiatives and meetings organized by community stakeholders, especially by the local municipality (Interview Chamber of Commerce, Municipality). According to the social responsibility coordinator, it is not always possible to attend every meeting due to the large variety of work responsibilities she currently has. Although she aims to attend all meetings Maderacre is invited to, in some occasions she is not able to go because she needs to carry out tasks for other areas in the company. Nevertheless, it has been indicated by different respondents that the lack of cooperation and participation between community actors is a common problem in Iñapari, since it is true for most companies, institutions and organizations. However, it is argued that Maderacre and other forestry companies could function as an example in enhancing cooperation and cohesion between community actors.
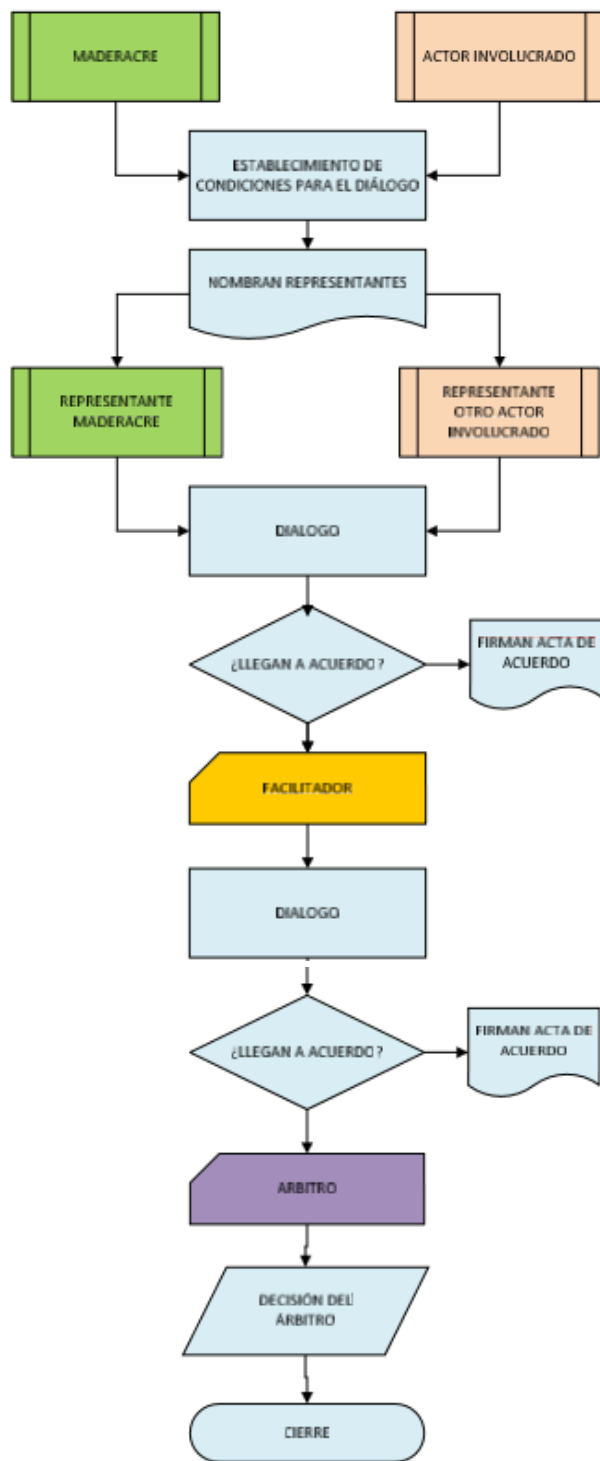
Relation stakeholders
Although some respondents argued to be content with the level of communication with Maderacre (Representatives Chilina and Nueva Esperanza), other stakeholders have indicated the need for more proximity with the company (Coordinator Bélgica community, Chamber of Commerce, Municipality, Governor Iñapari). They argued that they interact with Maderacre during group meetings or when they meet coincidentally, but indicated that they would like to have more one-to-one meetings with the company. Nevertheless, all respondents indicated that the relation with Maderacre is positive and friendly. They all indicated that the company treats them with respect and listens to them during moments of interaction. Some respondents who have known Maderacre since the early beginning, consider the people working for Maderacre as their neighbours, friends or even family.

This is also reflected in the low incidence of conflicts between Maderacre and community stakeholders. Currently, no significant social conflict has been recorded by the company. In case social conflict may arise in

the future, the company has developed different protocols that define how the company should engage with community members in case of conflict. The company has developed protocols for attending consults and requests from citizens, for informing citizens about un-habitual operations and a protocol for avoiding social conflict. These protocols have been disseminated to the local population by means of radio announcements, the panel in the Municipality and in the participatory meetings organized by Maderacre.

Figure 8: Protocol Conflict Resolution

Source: Maderacre, 2012: p68

5.3.4 Respect of indigenous rights

When Maderacre obtained the concession area in 2002, and AMATEC and PAUJIL in 2012, no indigenous communities or other inhabitants were living within the concession area. The presence of the company therefore does not interfere with the legal or customary rights of indigenous communities. The concession area does border with the territory of the indigenous community Bélgica, which owns an area of approximately 53.395 hectares. The Peruvian government donated this area in 1992, thereby officially recognizing the indigenous community and making them the legal owner of the land. Although the concession area of Maderacre is bordered with the territory of the community, the company does not interfere in anyway with the legal and customary rights of ownership, use and management of their land and resources (Interview Coordinator Community Bélgica).

Agreement

Nevertheless, due to the near presence of the indigenous community to the concession area, there are certain aspects that requires a level of cooperation between the company and the community. First, there is a shared access road that leads into the concession areas. Maderacre has committed itself to maintaining the access road and carrying out monitoring activities in cooperation with the community. In addition to this, the company has an agreement that allows the transit of vehicles through the territory of the community. Moreover, in the agreement signed in 2012, the rights and obligations of both actors are formally established. The objectives that have been identified in the agreement are to improve the protection of the common borders, support the local health-centre in carrying out health-campaigns in the community, realize educational talks on forest management and natural resource exploitation, and exchange experiences regarding forest management and REDD+. Other commitments that Maderacre makes are to recognize and respect the legal and customary rights of the indigenous community to possess, utilize and manage its land and resources, train community members in action protocols and provide the monetary and non-monetary resources for the implementation of the agreement. The indigenous community commits to carrying out their forest management activities according to the Forestry law and other regulations, and facilitating Maderacre to implement the agreement (Agreement Maderacre and CCNN Bélgica).

Respect of rights

According to the President of the community, Maderacre complies with the commitments in the agreement and respects the official boundaries of the community. As an example, he argued that when Maderacre needs to use the road of the community in order to enter the concession area, the company always sends an official letter in order to ask for permission. He also argued that the community has never had a problem or conflict with Maderacre and that there is a positive relation with the company. When the company interacts with the community, they feel they are treated with respect (Interview President, community member). This was also stated by the coordinator of the community, who argued that no conflict has occurred with Maderacre until this moment (Interview Coordinator Community Bélgica). Also the company has expressed the importance of respecting the rights of the indigenous community. Due to the extensive shared border, the indigenous community is considered to be a sensible stakeholder to the company, which means that the community should be treated carefully and with absolute respect (Interview forestry manager). The company emphasizes an organizational culture of intercultural respect towards the community, which determines the protocols and attitudes of the company towards the community (Maderacre, 2012: p45). One important document is the Code of Conduct, in which is indicated how workers of Maderacre should interact with local communities and indigenous people in a respectful and harmonious manner.

Communication

Nevertheless, although the relation between Maderacre and the indigenous community is positive, different respondents from the community emphasized the need to strengthen the relation between both actors. According to the representative of the community, he expected that the relation with Maderacre would have been stronger due to the near presence of the company to the indigenous community. Although the community has been incorporated in the Consultative Committee in 2012, he argued that besides these meetings there is almost no communication with Maderacre. According to the forestry manager of Maderacre, the community is an important stakeholder because of the shared border and it is a priority of the company to strengthen the relation with the community. Currently, meetings with the community often take place in an informal manner, but he argued that these meetings should become more formal in the future. In addition to this, he argues that a sort of friendship should be sought with the community, due to the sensible character of the stakeholder.

Commercial relation

At this moment, there is no commercial relationship between the Belgium community and Maderacre. Currently, the community has an agreement with the company Maderyja for the extraction of wood, which is valid for 5 years. Nevertheless, according to the coordinator of the community, he would have expected to establish a commercial relation with Maderacre due to the near presence of the company. He indicated that the community is open to establish a commercial relation with another forestry company, since there have been incidences with the company Maderyja that has undermined the agreement. He argued that the preference of the community will be for Maderacre, since Maderacre is located next to the community and is known among most community members.

Other indigenous people that are located in the area, are the indigenous people who live in voluntary isolation in the Madre de Dios Territorial Reserve. The concession area of Maderacre functions as a buffer zone for the territory of these isolated groups, which will prohibit the entry of people into the area. Due to the isolated character of these indigenous communities, the company does not seek contact but will leave the decision to contact to their own choice. Workers of Maderacre are trained according to the Code of Conduct, which states that seeking contact with these persons is prohibited. In case these people are seen, this will be registered and reported to the Peruvian authorities.

5.3.5 Local employment

One of the main social objectives of Maderacre, is to contribute to the local economy of Iñapari by creating local employment opportunities. The company therefore has a preference for attracting personnel from the region of Madre de Dios, which includes the localities of Puerto Maldonado, Iberia, Iñapari and other populated centres in the area. By providing formal jobs (on pay-roll) and social security, people will be able to improve their socio-economic situation and provide for their families on a structural basis. Moreover, with the income of Maderacre, workers will be able to purchase goods and services in local stores and restaurants. In order to attract local personnel, the company uses the radio station and the communication panel in the municipality to disseminate job opportunities in Maderacre.

The number of workers in Maderacre has increased significantly over the years. In 2011, the company had 8 employees, which increased until a number of 75 employees in 2011 and 134 employees in 2013. Although the relative number of local workers has decreased over the years, in absolute terms the number of local workers has increased. The reason that the relative number of local workers has decreased, is because there is not

sufficient workforce in the region in order to fulfil the increasing number of work opportunities. Therefore, the company needs to attract workforce from other forestry areas in Peru (Interview general manager).

In addition to favouring local hiring of workers, Maderacre also has the policy to give preference to local suppliers, even though this is more expensive due to a lower price competition in the region. In relative terms, the number of local suppliers has decreased over the years, although the absolute number has increased. This can also be perceived in the payments made to suppliers. In 2013, 49% of payments were made to local suppliers, while this percentage was higher in previous years (90% in 2011 and 68% in 2012). However, the total amount of payments made to local suppliers has increased over the years (Interview José Luis Canchaya). By giving preference to local suppliers, the company also contributes to the creation of indirect employment opportunities. The local suppliers of Maderacre all have personnel, ranging from 4 to 20 employees, with a total number of 73 employees. 34 of these employees are on pay-roll and therefore receive social benefits as required by law. All suppliers argued that their number of employees has increased over the years and 43% of the respondents argued that this has been the result of the commercial relation with Maderacre.

Different respondents have indicated the creation of employment opportunities and the increase in the local economy are the most important benefits of the forestry companies in the region. They recognized the change that has occurred in Iñapari over the last few years, arguing that Iñapari has grown significantly and counts with various stores, restaurants and other local businesses. People come to the area to work in the forestry sector and therefore spend money locally, thereby contributing to a more dynamic local economy and attracting new businesses. Although this is a result of the presence of all forestry companies, different respondents argued that special recognition needs to be given to Maderacre. Maderacre was the first forestry company in the region and the first to become certified by FSC, thereby creating an example for other forestry companies. One prominent member of the community (Abraham Cardozo) stated that Maderacre is currently the company that is most stable and that provides the majority of formal job opportunities. Although it is an estimation, he thinks that 80% of the economic growth in Iñapari can be attributed to Maderacre (Interview Abraham Cardozo). This is mainly due to the volumes Maderacre handles and the professional focus regarding its personnel, which is not always the case for other local businesses, which are smaller in size and have a more informal character. He argued that Maderacre can be considered to be a leader in the community.

Although the local workforce in Iñapari is not sufficient in order to fulfil all job vacancies in the forestry sector, different respondents argued that the situation is more complicated. It seems that there are two sides to the story. One prominent member of Iñapari said that the population of Iñapari generally has a negative image of the forestry companies in the region. 'Some people think forestry companies treat their workers badly, paying low salaries, shouting at them and make them work long hours' (Interview Abraham Cardozo). In addition to this, people do not have the experience and training in order to work in the forestry sector, which makes them less inclined to apply for a job position (Interview forestry manager). Nevertheless, on the other side, forestry companies in the region also have the perception that people in Iñapari do not want to work, do not know how to work, or that it does not interest them (Interview Abraham Cardozo, general manager). Therefore, they are more inclined to attract personnel from other forestry areas in Peru, where people have a longer experience in forest extraction. According to Abraham Cardozo, it is important that Maderacre tries to change the negative image of the company, in order to 'close the divide between the population and the company' (Interview Abraham Cardozo). Different respondents also indicated that forestry companies may be able to fulfil more job vacancies with local workforce if they improve their image and if they invest more in local capacity building (Interview Abraham Cardozo, Veronica Cardozo).

According to one respondent, the need to attract workers from other areas also brings difficulties to the company itself. He argued that Maderacre needs to change personnel every year since most migrant workers return home after the season is over and do not always come back. This means that Maderacre has to invest in training every year, which does not only cost time and resources but also leads to insecurity for the company regarding the work-force. He argued that it would be a positive development if Maderacre could provide permanent jobs to a certain group of workers, in order to maintain them in the long-term. However, according to the forestry manager, it is difficult to interest workers to stay permanently in Maderacre because most workers have their activities at home (family, agricultural land) and use the seasonal work for the company in times of low economic income (Interview forestry manager).

Currently, Maderacre is still in the process of learning and consolidating the business-activity of forest extraction. Therefore, the principal business-activity of Maderacre is still mainly upon the cutting, processing and exporting of timber, and does not include other economic activities. However, Maderacre is currently constructing an additional processing plant in Iñapari, where further processing will occur and more value will be added to the product. By carrying out these value-adding process locally, it may be possible to create additional employment opportunities and enhance capacity-building at the local level.

5.3.6 Access to immaterial resources

In addition to environmental and economic sustainability, Maderacre also emphasizes the importance of contributing to the social development of the local community. Therefore, the company dedicates a minimum of 5% of the annual utilities to social support, which is currently an amount of S./21800. In accordance with the participants of the Consultative Committee, Maderacre has decided to focus its social responsibility program on health-care and education, which have been identified as the main needs of the community.

Although the local municipality is responsible for providing basic services to the local population and investing in local infrastructure, the municipality does not always have the resources to do this. According to the municipality, the national government distributes economic support to the regional authorities based upon the level of poverty in every region. Because Madre de Dios is not considered as poor, the municipality receives a limited amount of resources in order to invest in community development. Therefore, the municipality asks private companies for a contribution.

Health-care

One important social objective of Maderacre is to improve and strengthen health-care services for the local population. Therefore, the company has been supporting the health-centre in Iñapari, the *Clas Tres Fronteras*. The health-centre receives resources from the national government, but like many other public institutions, these resources are not abundant. Therefore, its asks support from private companies in the region, including Maderacre, Maderyja and Catauas, which all provide a similar level of support (Interview health-centre). According to the director of Clas Tres Fronteras, Maderacre is always willing to give support when there is an emergency or other necessity. Moreover, Maderacre supports the health-centre with materials for the amplification of the building, which is necessary in order to attend more patients with a wider variety of diseases. An example of this is the creation of an area for tuberculosis patients, for which Maderacre has donated the material. In addition to this, Maderacre occasionally provides economic resources for carrying out social work in the community or for purchasing medical supplies. And in case of carrying out certain activities for the community, the company provides personnel for carrying out these activities together with the health-centre.

Although the support of Maderacre is described by the health-centre as incidental and only given when a request is made, it is also argued that Maderacre always supports the requests and has not refused to give support to the health-centre (Interview Health-Centre). This means that the support of Maderacre is fundamental to the local health-centre, since it can rely upon Maderacre when resources are low.

In order to formalize the relation with Clas Tres Fronteras, the company has firmed an agreement with the health-centre in 2012. In this agreement, Maderacre commits to cover the costs of transportation and alimentation of health-campaigns carried out in the community. These are for example health-campaigns in the Plaza de Armas in Iñapari, in order to provide health-care to the local population and inform them on the prevention of tropical diseases. Although these health-campaigns are still in process, the first campaign has been carried out in the end of May 2013, and one more campaign is planned. As exchange for the support of Maderacre, the health-centre agreed to attend the workers of the company and providing training in first-aid principles to workers and suppliers. There is therefore a relation of mutual support between the company and the health-centre.

In addition to this, Maderacre also supports the indigenous community Bélgica in the aspect of health-care, by providing economic resources to Clas Tres Fronteras for carrying out health-campaigns in the community. Until recently, this meant that a nurse would visit the community every three months in order to give vaccinations, medical check-ups and provide for other medical attention. However, the community indicated the need for a permanent nurse in the community, due to the recent incidence of injuries and even fatal cases of children. Although there is a health-post in the community, it has been closed for over a year due to the low salary the government pays. This made it difficult to find a health employee who was willing to stay permanently in the community. Therefore, Maderacre has decided to increase the monthly salary with an additional fee of S./500, which has made it possible to find a permanent nurse for the health-post. In addition to this, Maderacre provides an amount of S./200 for medicines. According to the representative of the community, this support of Maderacre for the health-post is very important, since it enables the community to have permanent health-care available and treat patients more quickly.

Education

Regarding educational activities, the main focus of Maderacre is on environmental education. Since a few years, Maderacre provides talks about environmental protection and sustainable forest management for students of the secondary school of Iñapari. In 2012, the company has signed an agreement with the secondary school in Iñapari, which states that Maderacre will provide talks on a regular basis (five times a year), organize visits to the processing plant (three times a year) and give workshops on the recycling of plastics and other inorganic materials (one time a year). In addition to this, a drawing and painting competition will be organized in order to increase awareness on the importance of environmental conservation (one time a year).

The perception of the respondents from the secondary school varies. According to the former director of the school, the talks of Maderacre are not sufficient in order to have an impact. He argued that the company has given only one talk in the previous year, and has not continued with this. However, according to Maderacre and other respondents, this was because of a strike in 2012 among teachers of the school that lasted for three to four months. Because of this situation, it was difficult for Maderacre to coordinate and organize talks in this time-period. In previous years, respondents argued that frequency of talks was a little higher, but always in an informal and incidental manner (not structural). Also the current director of the school indicated that she would like Maderacre to increase the number of talks for the students. This is because the talks on environmental

protection need to be repeated frequently in order to create an impact and motivate students to use this information in their daily situation. She argued that the current level of environmental education given by Maderacre is too low to achieve this impact.

Another criticism of the former director of the school is that Maderacre generally does not support the school with other requests. Last year, the institution has had to deal with a flood, which has damaged the building significantly and has caused the loss of computers, books and other education materials. Although the school has recovered to a certain extent and has obtained new books and 2 computers, there are still many necessities. He argued that they have asked various companies and other actors for support, but very few have responded. The same is true for Maderacre. 'Maderacre has very few times identified itself with the institution (…) despite the various times that they have asked for support, the company has supported them very few times' (Interview former director). According to him, other companies in the region generally support the institution more than Maderacre, since they sometimes provide materials as well. Nevertheless, the perception of the current director is more positive of Maderacre, since she argued that the company always cooperates and is one of the few companies in the region that 'has opened its door' for the school. For example, a request has been done to provide prices for the drawing competition of the anniversary in 2013, which Maderacre granted. However, she did argue that the school still has many necessities due to the flood of last year.

Use of intellectual property
During the research period, no incidences have been mentioned regarding the use of intellectual property by the company. This can be explained by the fact that most community members have traditional knowledge and skills related to subsistence activities, such as subsistence agriculture, collection of forest products or the development of tools and crafts (Greenoxx, 2012). This knowledge is less relevant to the company, since the activities of the company are related to commercial forest management and forest extraction, which is less developed among local community members.

Access to information and technical knowledge
Besides activities regarding environmental education, Maderacre also contributes to the transfer of more technical knowledge to the local community. An example of this are talks given to the local Agricultural School, where the company provides more technical talks regarding forest management.

Regarding the indigenous community Bélgica, the company has the objective of providing talks and training in forest management as well, in order to support the community in their forestry activities. However, at this moment these plans are still on paper. With the implementation of the Madre de Dios REDD project, it is estimated that more resources will be available for implementing information programs to the local population.

5.3.7 Access to material resources
In addition to support in education and health-care, Maderacre also supports the community by investing in communal roads and improving local infrastructure. This is mainly done for communal roads that the company shares with local stakeholders, such as the indigenous community Bélgica and the rural settlements of Nueva Esperanza and Primavera. In return, community members living nearby these roads carry out certain surveillance activities and control access to these roads.

Respondents from the rural settlements Primavera, Nueva Esperanza and Chilina all perceive the support of Maderacre as highly positive and important to the community. According to the representative of Nueva Esperanza, Maderacre has recently supported them with the maintenance of the road. Due to a problem with another private company from Lima, the road had become inaccessible, which disabled members of the community to transport their products to the village. Maderacre supported them with machinery in order to clean the road and make the road available again to the community. Another important support of Maderacre was the implementation of an electrical system in the educational centre. Also the representative of Chilina and Primavera indicated the importance of the support in road improvement, providing machinery and cleaning of roads. In addition to this, it is argued that the company provides them occasionally with gasoline and with wood for the construction of institutions.

Other support
Because Maderacre has focused its social responsibility program on health-care and (environmental) education, the company cannot fulfil all requests for support from other actors in the community. However, this is not known by all community members. For example, the representative of the club of mothers is highly critical of Maderacre for not supporting the organization. The club of mothers is been set up in order to support women with children and enable them to improve their health and quality of life, by providing information regarding alimentation, hygiene or training them in activities that generate income. However, the club is currently not able to carry out these activities due to a lack of resources. She argued that they do not receive support from any actor in the community, not from the private companies, not from the municipality nor from local NGO's. Another respondent who is highly critical of Maderacre, is the President of the neighbourhood Colonia (José Gabriel Gastelo), one of the main neighbourhoods of Iñapari. He argued that Maderacre has never supported the neighbourhood and when he sends a request for support, he does not always receive an answer explaining why the request has been turned town. He often asks for support in the form of baskets for the neighbourhood, or materials necessary for the organization of a social event.

The criticism of these community actors regarding the social support of Maderacre can be explained in different ways. First, as argued above, many community members are not aware of the two social objectives of Maderacre or do not see the results of the Social Responsibility Program in the community. Another explanation given by the company and by other members of Iñapari is that the population has a strong tendency to ask for support, which cannot always be fulfilled. According to Maderacre, the population sometimes asks for support that is disproportionate to the amount of resources Maderacre can dedicate to social objectives. The company argued that the local population sometimes forgets that it is not the responsibility of private companies to fulfil certain necessities in the community, but this is the responsibility of the government.

Access to environmental resources
Regarding the natural environment, the company has different mechanisms for contributing to the protection of the environment. First, the company has been certified by FSC, which means that a sustainable forest management system is in place that enables the company to minimize the impact of its operations on the forest. This includes the protection of High Conservation Value Forests (HCVF), which is required by the FSC standard. Moreover, the presence of the company in the area reduces the risk of illegal deforestation, due to the vigilance and other monitoring activities the company carries out (Interview WWF Lima).

In addition to this, Maderacre, Maderyja and the Ngo Greenoxx has implemented the Madre de Dios REDD project, which was validated on the 2nd of December 2009 according to the Climate, Community & Biodiversity Alliance (CCB Standards) by Scientific Certification Systems (SCS) (Greenoxx, 2012: p6).With the project, the company hopes to create economic revenue that can be used for the protection of the forest area, by investing in surveillance and promoting environmentally friendly productive projects that reduce the need for deforestation. The objective is to contribute to sustainable development and reduce pressure on forest land in the buffer zone of the concession area.

Although the concession area is not directly accessible by the local population, the conservation and sustainable management of the forest will bring the local population indirect benefits in the form of clean air and the protection of biodiversity. Also in the long-term, the conservation of the area will be important for the next generation in Iñapari and surrounding villages.

5.4 Society

5.4.1 Public commitment to sustainability

Maderacre strongly emphasizes the need for sustainable development. According to the Social Responsibility Plan, Maderacre aims to put in practice sustainable development by realizing sustainable forest management while keeping in mind the balance between environmental, social and economic aspects. Another document in which its commitment to sustainable development is emphasized is in the Madre de Dios Amazon REDD project description. These documents are published on the website of Maderacre and are freely accessible to all actors. Moreover, other expressions of the commitment to sustainable development can be found on the website of Maderacre in the form of the certification documents of FSC and CCBA, which indicate that Maderacre complies with the environmental and social criteria developed by these standards.

Maderacre actively tries to create a culture of environmental conservation. This is done in various ways. First, the company provides environmental education for the students of the local school in Iñapari, by organizing environmental talks, workshops and visits to the processing plant. Although these activities are not fully implemented at this moment, the objective of this program is to increase awareness among students and their families regarding the importance of protecting the natural environment. Second, Maderacre informs the local population about forest management in participatory meetings, although not all members participate. Third, the company has the objective to carry out additional communication activities regarding natural resource protection, by placing signs in the community that emphasize this topic. And fourth, the company also supports the local municipality in carrying out environmental activities, such as waste management activities.

5.4.2 Prevention and mitigation of armed conflict

Currently, there are no conflicts present in the area regarding access to natural resources. However, the forestry sector is a sector in which social conflict may possibly occur, which could also happen in Madre de Dios. At the local level, it is argued that there is an increasing pressure regarding the resources of the forest, which is occurring between transnational investors and entrepreneurs, local entrepreneurs and the population of the areas concerned. An increase in social conflict is therefore a possibility (Maderacre, 2012: p4). Another source of tension might come from radical environmentalists and conversationalists, which might pressure the government to prohibit the extraction of the forest.

Although there is currently no conflict between forestry companies in the region and the local population, different respondents have argued that this might become a problem in the future. There exists a negative perception of the forestry companies among the local population, who believes that these companies are deforesting the area and are not leaving anything behind for the community. It is argued that Maderacre and other forestry companies need to improve this image in order to enhance the social support network and prevent social conflict in the long-term.

Another possible risk is the construction of the Alto-Purus Highway, which may lead to tensions and social conflict when the proposal is passed. However, this is currently not approved by the Peruvian Congress, which is therefore not yet a threat at this moment.

5.4.3 Corruption

Although Maderacre has not published a formal document with the commitment to prevent any type of corruption, according to the company, honesty, transparency and integrity is highly valued. This is also indicated by different respondents who do business with the company, who argued that Maderacre tends to be more formal in managing its business activities than other actors in the region. Although this occasionally leads to a more slow and bureaucratic process, this will more likely ensure a formal and transparent character of the business operations.

5.4.4 Research

Maderacre also promotes the development of research. 1 % of the utilities of Maderacre is invested in the development of research activities within the concession area, which means that the development of agreements are promoted between the company and research institutions. Currently, there are five agreements signed with private and public Universities.

6. Conclusion

6.1 Answering the research question

What has been the social impact of project Maderacre on the related target groups and to what extent has Maderacre been able to create shared value at the local level?

Over the years, it has become clear that combining the mutual objectives of poverty alleviation and forest conservation is a great challenge. Most forest conservation approaches tend to emphasize one objective over the other, or have not been able to integrate both objectives effectively. In addition to this, a common problem of most conservation approaches is the lack of funding that is necessary in order to effectively control and monitor large forested areas against external influences. In the context of global climate change, the mechanism of REDD+ was developed in order to provide economic resources to governments for protecting their tropical forests. However, although the idea behind REDD+ is to compensate forest users for conserving their forest, due to the centralized character of REDD+, there is a risk that these benefits will not reach the rural poor. In the literature, it has been indicated that voluntary social certification schemes may improve the social impact of REDD+, since the project will have to comply with a number of social and environmental principles. Another manner is by applying the concept of shared value creation, which means that the social aspect actually becomes part of the core objective of the project in order to reduce internal costs and enhance its sustainability. While compliance with social certification principles might still be considered an obligation, the concept of shared value creation actually requires a genuine positive relationship with local stakeholders, in which communication, transparency and participation are emphasized. In this context, a social impact assessment has been carried out of the company Maderacre, a certified logging company located in the South-East jungle of Peru that has implemented a REDD+ project in 2009. The project has been certified by the social certification schemes FSC and CCBA and the company emphasizes the importance of creating shared value for the local community.

Regarding the main stakeholder group of Maderacre – the workers – the social impact has been mostly positive. The main objective of the company is to provide workers the opportunity to work for a formal and honest company, obtain a stable income and benefit from a variety of social benefits. For most workers, Maderacre is the main income source and the majority of workers indicated that their socio-economic has improved significantly. Maderacre complies with worker rights as established in national and international legislation and promotes a safe working environment, in which measures are taken in order to avoid health-risks and promote equality and integrity. This is also confirmed by the workers themselves, who are generally content with working conditions and the way they are treated by Maderacre. The incidence of accidents and health-problems is low and the majority of workers do not perceive working for Maderacre to be harsh or dangerous. Moreover, they have indicated that there exists a certain level of proximity within the company, which enables them to express criticism and negotiate about working conditions. As a result, there are currently no internal conflicts or other major problems with the workers. Therefore, it can be argued that Maderacre has been able to create shared value for this stakeholder group. In addition to complying with certification schemes and national and international legislation, Maderacre actively aims to create a positive relationship with its workers. This has enabled the company to reduce internal costs and increase productivity, since workers are generally motivated and physically healthy to carry out their activities.

With respect to the target group of local suppliers, the impact of the company is also positive. Although it is more expensive for Maderacre to buy from local suppliers due to a lack of price competition, the company does favour local purchasing in order to contribute to the local economy. Similar to the workers, Maderacre has the aim to establish professional business-relations in which formality and transparency is important. The majority of the respondents is content with the price Maderacre pays, which is according to the market price and established during a negotiation process. Although Maderacre is not always able to pay on time, respondents recognize that this is mainly due to local circumstances. Most suppliers feel they are able to negotiate with Maderacre and a small majority indicated that Maderacre provides them with information regarding novelties and other market information. Compared to the workers, the impact of Maderacre is relatively less important on their daily situation, since most suppliers have a variety of clients of which Maderacre is only one. Nevertheless, the majority of the respondents indicated that Maderacre provides them with an important source of income, which has enabled them to improve their socio-economic situation. For other suppliers, the company is especially important because it provides them with a higher level of security. They argue that the relationship with Maderacre is based upon mutual benefit, which means that they help each other in case of an emergency. Therefore, it can be argued that Maderacre has been able to achieve shared value creation with this stakeholder group. Not only does a positive commercial relation with local suppliers increase the efficiency and stability of the business-activity, due to the proximity with many local suppliers, the company may also count on their support in case of need.

Compared to workers and local suppliers, the relationship with the local community is more complex. In general, the impact of Maderacre is neutral, which means that the company respects the rights of the indigenous community Bélgica and other rural settlements, complies with environmental regulations and does not negatively impact the situation of the local community. Although the presence of migrant workers in the community has been indicated by some respondents as negative, this is mainly the result of the presence of a variety of forestry companies in the region. In general, there are no major conflicts or other problems with members of the local community. Although some respondents argued that the relationship with Maderacre could be strengthened, they do indicate that when there is contact, the contact is friendly and they are treated with respect. Moreover, it has been indicated that the formal and transparent character of Maderacre reduces the opportunity of corruption and discourages dishonest behaviour, which may function as an example to other companies in the region.

In addition to this, the company also aims to create a positive impact in the local community. First, Maderacre has the objective to contribute to the local economy by favouring local hiring of workers and suppliers. This has been successful to a certain extent, since the presence of Maderacre has created formal employment opportunities and contributed to the growth of the local community. However, although the number of job opportunities has increased significantly, some respondents argued that local employment may be enhanced if Maderacre invests in capacity building and improves its image in the community. This may also be in the benefit the company itself, since bringing in workers from other areas in Peru leads to high costs and creates instability regarding the workforce. In addition to this, the company aims to create a positive impact by investing 5% of its utilities in community development. This support is mainly directed towards improving education and health-care, which have been identified as the main necessities by community stakeholders. According to the representative of the health-centre, Maderacre supports them with material resources and other support when they request this, which enables them to rely upon the company in times of need. Also for the indigenous community Bélgica, the support from the company has been highly valuable, since it enables

them to maintain a permanent health-professional in the community. Nevertheless, regarding education, the impact has been more limited. According to respondents from the local school in Iñapari, the company generally does not provide material support to the institution, which operates in basic conditions and currently lacks certain educational materials due to a flood of last year. Instead, Maderacre mainly invests in environmental education, by providing talks and other training regarding the protection of the natural environment and the principle of sustainable forest management. However, different respondents argued that the frequency is too low in order to create an impact in the community. In addition to health-care and education, the company also provides support to other social organizations and rural settlements, mostly in the form of infrastructure and other material support. However, although appreciated by the beneficiaries, this support is mainly provided in times of need and does not have a structural character.

While most community representatives and other beneficiaries are aware of the social support of Maderacre, this is not perceived by the local population. In general, there exists a negative image of Maderacre and other forestry companies among the population of the urban area. This can be explained by a lack of communication and proximity to this stakeholder group, which does not interact with the company on a structural basis. While the company organizes formal meetings in order to provide information about the company, most people do not attend because they do not perceive these meetings to be genuine. As a result, the negative image of the company is maintained and actually reinforces the low attendance to these meetings. Although the stakeholder group is of less immediate importance to the company, this negative image may eventually threaten the long-term existence of the company, since it may lead to social tensions and protest against the presence of forestry companies. In addition to this, this same lack of understanding may motivate local policy makers to implement policies that undermine the business of forest extraction, which almost occurred when the former governor wanted to implement a new tax that would decrease profits significantly and undermine the sustainability of the company (Interview Coordinator Community Bélgica).

It can be argued that Maderacre has been less able to create shared value creation for the local community than for workers and local suppliers. Due to the proximity with these target groups there is more opportunity for communication and negotiation, which leads to higher transparency and mutual understanding between the two actors. In addition to this, because of the commercial relation with these stakeholders, the impact of the company is more structural on their daily situation. Therefore, they have a more positive perception of the company, which leads to higher efficiency and lower internal costs due to the low incidence of health-problems and internal conflict. Regarding the local community, the link between community members and the company is less strong because there is no commercial relationship with this stakeholder group. Although the company invests in community development and organizes opportunities for information and participation, many community members are not aware of this or are not willing to participate. Many respondents perceive these meetings as a formality in order to comply with the certification standards, and not as a genuine willingness of the company to establish a positive relationship with the local population. Although on paper the company recognizes the need to create shared value creation for all stakeholder groups, in practice, social benefit creation for the local community is still mainly considered to be a side-benefit. Nevertheless, while establishing positive (structural) relations with the local community may not be of direct importance to the company at this moment, this may become essential for the sustainability of the business in the long-term.

6.1.2 Recommendations

According to Maderacre, after the company was taken over by family Wong in 2011, the main focus has been on improving and strengthening its economic and environmental performance. Now that the situation is more stable, it is argued that more resources and time can be dedicated to the social objective of the company. For example, there are various plans to implement certain community programs related to health-care and environmental education, which are currently only implemented to a limited extent. Also the need to create a stronger relation with the indigenous community Bélgica has been emphasized and the company has expressed interest in establishing a commercial relation. Because of the professional and transparent character of Maderacre, this may strengthen the forestry operation of the community and reduce the incidence of problems that it currently experiences with the company Maderyja. Moreover, when income is derived from REDD+, this can also be invested in increasing surveillance and control in the area, which will also benefit the indigenous community. This income will also be used for implementing the environmentally friendly productive projects in the buffer zone of the concession area, which will enhance the structural impact of the company on the rural communities Chilina, Nueva Esperanza and Primavera.

Nevertheless, even if the company is able to dedicate more time and resources to its social objectives, if this is not perceived by the local population, the effect of shared value creation will still be limited. Although Maderacre has a communication plan, most communication activities are still in process, or are not effective in reaching the local population. For example, because the internet connection in Iñapari is weak (or even absent), the citizens of Iñapari do not read the website of Maderacre or the digital newsletter. Another example is the participatory meeting Maderacre organizes every year. Most people do not know about these meetings because of the lack of (adequate) communication about these meetings. Moreover, due to the negative image of forestry companies, few people are inclined to invest their time and attend a meeting of Maderacre. This therefore causes a vicious circle; although community members generally have a negative image of Maderacre because they are not informed, they are also not inclined to attend the meetings of Maderacre because of this negative perception.

Different recommendations can be made in order to improve the communication of Maderacre with the local community. First, it is important that the company increases its communication activities and tailors these to the local reality. This can be done by making them more visual, for example by collocating information signs or using images and video material. Other stakeholders argued that Maderacre could possibly invest in small necessities of the community, such as garbage bins or information signs, on which the company can put its logo. Although this is a small investment, it may change the way people think of the company because they can see the positive effect of the company on a daily basis. When the local population is more aware of the social support Maderacre, it may be possible to improve the image of the company and increase the understanding why not all requests for support can be fulfilled.

In addition to this, the company should use more informal communication channels in order to interact with the local population. For example, because there does not exist a strong culture in Iñapari of attending formal meetings, Maderacre could organize more informal meetings or events in order to inform the population. This could for example be done by organizing a sport competition or other social activity, where incentives such as beverages and food are provided in order to motivate people to participate. Also (informal) events organized by other community members may give Maderacre the opportunity to improve its image, by participating more frequently and contributing its experience and expertise to finding solutions for community needs.

In addition to this, Maderacre should communicate with the local population on a more regular basis, by talking informally with community members, showing interest in their well-being and organizing additional meetings. Currently, the Consultative Committees and participatory meetings of Maderacre are not perceived as genuine, since they are only organized when the date of the certification control is approaching. If these meetings are complemented with more (informal) meetings and other communication activities, it may be possible to motivate people to also attend the more formal meetings of Maderacre. When the company engages more with the local population, the negative perception of Maderacre may be reduced. This is also important to the company itself, since it will create a stronger support-base at the local level and reduce the threat of social conflict.

Another strategy of enhancing the image of Maderacre in the community, is by improving the relation with José Gabriel Gastelo, the representative of the neighbourhood la Colonia and the owner of the main radio station in Iñapari. Although he is critical of Maderacre and may sometimes have unrealistic expectations regarding the social support of the company, he is also a person with strong influence in the community. By investing in this relationship, Maderacre may be able to reach more people and improve the image of the company in the community. This can be done for example by fulfilling some (or part) of his requests, but most importantly, by improving the communication with him. For example, he argued that when he sends a request for support, he does not always receive an answer of the company, which increase his negative view of the company. In addition to this, although he does not participate in the Consultative Committee, he did argue that he would like to receive information in written form about the social activities of Maderacre. When his perception of Maderacre improves, he may be more inclined to disseminate more positive information about the company.

However, although improving communication is important, another issue mentioned by respondents is the current importance given to the social area of the company. Different community stakeholders argued that they do not perceive that the social responsibility coordinator has the same influence in the company as the personnel that manages the economic and environmental aspects. Although they perceive Pierina as a very friendly person with whom they can communicate in an informal manner, they do not perceive her as having a real decision-making power in the company. This has also been indicated by the social responsibility coordinator herself. Although she would like to attend all meetings organized in the community, she is often also needed for other areas in the company, which means she cannot always fulfil her activities related to the social responsibility area. Since the staff members who need her help for other activities are generally in a higher position, it is not possible for her to decline these requests. It is therefore important to also educate the personnel of the local office in Iñapari about the need and importance of the social responsibility area, in order to strengthen this at the local level.

7. Discussion

7.1 Limitations

The objective of this study was to carry out a social impact assessment of the company Maderacre. This has been done according to a comprehensive framework of quantitative and qualitative indicators, which is based upon the certification schemes and the social impact framework of UNEP. While measuring compliance with certification schemes and legislation was relatively straightforward, analysing the social impact of the company was more complex. This is because there are many different factors that influence the socio-economic situation of a stakeholder group, which cannot all be contributed to Maderacre. Therefore, I used a combination of quantitative and qualitative research methods, in order to obtain the opinion of target groups regarding the impact of Maderacre. This also enabled me to obtain more insight in the extent to which the company has been able to create shared value creation. This concept is strongly based upon perceptions and opinions, which makes it more subjective to investigate. Moreover, it is un-going process that may become influenced by other factors, which makes it more difficult to determine whether or not shared value creation has been achieved, or will be achieved in the long-term. For example, implementing a certain social activity may not immediately lead to behaviour change, but requires time in order for target groups to perceive this and consciously or unconsciously adapt their behaviour. In the meantime, other factors may also influence the outcome, which makes it more difficult to trace back the result. In the social impact assessment of Maderacre, I have tried to solve this by including sufficient space in the research for the perception and opinion of the stakeholder groups. This enabled me to understand certain nuances and obtain insight in the complexity of the situation, which was necessary in order to place the results into context.

Another limitation was the limited time-period that was available for carrying out my research. This did not make it possible to carry out a large-scale analysis of the urban population of Iñapari. I solved this by carrying out structured interviews with 30 inhabitants selected from different neighbourhoods and complementing this with information obtained from community representatives. Nevertheless, in order to obtain a comprehensive view of the opinion of the local community, it is important to carry out questionnaires with a larger sample of the urban population.

7.2 Contribution to literature

In the literature, various authors have indicated the risk that REDD+ may undermine the situation of the rural poor due to the centralized and market-based character of the mechanism. Applying social certification schemes may reduce this negative impact and create co-benefits at the local level, but more empirical evidence is still necessary. This is also true for the concept of shared value creation, which may contribute to safeguarding the social objectives of REDD+ by making them part of the core-objective. By investigating the social impact of the company Maderacre, it has been able to obtain more insight in the impact of these principles in a real-life situation. It can be argued that social certification schemes can reduce the negative impact of REDD+ at the local level, since it requires project implementers to comply with a set of social and environmental indicators. Nevertheless, the impact may be limited if this is only considered to be an obligation, since this will be perceived by the local stakeholders. This is also true for the case-study of Maderacre, in which the local community did not perceive the social activities of the company to be genuine. Although Maderacre did have the commitment to comply with the social principles of the certification schemes, other actors might be less motivated to do so. If monitoring and verification are not carried out accordingly, the impact of these certification schemes may be even further undermined. Therefore, the concept of shared value creation may

play an important role in enhancing the impact of social certification schemes and creating real benefits at the local level. This is because it is based upon the understanding that distributing the benefits of forest conservation is important for the sustainability of the project. In order to do this effectively, it is important to establish a real relationship with local stakeholder groups and involucrate them into project design and decision-making processes. Only then will it be possible to obtain sufficient understanding of the local reality and distribute the benefits of forest conservation in a manner that is adequate to the local reality. Only when local stakeholders feel they are part of the project and the benefits are adapted to their interests and needs, will the benefits of shared value creation have a long-term effect.

Although Maderacre provided a case-study in order to investigate the impact of social certification schemes and shared value creation in a real-life situation, it is important to carry out additional research regarding these principles. It can be argued that the context in which Maderacre operates is relatively uncomplicated, since most rural communities own their own land and do not depend upon the concession area of Maderacre for their daily livelihood. In addition to this, the level of poverty in Iñapari is low and most people obtain income from activities that are related to commercialism. Therefore, it may be important to conduct research regarding the impact of social certification and shared value creation on REDD+ in an area where poverty alleviation is a more pressing need.

References

Agrawal, A., Nepstad, D., Chhatre, A., (2011), "Reducing Emissions from Deforestation and Forest degradation", Annual Review Environment and Resources

Alpert, P., (1996), 'Integrated Conservation and Development Projects: Examples from Africa', BioScience Vol. 46. No. 11

Alvarez, N. L., Naughton-Treves, L., (2003), "Linking National Agrarian Policy to Deforestation in the Peruvian Amazon: A Case Study of Tambopata, 1986–1997", Royal Swedish Academy of Sciences, Vol.32 No. 4

Angelsen, A., (2008), 'Moving ahead with REDD: Issues, options and Implications', CIFOR

Arnold, J.E.M., Bird, P., (1999), "Forests and the poverty-environment nexus", Prepared for the UNDP/EC Expert Workshop on Poverty and the Environmnent, Brussels, Belgium

Aurenhammer, P., (2013), "Climate Aid Will Neither Support Forests nor the Poor: No Hope for Saving the World's, Journal of Sustainable Forestry, George-August-University Göttingen

Baker, T. R., Jones, J. P. G., Rendón Thompson, O. R., Román Cuesta, R. M., del Castillo, D., Chan Aguilar, I., Torres, J., Healey, J. R., (2010), 'How can ecologists help realise the potential of payments for carbon in tropical forest countries?', Journal of Applied Ecology, British Ecological Society

Blom, B., Sunderland, T., Murdiyarso, D., (2010), 'Getting REDD to work locally: lessons learned from integrated conservation and development projects', Environmental Science & Policy 164 − 179

Bohle, H. G., Downing, T. E., Watts, M. J., (1994), 'Climate change and social vulnerability. Toward a sociology and geography of food insecurity', Global Environmental Change 4 (1) 37 − 45

Brotto, L., Murray, J., Pettenella, D., Secco, L., Masiero, M., (2010), 'Biodiversity in the Peruvian Amazon', ETFRN

Carvalho, J. C., (2012), 'Chapter 7: Towards a New Model of Forest Development', Springer Science

CCBA, (2008), 'Climate, Community & Biodiversity Project Design Standards Second Edition, CCBA, Arlington, at: www.climate-standards.org

Christensen, J., (2004), 'Win-Win Illusions: Over the past two decades, efforts to heal the rift between poor people and protected areas have foundered. So what next?', Winter Vol. 5 no. 1

Center for International Forestry Research, (2007), 'Integrated Conservation and Development: an overview', CIFOR, Powerpoint presentation, Phnom Penh, Cambodia

Colchester, M., (2006), 'Forest Peoples, Customary Use and State Forests: the case for reform', Forest Peoples Programme: Paper for IASCP, Bali

Dooley, K., Griffiths, T., Martone, F., Ozinga, S., (2011), 'Smoke and mirrors: A critical assessment of the Forest Carbon Partnership Facility', FERN and Forest Peoples Programme

Food and Agriculture Organization (2007), 'Forests and Climate Change Working paper 5: Definitional issues related to reducing emissions from deforestation in developing countries', FAO, United Nations, Rome

Food and Agriculture Organization, (2012), 'The State of the World's Forests', FAO, United Nations, Rome

Food and Agriculture Organization, (2010), 'Key findings: Global Forest Resources Assessment', United Nations, Rome

Forest Stewardship Council A.C., (2011), 'Strategic framework for an FSC Climate Change Engagement', FSC

Greenoxx NGO, (2012), 'Madre de Dios Amazon REDD Project: Project Description', VSC Version 3.

Hall, A., (2011), 'Getting REDD-Y: Conservation and Climate Change in Latin America', *Latin American Research Review, Special Issue,* Latin American Studies Association.

Hayes, T. M., (2006), 'Parks, People, and Forest Protection: An Institutional Assessment of the Effectiveness of Protected Areas', World Development Vol. 34, No 12, pp 2064 -2075, Indiana University, Bloomington, USA

Holmgren, S., (2013), 'REDD+ in the making: Orders of knowledge in the climate-deforestation nexus', Environmental Science & Policy 33 369-377, Swedish University of Agricultural Sciences, Uppsala, Sweden

Hughes, R., Flintan, F., (2001), 'Integrating Conservation and Development Experience: a review and bibliography of the ICDP Literature', International Institute for Environment and Development, London.

Ingram, J. C., DeClerck, F., Rumbaitis del Rio, C., 'Integrating Ecology and Poverty Reduction. The Application of Ecology in Development Solutions', Springer Science

Jong, de W., Borner, J., Pacheco, P., Pokorny, B., Sabogal, C., 'Amazon Forests at the Crossroads: Pressures, Responses and Challenges', Forests and Society – Responding to global drivers of change

Kissinger, G., Herold, M., de Sy, V., (2012), 'Drivers of Deforestation and Forest Degradation: A Synthesis Report for REDD+ Policymakers', Lexeme Consulting, Vancouver Canada

Lawlor, K., Myers Madeira, E., Blockhus, J., Ganz, D. J., (2013), 'Community Participation and Benefits in REDD+: A Review of Initial Outcomes and Lessons', Forests 2013, 4, 296-318

Maderacre SAC, (2012), 'Plan de Responsabilidad Social', Lima, Perú

Merger, E., Dutschke, M., Verchot, L., (2011), 'Options for REDD+ Voluntary Certification to Ensure Net GHG Benefits, Poverty Alleviation, Sustainable Management of Forests and Biodiversity Conservation', *Forests* www.mdpi.com/journal/forests

Mustalahti, I., Bolin, A., Boyd, E., Paavola, J. (2012), 'Can REDD+ Reconcile Local Priorities and needs with Global Mitigation Benefits? Lessons from Angai Forest, Tanzania', *Ecology and Society 17 (1): 16,* http://dx.doi.org/10.5751/ES-04498-170116

Naughton-Treves, L., (2004), 'Deforestation and Carbon Emissions at Tropical Frontiers: A Case Study from the Peruvian Amazon', World Development Vol. 32, No. 1, pp. 173-190

Pettenella, D., Brotto, L., (2012), 'Governance features for successful REDD+ projects organization', Forest Policy and Economics 18 46-52, Department of Land, Environment, Agriculture and Forestry, University of Padova, Italy

Peskett, L., Huberman, D., Bowen-Jones, E., Edwards, G., Brown, J., (2008), 'A Poverty Environment Partnership (PEP) Report: Making REDD work for the Poor', Poverty Environment Partnership (PEP)

Pokorny, B., Scholz, I., de Jong, W., (2013), 'REDD+ for the poor or the poor for REDD+? About the limitations of environmental policies in the Amazon and the potential of achieving environmental goals through pro-poor policies', Ecology and Society 18(2)

Porter, M.E., Kramer, R., (2011), 'Creating Shared Value', Harvard Business Review

Ribot, J., Larson, A M., (2012), 'Reducing REDD risks: affirmative policy on an uneven playing field', *International Journal of the Commons Vol. 6, no 2, pp. 233-254.* Igitur publishing

Rights and Resources, (2012), 'Respecting Rights, delivering development Forest tenure reform since Rio 1992', Washington D.C

Rutt, R., (2012), 'Social protection in REDD+ initiatives: a review', University of Copenhagen

Southworth, J., Marsik, M., Qiu, Y., Perz, S., Cumming, G., Stevens, F., Rocha, K., Duchelle, A., Barnes, G., (2011), 'Roads as Drivers of Change: Trajectories across the Tri-National Frontier in MAP, the Southwestern Amazon', Remote Sensing 3 1047-1066

Taylor, P. L., (2005), 'In the Market But Not of It: Fair Trade Coffee and Forest Stewardship Council Certification and Market-Based Social Change', World Development Vol. 33, No. 1, pp 129-147

United Nations Environment Programme, (2009), 'Guidelines for Social Life Cycle Assessment of Products', Life Cycle Initiative

United Nations (2009), 'The State of the World's Indigenous Peoples', Department of Economic and Social Affairs, New York

Wunder, S., (2005), 'Payments for environmental services: some nuts and bolts', Center for International Forestry Research (Cifor)

Wunder, S., (2001), 'Poverty Alleviation and Tropical Forests – What Scope for Synergies?', Center for International Forestry Research (CIFOR), Jakarta, Indonesia

World Wildlife Fund (2007), 'Factsheet Deforestation and Climate Change' , WWF
http://awsassets.panda.org/downloads/intro_factsheet_27nov07_lr.pdf

Websites:

FSC: http://www.fsc.nl/

Forest Peoples Programme: http://www.forestpeoples.org/

UNFCC: http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php