

UNIVERSITY OF ANTWERP

INSTITUTE OF DEVELOPMENT POLICY AND MANAGEMENT

Dissertation

WHAT DOES SOCIAL UPGRADING MEAN FOR SMALL-SCALE PRODUCERS?

**Family Farmers and Oil Palm Cultivation –
A View of Possibilities and Constraints**

Wanêssa MARQUES SILVA

Master of Globalization and Development
Supervisor: Prof. Dr. Lee Pegler
Academic Year 2013-2014

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Preface and Acknowledgements

The sustainable development of small-scale producers has been always in my interest. Small-scale producers occupy the bottom position of value chains in developing countries, which makes their social upgrading much more difficult to be attained. Nevertheless, the literature has been given little attention to this type of producers. In this sense, when the opportunity to participate of the GOLLS project emerged I was glad to be able to take part in it. The Governance of Labor and Logistic for Sustainability (GOLLS) research project is a joint initiative between the Institute of Social Studies of the Erasmus University Rotterdam, in The Hague, the Institute of Development Policy and Management (IOB), in Antwerp, and several universities and organizations in Brazil. GOLLS project studies commodity chains' dynamics that link Brazil and main ports of Europa. In this regard, GOLLS aims to assist the promotion of labor rights, human security and social improvements to participants of global value chains. Moreover, the current government incentives for the expansion of palm oil production in Brazil also contributed for choosing this topic.

The research process was not easy, but I was lucky to count with the help and support of people who I would like to thank:

- Prof. Dr. Lee Pegler, for the invaluable assistance during the entire research process and for all the motivation and kind words;
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List of Acronyms

CPO Crude Palm Oil

CSPO Certificate for Sustainable Palm Oil

GCC Global Commodity Chain

GPN Global Production Network

GVC Global Value Chain

ILO International Labor Organization

ISPO Indonesian Sustainable Palm Oil Foundation

NGO Non-Governmental Organization

PA Pará state

P&C Principals and Criteria

PNPB National Plan for the Production and Use of Biodiesel

PPP Public-Private Partnership

PRONAF Program for the Strengthening of Family Farming

BDPO Refined Bleached Deodorized Palm Oil

RSPO Roundtable on Sustainable Palm Oil

UN United Nations

UK United Kingdom

VC Value Chain

IYFF International Year of Family Farming

ZAE Agro-Ecological Zoning

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Executive Summary

When the global value chain approach has emerged in the literature of value chains its primary concern was economic returns and the economic upgrading of enterprises. Labor thus was treated as one more factor of production and was hardly taken into consideration by researchers (Rossi, 2011). However, due to the development of the global production network (GPN) perspective workers and small-scale producers start to be seen as social actor and social upgrading has become theme of several studies (Pegler, 2009; Barrientos et al., 2010; Bernhardt and Milberg, 2011, Rossi, 2011; Selwyn, 2013).

Notwithstanding the notion of social upgrading is often characterized by narrow definitions and measurements in the literature. In this sense, the present work called attention to a broader and interdisciplinary definition of social upgrading. Considering that work characterizes individuals and changes in work conditions should also come from people's actions, it was argued that notions such as agency and livelihood strategies are essential to a better understanding of the concept of social upgrade. Agency is people's capacity to change and build by themselves their own social realities (Long, 2001). Agency enables small-scale producers to challenge and pressure GPN drivers and other actors outside and inside the chain in order to achieve social improvements in the work place. Livelihood strategies refer to livelihood choices based on the assets (material or social) possessed (Ellis, 2000). Livelihood strategies influence people participation in value chains and their decision-making concern their work lives.

It was also argued that factors that enable or constraint social upgrading should also be taking into consideration in social upgrading analysis. Two of these factors are discussed in the present research: government actions and the establishment of standards (there are more indicators that facilitate or restrain social upgrading, but they should be subject of further analyzes). In this regard, the present research aimed to answer two main questions:

- What does social upgrading mean for small-scale producers?
- Which are the facts and circumstances that enable or constrain the achievement of social upgrading for smallholders?

In order to address these questions the case study of the inclusion of family farmers from the Brazilian amazon region in the palm oil global production network was analyzed. In 2002, a public-private partnership was establishment between the government, a private company and family farmers for the cultivation of oil palm. More than 10 years have passed since this agreement and its consequences to smallholders are apparent. Through semi-structured interviews, informal talks and observations it was possible to conclude that income, livelihood opportunities and well-being of family farmers have improved. Oil palm cultivation has provided family farmers with resources and time to invest in other activities, diversifying their sources of income. It also has brought direct in indirect benefits to their communities. The partnership has increased income in the communities, which has prevented migration to urban areas and has generated employment in the region, and has influenced the improvement of infrastructure in the small villages, e.g. the construction of roads and the establishment of power services.

Nevertheless, the partnership arrangements have contributed for a relation of dependence between family farmers and the big company. The government has not complied with the agreement commitments and the enterprise has become the only actor supporting the family farmers. This situation has coupled with their low rates of education and expertise in oil palm cultivation and market, which has generated a dependence of family farmers in relation to the enterprise. Therefore, their agency to pressure for better social conditions is hindered and their social upgrading still could not be fully attained.

1. Introduction

The exchange of goods and services around the globe has reached impressive levels in the last years of the twentieth century. This fast increase in the globalization process¹ has brought the necessity of a better understanding of the dynamics behind global commercial flows and their implications to the livelihood and well-being of millions of people involved in production and trade. Thus, throughout the past decades the literature has been exploring the consequences of this process on poor people living in developing countries. In this context, concepts such as global value chain (GVC) and global production network (GPN) have emerged as tools to analyze global distribution patterns of production and earnings among distinct parties (actors) within highly connected nets of production (Kaplinsky and Morris, 2000).

Since the 1990s, value chain (VC) analysis has gained popularity among scholars and become an important heuristic tool to map and, based on these mappings, to modify distributional outcome trajectories. Kaplinsky describe the value chain as “the full range of activities that are required to bring a product or service from conception, through the intermediary phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use” (Kaplinsky, 2004: 80).

When analysis of value chains arose as a field of study, the main concerns of the literature were economic returns and the economic upgrading of firms. Labor was treated as a mere factor of production or not even taken into consideration and workers, as social actors, were not part of the analysis (Rossi, 2011). However, since the last decade, this path has changed and social issues have become theme of several studies (Pegler, 2009; Barrientos et al., 2010; Bernhardt and Milberg, 2011, Rossi, 2011; Selwyn, 2013). Of particular importance is the social upgrading of small-scale producers and workers. These types of producers and workers are often found at the bottom of value chains in developing countries, occupying the most vulnerable position in the chain. They are normally involved in agricultural production or home-based work in more labor-intensive or artisanal types of manufacturing, and usually have access to their own assets and means of subsistence. Their production takes place in or around the

¹ Globalization is the progressive attenuation of global flow barriers to ideas, information, technology, labor, capital, goods and services (Kaplinsky and Morris, 2000).

household and the distinction between commercial and unpaid activities is quite limited. It also involves both paid and unpaid family labor, and can include child labor (Barrientos et al., 2010).

Studies have confirmed that the violation of rights and insecurities faced by workers and producers in small-scale systems of production are greater than the ones suffered by workers inserted in higher levels of value chains in which labor is more secure and regulated (Pegler, 2009; Barrientos et al., 2010). Small-scale producers and workers very often have limited skills and resources, low or no education, no access to credit, and are less informed than high-skilled workers and producers, which diminish their bargaining power in negotiating with value chain drivers and other actors directly or indirectly involved in the chain.

Nevertheless, the insertion of small-scale producers and workers in global value chains has been largely supported. It is argued that the participation in VCs offers great opportunities for the achievement of poverty alleviation, entrepreneurship and decent labor conditions (Helmsing and Vellema, 2011). This assumption is often linked to the idea that the inclusion in VC's brings higher economic returns (and economic upgrading) to small-scale producers and workers which (automatically) generates social ameliorations. However, recent studies have shown that economic upgrading does not necessarily lead to social upgrading and can even result in social downgrading (Barrientos et al., 2010; Milberg and Winkler, 2010; Bernhardt and Milberg, 2011).

Despite the recent increase in the amount of researches that focuses on social upgrading, the conventional use of this concept is very often characterized by narrow definitions and measurements. It does not comprise all the implications that the access to better work conditions should encompass (Bolwing et al., 2010). In this sense, the present study looks for a broader and interdisciplinary conceptualization of social upgrading that embraces the notions of agency and livelihood strategies in its characterization. Additionally, social upgrading studies rarely address facts and circumstances that enable or constrain the attainment of social improvements to small-scale producers. Social upgrading depends on different processes that influence and change the behavior of agents inside and outside the chain, such as power relations (including their multidimensional conceptualization), government actions and the establishment of

standards and certifications, which can foster or limit social upgrading achievement. Accordingly, this research aims to answer two main questions:

- What does social upgrading mean for small-scale producers?
- Which are the facts and circumstances that enable or constrain the achievement of social upgrading for smallholders?

In order to answer these questions the inclusion of family farmers from the Brazilian amazon region in the palm oil global production network will be analyzed. Palm oil global production more than doubled in the last decade and palm oil became the most world widely used vegetable oil. Its high quality, productivity, versatility and price together with low costs of production contributed to this fast expansion (Sheil et al., 2009; WWF, 2013). Following this scenario the Brazilian government has launched several programs aiming to foster palm oil production in Brazil over the next few years. The vision is for Brazil to become the fifth world biggest palm oil producer in 2015, currently the country occupies the tenth position (Villela et al., 2014). Among these projects is the inclusion of family farmers in the palm oil value chain based on a pilot partnership developed by Pará state government in the beginning of the 2000s.

In 2002, representatives of the Pará government, which is responsible for 90% of Brazilian palm oil production, invited a private company and family farmers to integrate a public-private partnership (PPP) for the production of palm oil. They accepted the government proposition and a contract of partnership for the duration of 25 years was signed between the three parties. Family farmers agreed to cultivate oil palm, the government committed to provide the land for the plantations, credit and technical support, and the company would buy the fruit. Currently, more than 10 years have passed since the establishment of this project and it is therefore possible to analyze whether or not the inclusion in a GPN has brought economic and social upgrading to the small-scale producers. This case offers a representative picture of the dynamics associated with inclusion in a VC and how various factors can influence the achievement of social upgrading. Its particularities make this analysis highly significant to value chain analysis and the study conclusions may bring new perspectives to this field of study.

The next section will present the methodology applied in the present research. Due to the intangibility of factors analyzed in this study a qualitative approach has been

chosen. Data was gathered through semi-structured interviews, informal talks and observations with family farmers and other key actors. The third section will briefly resume the evolution of concepts in the literature of value chains, giving greater emphasis on how social upgrading has been characterized. Moreover, it will be also discussed the inclusion of the notions of agency and livelihood strategies in the conceptualization of social upgrading, as well as the factors that enable or hinder social upgrading. The fourth section will be divided in two main parts. The first part will present an overview about palm oil production and the context of this production in Brazil. The second part will show and analyze the data gathered during the field work. Conclusions and recommendation will be presented in the last section.

2. Methodology

The present research builds a methodology for examining the inclusion of small-scale producers in global production networks. The current literature suggests that this is best done by combining a vertical vision of chain structures (and their governance) with a grounded understanding of the local social context and dynamics. The objective is to promote and add to a vision whereby there is not only economic upgrading, as a result of chain insertion, but also an improvement in social conditions.

Based on an actor-oriented approach that characterizes social actors as active participants of social interactions, influencing and being influenced by external interventions (Long, 2001), this research task will thus be to draw understandings of what forms of social change represent upgrading, according to concrete experiences informed by family farmers involved in the palm oil global production network. The research will be grounded in this vision but also in a consideration of how other actors and circumstances either support or challenge social upgrading. Therefore, the case study of Brazilian family farmers inserted in the palm oil global production network will be used to address the research questions raised in this analysis. This case study was chosen due to its relevance to the current economic and social development of small-scale producers in tropical developing countries.

Due to the complexity of social upgrading matters, which encompass abstract aspects of work conditions, as well as taking into account the fact that qualifying work requires

qualitative data that can hardly be extracted from quantitative surveys (Rossi, 2011), the present research adopted a qualitative approach. Additionally, the analysis of social upgrading of family farmers is favored by qualitative research flexibility and capacity to go deep in social and institutional aspects of local context (Bamberger, 2000). This research relied on a case study method, “an empirical inquiry that investigates a contemporary phenomenon within its real-life context” (Yin, 1994: 13). The case study provided deep and detailed information about each particular data collection, which makes it the most suitable method to clarify the research questions.

The present research essentially used primary data for its analysis. Nevertheless, secondary data based on a study conducted by Peabiru² (2014) about social and environmental aspects of family farmers in the same region was also consulted. Primary data was collected through semi-structured interviews³, informal talks, walks and observation⁴. The fieldwork took place during the month of July 2014 in three communities, Arauaí, São Vicente and Soledade, located in the Mojú municipality area and in Belém, Pará state. Semi-structured interviews were carried out with 28 family farmers who live in the communities. Agropalma staff, community representatives and members of a local NGO, Peabiru, were also interviewed or participated in informal talks.

Arauaí, São Vicente and Soledade as aforementioned are part of a municipality of Mojú, which has a population of 70,018 inhabitants (IBGE, 2010). According to local community leaders, Soledade has more than 2000 inhabitants and the other two have nearly one third of this number. These communities were chosen because a large number of family farmers who cultivate oil palm reside there⁵, and also due to practical constraints, such as time and location. To overcome difficulties the selection of the communities was made in consultation with Peabiru. Family farmers were simple randomly selected within the three communities. In São Vicente and Soledade, 12

² Peabiru Institute is a civil society organization that works with biodiversity and forest conservation, as well as with the promotion of sustainable development of rural and traditional communities in the North of Brazil. This organization has been working with family farmers for over five years and its insights were significantly useful for this research.

³ The interview guide is available in the appendixes.

⁴ Walks and observation were used to provide a complementary vision of roles and positions in the value chain and in the communities

⁵ Most of the family farmers who participate in the partnership with Agropalma live in seven communities or farms around the enterprise manufacturing plant, however some others live in distant location in different municipalities.

farmers from each community were interviewed. However, in Arauaí only 4 interviews were conducted due to time and location restraints. Among the interviewees 4 were female and 24 male.

One semi-structure interview was conducted with Agropalma's manager of corporate social responsibility, and informal talks took place with other staff members of the company who work directly with family farmers. Three semi-structured interviews and informal talks were carried out with Peabiru members. This NGO was hired by Agropalma to provide a diagnostic about the economic and social life of family farmers, as well as to promote awareness about environmental sustainability in the communities. Peabiru worked nearly five years in the region. Informal talks were used to obtain information with local leaders. Government representatives were not interviewed due to difficulties in establishing contact with them, e.g. phone numbers were not available or there was no answer, and time constraints.

During the field work I was often in the company of a local female resident who was supporting me with transportation between households and communities. Her presence facilitated the approach and the establishment of trusting relationships with family farmers. There was no sign of discrimination from interviewees (family farmers or other actors) towards me because of my age or gender. Language and cultural aspects were also not an issue. Most of the interviews were recorded with the consent of the interviewees, but as a matter of confidentiality their names will be omitted.

The analysis of the data collected was based on the six phases of analysis model of Braun and Clarke (2006), which includes: transcription and data review, generating initial codes, search for themes, reviewing themes, defining and naming themes, and analysis. Notwithstanding limitations of the qualitative approach and the case study method, the use of varied research methods (semi-structure interviews, informal talks, walks and observations) and the contact with different actors provided significant and reliable information about economic and social aspects of family farmers, enabling confident conclusions.

3. Literature review and theoretical framework: value chains analysis - concepts and definitions

3.1 From GCC to GVC

The increase of trade and service flows around the globe and the spread of industries to Asia during 1950 and 1960, and to Latin America and Caribbean in the 1970s and 1980s made production and trade more integrated, but also more complex (Gereffi and Memedovic, 2003). The intensification of the globalization process brought new configurations for flows and production dynamics, which influenced the development of analytical tools that could better explain the nuances of this new world. In this context, Gereffi (1994) established the concept of global commodity chain (GCC), a notion that encompasses the complexity of activities and relations among different actors in production networks (Rossi, 2011). Gereffi (1994) stresses that GCC characterizes the process by which inputs are transformed into finished commodities and distributed to consumers. Thus, it presents the links between production and distribution where production often takes place in a developing country and the finished goods are exported to developed markets.

Gereffi (1994) also discussed power relations among different actors in a chain, dividing GCCs into two governance structures (two organizational frames): producer-driven and buyer-driven chains. Governance refers to the exercise of control along the chain. It is the power that some firms possess to set and enforce parameters under which other chain participants operate (Humphrey and Schmitz, 2002). Producer-driven chains are characterized by large capital-and technology-intensive manufactures that coordinate and are involved in the whole production network, including distribution and retailing. They are multinational (oligopolies) that move to developing countries to have facilitated access to raw materials and cheaper cost of production (e.g. General motors and IBM). In contrast, buyer-driven chains are decentralized production networks where retailers, marketers and branded manufactures, such as Wal-Mart, Zara and Nike, are the key players. They sell, finance and develop products' marketing, adding high-value to them through their famous brand marks, and consequently, most the profits stay in their hands (Gereffi, 2001; Gereffi and Memedovic, 2003).

Some years after establishment of the GCC perspective another approach aiming to study firm-level dynamics and distributional patterns was elaborated on. The global value chain concept arose expressing the major importance given to value creation, value distribution and value capture in the production process (Rossi, 2011). Global value chains refer to the value added to activities, which firms and workers perform, required to produce a good from its idealization, through the different stages of production until the delivery to final consumers and end use. This concept involves the coordination of activities, such as design, production, marketing, distribution, retailing and support to final consumers, which are divided into firms often located in different countries and regions. The GVC study comprehends a holistic view of the global production that comes from the top down to the bottom up (Humphrey and Schmitz, 2000; Gereffi, 2005; Gereffi et al., 2001; Barrientos et al., 2010; Gereffi and Fernandez-Stark, 2011). The global value chain approach has been widely used to analyze distribution patterns. Its deeper insights enable a better understanding of resources and commercial activities spread around the globe, which traditional models of economic and social analysis do not provide (Kaplinsky and Morris, 2000).

In the context of the GVC approach and the relevance given to economic aspects in chain analysis, the notion of economic upgrading emerged. The expansion and liberalization of trade markets around the globe led to an increase in competition and, consequently, to a fear of market loss. This situation fostered the idea of economic upgrading as a solution to improve efficiency, decrease costs and provide higher value-added to production (Milberg and Winkler, 2010). Economic upgrading is characterized as a process in which firms shift their competences from lower-value to higher-value activities when inserted in global production networks to maximize value creation and learning⁶ (Gereffi et al., 2001; Gereffi, 2005). In addition, economic upgrading

⁶ Within the GVC framework four possible stages in which firms can achieve economic upgrading are identified: 1)*Process upgrading*: reorganization of the production system or introduction of new and superior technologies (innovation) that did not already exist aiming costs reduction; 2)*Product upgrading*: refers to the shift toward new products or improvements in operation or design of existing products. In this upgrading the objective is develop products that use less material and energy; 3)*Functional upgrading*: changing functions within firms or introducing new functions (or abandoning existing ones) in order to perform higher value added tasks and; 4)*Chain upgrading*: shifting to new industries or product markets (value chains) that are technologically more advanced and, possibly, comprehend different marketing channels (Humphrey and Schmitz, 2000; Humphrey and Schmitz, 2002; Barrientos et al., 2010; Gereffi and Fernandez-Stark, 2011).

supposed to promote competitiveness and innovation among industries, which lead to more efficient and higher quality production (Gereffi and Fernandez-Stark, 2011).

3.2 Global production network and social upgrading

The GCC and GVC approaches basically study input-output structures and governance aspects of chains (Rossi, 2011), giving little or no attention to social issues involved in the production process. In this view, the notion of global production network arose in order to address social and environmental themes in the study of value chains (Gereffi and Fernandez-Stark, 2011). This perspective is based on the notion of social embeddedness of Granovetter (1985) which stresses that the social context in which actors are inserted in determines their behavior and economic activities (choices). In this sense, apart from analyzing the role and interactions of leading companies and suppliers, the GPN framework also focuses on other important actors (national governments, international trade unions, NGOs and multilateral organisms) that influence and are determinant to the global production. Within the GPN scope more space was given to institutional and social aspects of the production network, power relations became a central topic and labor conditions and workers' entitlement were recognized as indispensable to address poverty and livelihood issues (Barrientos et al., 2010).

In accordance with the GPN perspective, the concept of social upgrading, the improvement of labor conditions, has become the focus of many recent studies (Barrientos et al., 2010; Bernhardt and Milberg, 2011, Rossi, 2011; Selwyn, 2013). The notion of social upgrading is embedded in the conceptualization of decent work made by the ILO. In the face of the challenges brought by globalization and the expansion of trade markets and production chains, the ILO (1999) has elaborated the four principals of decent work. These principals refer to work under conditions of freedom, equity, security and dignity where rights are ensured and appropriate remuneration and social protection are provided⁷. The ILO widely promotes the Decent Work Agenda, which has become part of the Millennium Development Goal in 2006. However, as stressed by

⁷ "Decent work applies not just to workers in the formal economy but also to unregulated wage workers, the self-employed and home workers. It also refers to adequate opportunities for work, remuneration (in cash and in kind), and embraces safety at work and healthy working conditions" (Ghai, 2003: 113).

Barrientos (2007), the context of global production networks provides severe challenges to the full accomplishment of the four pillars of decent work.

3.2.1 Social upgrading: critiques and alternative perspectives

Different authors have been applying distinct definitions and measurements to analyze social upgrading. Bernhardt and Milberg (2011), for instance, in their paper, which try to find causal conditions between economic and social upgrading/downgrading, use two basic indicators to indicate and measure social upgrading: increase in employment (or at least no decrease) and increase in real wages (how much workers benefit from the value created by economic activities). These are valid indicators, however they do not say much about real social amelioration of work conditions. Measuring the growth in the number of jobs created does not show whether these jobs are regulated or secure⁸.

Barrientos et al. define social upgrading as the “access to better work, which might result from economic upgrading (for example, a worker that has acquired skills in one job is able to move to a better job elsewhere in a GPN). But it also involves enhancing working conditions, protection and rights” (Barrientos et al., 2010: 7)⁹. The social upgrading concept proposed by Barrientos et al. (2010) is broader than the one used by other authors, such as Bernhardt and Milberg (2011), and it represents an important evolution for value chain analysis. However, the present research argues that this conceptualization still does not comprise all the implications that the access to better work conditions may bring, neither does it address possibilities nor constraints for the achievement of social upgrading.

The way in which social upgrading is addressed in the literature has been raising critiques among scholars. Selwyn (2013), for instance, points that the conventional use of social upgrading contains analytical and political ambiguities. According to this author, the primordial analytical weakness of the social upgrading literature is the

⁸ Many times work within value chains is flexible, informal and insecure. The absence of formal contracts unable legal employment benefits, such as social protection, and increase the risk of poverty. Furthermore, labor regulations by the state have become weak due to the absence of governments' control over corporate buyers, which operate outside their borders. Nevertheless, civil society organizations (notably trade unions and NGO) have been following the activities of big corporation, buyers and brands to pressure and ensure that labor standards are applied within their supply base. Adverse campaigns made by civil society organizations can highly undermine the image, market position and share price of large companies (Barrientos, 2007).

⁹ Barrientos et al. also point that “improving well-being of workers can also help their dependents and communities” (Barrientos et al., 2010:7).

inability to understand the nature of capitalism exploitation and indecent work. He also criticizes the argumentation that amelioration in workers conditions will be provided by firms, states and international organizations. Thus, this author claims for a bottom-up conception of social upgrading that should be “rooted in analysis of the capitalist labor process, where changes to workers conditions are determined, fundamentally, by the balance of power between labor and capital and how this balance is institutionalized by states” (Selwyn, 2013: 76).

Selwyn (2013) argues that firms will not provide benefits to workers if there is no pressure to enforce commitments. According to this author, firms would simply choose not to do so, even if they wanted to, because this would represent an additional cost of production, which could generate losses in competitive advantage. He stresses that competitive accumulation imperatives explain why firms (capital) will always attempt to reduce to a minimum or eliminate labor conditionings that might decrease marginal returns often associated with social upgrading. Taking into account this assumption, Selwyn (2013) points out the significant role of trade unions in the attainment of social upgrading. Trade unions strengthen the bargaining power of workers in relation to employers and governments, enabling the accomplishment of better work conditions and higher wages. Therefore, to this author, the associational power of workers, that allows them to achieve concessions from firms, constitutes a core determinant of the link between economic and social upgrading.

3.2.2 Agency and power relations

Selwyn's (2013) propositions offer a new perspective to the analysis of social upgrading. This author focuses on the workers' ability to change 'the rules of the game' by themselves through collective action. This assumption can be directly linked to the notion of human agency. It states that workers or, in our case, small-scale producers have agency to change their own reality. Based on this premise, the present research argues that the idea of agency is essential to the process of social upgrading. Agency can be characterized as following:

“The notion of agency attributes to the individual actor the capacity to process social experience and to devise ways to deal with life, even under the most

extreme forms of coercion. Within the limits of information, uncertainty and other constraints (e.g. physical, normative or politico-economic) that exists, social actors possess the 'knowledgeability' and 'capability'. They attempt to solve problems, learn how to intervene in the flow of social events around them, and to a degree they monitor their own actions, observing how other react to their behavior and taking note of the various contingent circumstances" (Giddens, 1984 in Long, 2001: 16).

This means that even actors who occupy the weakest position in society can engage in the construction of their own social lives. Therefore, small-scale producers, individually or collectively, have the capacity to change their workplace realities.

The labor geography literature has been contributing to the notion of labor agency linking their work to the study of GPN. Katz (2004), for instance, states that worker's agency is a multi-level conception that includes three main strategies: resilience - small acts that help people to cope with their everyday reality but do not change social relations, e.g. migration (Sportel, 2013); reworking - improvement of material well-being, adjusting power relations and the distribution of resources, for example, through the expansion of the access to education (Katz, 2004) and; resistance – it is challenge of historically and geographically oppressive social relations, e.g. the organization of collective campaigns to improve labor rights (Sportel, 2013), and consequently achieve social upgrading.

Another example is the work of Carswell and De Neve (2013). These authors follow a horizontal approach to show how multiple and everyday forms of agency used by workers design and affect their work choices and social lives (e.g. women workers who have children need more flexibility and may shift from a job in a factory to home-based work, which can result in a lower income). These authors argue that labor agency is shaped by social relations and livelihood strategies - which can both enabling and hindering people's decision making and agency potential (e.g. gender social constraints restrict women's agency) - that are themselves embedded in a wider economic and cultural environment. Carswell and De Neve's (2013) perspective is grounded in a notion that sees worker's agency shaped and embedded in both vertical, the governance structures of GPNs, and horizontal dimensions, local social relations and livelihood strategies (Coe and Hess, 2013; Lund-Thomsen, 2013). Therefore, the constraint of

small-scale producers' agency, due to chain or social aspects of their lives, can prevent the attainment of social upgrading.

As stressed by the labor geography literature social relations, or more precisely power relations, are determinant to shape smallholders' agency potential. It is not possible to talk about agency and not talk about power relations. The study of power relations in value chain analysis was primarily linked to the notion of governance, the vertical control of the chain¹⁰. The governance notion is useful to study inter-firm level relations, but it does not approach multiple modalities of power relations that are involved in a global production network. These multiple possibilities of power configurations enable small-scale producers to articulate and mobilize resistance and pressure to attain better work conditions (Coe and Hess, 2013).

Power relations established inside and outside GPN's can be one of the main constraints to the social upgrading of small-scale producers and workers. It can restrain participation, representation and voice. As Mosse (2010) stresses power that people have is dependent of others' (e.g. labor unions leadership, workers party) capacity to classify them and speak on their behalf (this author sees power as representation in political arenas). The problem here, then, is that weaker groups depend on others to be represented otherwise their claims are invisible and unpoliticized¹¹. Therefore, the suppression of freedom of association can render small-scale producers with no representation (voiceless). The same happens in associations (labor unions and cooperatives) where the representatives have no real interest in workers' will. Situations like these hinder smallholders to fight and pressure companies, government and society for their rights.

Nevertheless, as Long (2001) states power emerges through processes of social interaction, thus it should be seen as a relationally and not as something that can be used up. Moreover, the fact that someone has power does not mean that others cannot have. Therefore, "all actors exercise some kind of 'power', leverage or room for manoeuvre,

¹⁰ Humphrey and Schmitz (2001) point that without governance a value chain would be just a net of market relations, it would not exist. The UK-Africa horticulture value chain offers a typical example of governance. Supermarkets in UK determine imperatives of the horticulture production (e.g. employment strategies), even though they do not own farms or packing facilities. Supermarkets only take ownership of horticulture products when they arrive in UK regional centers of distribution, but this does not prevent them to influence earlier points in the chain (Humphrey and Schmitz, 2001; Dolan, 2004).

¹¹ For Mosse (2010) this is what often happens with lower-income people, such as in his example of migrant workers in India that have no representation and thus, cannot reach social improvements.

even those in highly subordinate positions” (Long, 2001:17). This conceptualization of power linked to the notion of agency express the possibility that smallholders in the bottom of a GPN have to resist and change social conditions by themselves.

3.2.3 Livelihood Strategies

In their framework, Bolwig et al. (2010) highlight the importance of power relations and terms of participation for value chain analysis. According to these authors conditions and terms of participation, as well as power relations, deserve special concern because they influence livelihood strategies (opportunities). “Livelihood activities are not neutral but engender processes of inclusion and exclusion” (De Haan and Zoomers, 2005). The inclusion in a specific value chain can mean exclusion from others that may be more advantageous. Therefore, smallholders should carefully analyze costs and benefits of participation. Moreover, exclusion is not necessarily a disadvantage. Local markets, for example, can offer better returns than global markets, which make the non-participation in a GPN a desirable choice. Actors through their agency can opt for self-exclusion. At the same time, inclusion may provide opportunities to gain status or consolidate power in social relations, which can facilitate the accomplishment of better work condition (Hospes and Clancy, 2011).

Livelihood, as means of making a living and giving meaning to people’s lives (Bebbington, 1999), includes people’s capabilities and access to social (intangible) and material (tangible) assets (Kanji et al., 2005). Households or individuals make their livelihood choices based on the assets they possess (Ellis, 2000). Assets are stocks of capital: human, natural, social, produced (physical and financial) and cultural (Bebbington, 1999). Capitals represent resources used to build livelihoods and provide to households the capability to be and act (Kanji et al., 2005). To access all the capital they need households often participate in multiple value chains. This involves competition for resources, which is influenced by age and gender status. Therefore, the terms of participation in a given value chain, being part of a livelihood strategy, depends not only on its returns or risks of inclusion and the assets possessed, but also on how the overall household resource (material or social) allocation is distributed among its members (Bolwig et al., 2010; Riisgaard et al., 2010).

Agency and livelihood strategies are essential factors of people's work and social lives. At the same time that social upgrading fosters smallholder' agency and livelihood strategies, agency and livelihood strategies help them to resist and pressure to better work conditions. In this sense, the present work calls attention to the importance of inclusion of these two factors in the conceptualization of social upgrading.

3.3 Possibilities and constraints to social upgrading

Despite the recent attention given to the social upgrading thematic in the literature in the past years and the diverse forms of conceptualization of this aspect in GPN analysis, few studies concentrated in characterizing possibilities and constraints to social upgrading. A broad range of variables can be included in this categorization, such as social capital, access to information and the role of civil society organizations (that might be subject of further researches). Nevertheless, this work will focus on two factors that have been given little attention by GPN literature and exert significant influence in the attainment of social upgrading. These factors are government actions and the establishment of standards.

3.3.1 Government Actions

The role of national, regional or local governments in the social upgrading of small-scale producers is very often underestimated by the literature of GPN. It is often argued that to small-scale producers upgrade decision-making needs to come from private actors that occupy higher positions inside or outside the value chain, usually far away from where smallholders are located. According to this assumption, local-level action alone would rarely promote significant change in terms of better work conditions (Riisgaard et al., 2010). This type of argumentation not only denies the agency of small-scale producers as drivers of their own social change, but also suppresses the role of local and national governments in assisting workers to achieve social amelioration.

Governments can contribute in diverse ways for the accomplishment of economic and social upgrading of small producers, from the support to the inclusion in global production networks to the creation of laws and standards in favor of better work

conditions. Governments can facilitate the inclusion of smallholders in local or global value chains, for instance, as part of poverty alleviation or economic growth strategies. This is possible through the creation of physical and informational structures, the non-prevention the participation of stakeholders in the economy, and by combating corruption (Tilburg et al., 2011).

The concession of microfinance services by governments can also assist the inclusion of small-scale producers in GPNs. Smallholders in developing countries have limited access to credit or other financial services (Bitzer et al., 2011). Hence, public services, such as the creation of loan programs or local banks, can enable small farmers to take part in dynamic value chains and increase their livelihoods opportunities. Nevertheless, these policies to social inclusion should be seen as multi-dimensional processes in order to not create adverse outcomes for smallholders or enhance the social exclusion of some groups while the participation of a specific group is promoted (Hospes and Clancy, 2011).

In addition, the government can augment mechanisms to protect or enhance smallholders' participation in global and internal markets. For instance, governments can establish subsidies to exports or quotas, control price systems and supply, and minimize transaction costs. As Laven (2011) states, in her work about the role of the Ghanaian state in the global cocoa chain, the government mitigate risks to producers acting as a chain actor. In the case of Ghana, where the government exerts a severe control over the market, government actions helped producers, in their majority small farmers, to cope with the fluctuations and risks of the liberalization trend initiated in the 1980s. However, persistent control of the government restrains opportunities and incentives for actors to assume their roles, resulting in drawbacks when the government has difficulties to manage sustainable production and social improvements (Laven, 2011).

The government can also support social upgrading through the creation and establishment of laws and standards. Standards settled by the government, differently from other standards, are compulsory, transparent and do not offer leeway to producers (Kaplinsky, 2010). National legislations are the primary norms that a firm obeys in relation to labor rights. Punishments and benefits stated by laws are effective mechanism of compliance. To avoid consequences that can range from fines to the

shutdown of the company, employers change practices and satisfy regulations. Thus, the establishment of labor national and regional legislation and standards has been provoking positive changes to the accomplishment of social upgrading. Nevertheless, besides establishing laws and standards, the government also needs to supervise their application. The non-supervision enables bad practices. However, it is the expressive number of informal work in developing countries one of the main factors that prevents the application and the enforcement of labor legislation. International organizations, such as the ILO, and civil society organizations also play an important role developing standards. However, their standard may not be compulsory or do not present incentives to compliance (Kaplinsky, 2010).

Government actions have a great role in the promotion or constraint of social upgrading. It can facilitate the inclusion in global production network, providing credit to small-scale producers. It also can establish mechanisms that protect the participation and gains of producers and workers, as well as create laws and set standards that promote decent work practices and thus social upgrading. Therefore, the literature of GPN should dedicate more space to the analysis of the government role in the accomplishment of social upgrading.

3.3.2 The establishment of standards

Standards are a range of requirements, specifications or guidelines that can be set up to ensure technical characteristics of materials, products, processes and services (ISO, 2014). Additionally, standards can also include stipulations relating to workers conditions, smallholders rewards and environmental impacts, which are mostly applied in agro-food chains (Bolwig et al., 2010). Standards are set by four major actors: private companies - individual lead-firms develop standards to assure the efficiency of their value chains operations, as well as to comply with civil society pressures on labor rights and environmental concerns; governments – national or local government establish standards to control traded good markets and enforce labor legislation; civil society organizations – standards settled by civil society organizations are voluntary, unlike governmental and private sector standards, but they play an important role for the entry of goods in higher-margin niche markets, and; international industry bodies – industry-

specific organizations set standards to address an international range of participating firms, these standards usually cover different services, since they target internal processes (Kaplinsky, 2010).

The establishment of standards has an important impact on small-scale producers in developing countries. On the one hand, it determines access to specific segment of the market and the entry in higher-margin markets in developed countries. To achieve standards specificities producers develop capabilities that can enhance efficiency and increase productivity. The compliance with some standards guarantees a minimum price to goods, access to credit and technical training. As well as, it provides better work conditions and sustainable practices of production (Taylor, 2004; Bolwig et al., 2010; Kaplinsky, 2010).

On the other hand, costs to meet standards are high and product and process requirements may not correspond to local society practices or with soil and weather conditions, which represent entry barriers (exclusion) to small-scale producers in poor countries who does not have conditions to pay costs of transaction and to existing suppliers. The process of inclusion and exclusion within local societies can cause instability and conflict by interfere in communities' power relations. Changes in social roles due to standards compliance may put some members of the society in a worse off position. Gender roles (especially women roles) are normally the most affected in this situation. Moreover, standards require coordinated actions along the value chain, which may be difficult to attain. There is also the complaint that the market for standardized goods is stagnant, the demand is lower than the supply (Guthman, 2007; Bolwig et al., 2010; Kaplinsky, 2010).

Therefore, standards not only play a significant role in the trade market, but also in the livelihood and social conditions of smallholders who are under their requirements. Standards can offer important opportunities for the accomplishment of social upgrading due to labor conditions requirements. However, they can also constrain the participation of small-scale producers in value chains and modify social and work relations that may lead to the downgrading of specific actors, such as women. In this sense, the extent of the opportunities to social upgrading of small-scale producers under standardized system will depend on the context in which the producers are inserted, the type of production and the amount of real returns that they receive.

3.4 Measuring social upgrading

Based on the theoretical framework presented to guide this research, some indicators are proposed in order to analyze whether or not the inclusion in the palm oil global production network generated social upgrading to family farmers.

The GPN literature normally characterizes social upgrading in two broad categories: *Measurable standards* – which include level of wages, type of contract, social protection, health and safety, working hours and employment security. These indicators are easier to measure and quantify, as well as to observe during social audition in firms. Measurable standards enable the measurement of the modifications in labor practices due to policy changes and interventions that aim to make labor more stable and efficient, and; *Enabling rights* - the full range of rights and entitlements of workers as social actors, which are more difficult to reach, measure and quantify due to their intangible aspects. Within enabling rights are freedom of association and collective bargain, non-discrimination and voice (Rossi, 2011).

These categories encompass some determinant indicators of social upgrading that cannot be left out of the present research, such as income security, safety, freedom of association, voice (representation) and discrimination. In addition, livelihood strategies and potential agency were also tackled. The elaboration of the indicators was based on Rossi (2011) and Kantor et al. (2006) work, but not bounded by them due to differences of target groups (the works of these authors were based on workers and the present research in small-scale producers). These indicators are better detailed in table 3.1.

Table 3.1 Social upgrading indicators

Indicators	Description
Income security	Level of income Access to credit
Safety	Use of safety equipment
Freedom of association	Existence of association Willingness to be associated
Representativeness	Share of producers associated Farmers' participation

	Level of satisfaction with association
Livelihood Strategies	Income sources before the GPN inclusion
	Currently income sources
	Income sources of wife/husband
	Future perspectives

Source: Elaborated by the author based on Rossi (2010) and Kantor et al. (2006)

The indicators were addressed in the interviews with family farmers and the results also count on family farmers' self-perception of social improvements brought by the inclusion in a GPN. The conclusions expressed on factors, such as discrimination and potential agency, were mainly based on information gathered during informal talks and observations due to their intangibility.

4. Palm oil global production network and family farming

4.1 Palm oil production overview

Palm oil is commercially cultivated in at least 43 countries. It has become the most world-wide used vegetable oil in the past years and demand continues to increase (WWF, 2013). The annual world palm oil production has grown from 25,3 million tons in 2001 to 60 million in 2013 (USDA, 2014). It is estimated that palm oil is responsible for 65 percent of all vegetable oil traded internationally. The high quality and versatility of palm oil enable its use in a broad variety of products, from ice cream to shampoo and biodiesel¹². Key to this attractiveness is its high yield. Oil palm is capable of producing more oil per hectare than any other crop¹³ (it produces about three to eight times more than any other oil-crop in a given area). Together with sugarcane grown in Brazil and sorghum grown in China, it makes the most efficient use of land, water, nitrogen, and energy resources. Moreover, costs of production are relatively low, mainly due to cheap labor predominant in the regions where palm grows, Africa, Asia and Latin America (where there are denounces of forced and child labor). High prices in the global market

¹² For many products currently there is no economically attractive replacement for palm oil.

¹³ Oil can be extracted from both fruit, crude palm oil (CPO), and seed, palm-kernel oil. Crude palm oil is most used in food industries and palm-kernel oil in non-edible products (e.g. cosmetics, plastics and herbicides).

also incentives the expansion of this production. (Sheil et al., 2009; Meijaard and Sheil, 2013; WWF, 2013).

Oil palm (*Elaeis Guineensis*) has its origins in tropical rain forest of West and Central Africa. As a typical rainforest species it requires particular conditions to grow, such as high temperatures (among 24 to 30 °C, minimum and maximum) and rain volume¹⁴ (Sheil et al., 2009). Due to these specificities 95 percent of existing plantations in the world are located in a latitude range 10° north and south of Equator line. Thus, palm oil production is restricted to some countries in Southeast Asia, Sub-Saharan Africa and Latin America. Indonesia and Malaysia, the global biggest producers of palm oil, are alone responsible for 86 percent of world's entire production (Villela et al., 2014).

The production of palm oil has been raising controversial opinions. On the one hand, it is argued that palm oil production brings economic development to tropical countries and improvement to small-scale producers' well-being (most of the world's palm oil production comes from smallholders). It is also stressed that palm oil can provide environmental benefits. Income increase leads to reduced levels of forest loss, and palm oil biofuels can reduce global carbon emissions¹⁵. On the other hand, palm oil is linked to widespread loss of rainforest and biodiversity. During the period of 1990 to 2010 it is estimated that 3,5 million hectares were deforested in Indonesia, Malaysia and Papua New Guinea, three of the world's biggest palm oil suppliers. This clearing of land has endangered many animal species, including rhinos, elephants, tigers, several kinds of birds and orangutans¹⁶. Concerns over food production, green grabbing and forced displacement of traditional groups in countries where palm oil is expanding have been also raised (Friends of Earth, 2008; Backhouse, 2013; Meijaard and Sheil, 2013; WWF, 2013). Both sides present points that producers, government and consumers should consider. Nevertheless, there is an absence of scientific-based information. More scientific studies are needed to clarify positive and negative outcomes of palm oil production (Sheil et al., 2009).

¹⁴ Palm trees mature rapidly; fruits are ready to harvest in 2 to 3 years after planting. The plant reaches its maximum productivity between the ages 9 and 15 years. After 25 years yield decreases, trees get too tall to harvest and need to be replaced (Sheil et al., 2009).

¹⁵ Defenders of palm oil production refer to it as the 'green gold'.

¹⁶ Threats caused by palm oil expansion to orangutans in Southeast Asia were responsible for a global campaign calling consumers to not buy products made by non-certificated palm oil (Meijaard and Sheil, 2013).

In order to decrease impacts caused by oil palm plantations expansion and incentive sustainable production international initiatives have been created. One of the most prominent is the Roundtable on Sustainable Palm Oil (RSPO). The RSPO is a group formed in 2004 to encourage the adoption of more responsive practices in the palm oil value chain. The group includes oil palm growers, processors, manufactures, retailers, investors and NGOs that run a verifiable certificate for sustainable palm oil production, called Certificate for Sustainable Palm Oil (CSPO). This standard is audited by independent certification bodies and it is based on the RSPO Principles and Criteria (P&C) for Sustainable Palm Oil Production, which set up requirements that must be met for the certification (Meijaard and Sheil, 2013; WWF, 2013). The RSPO P&C are organized under eight general principles that encompass compliance with applicable law and regulations, responsible consideration of employees and environmental responsibilities¹⁷ (RSPO, 2013).

Notwithstanding the increase of certified palm oil production in the past few years¹⁸, the RSPO has been receiving a lot of criticism due to members' non-compliance. Companies complain that the RSPO P&C are complicated, costly and hard to implement, mainly to smallholders¹⁹. Moreover, sustainable palm oil supply has been greater than demand., only 52 percent of certified palm oil have been sold in 2012 which have frustrated committed producers and put other producers off certifying (Laurance et al., 2010; Meijaard and Sheil, 2013; WWF, 2013).

4.2 Palm oil production: the Brazilian context

Brazil is a dominant oilseed producer, being the second largest global soybean supplier. Regardless, in 2011, with a plantation area of 70,000 ha Brazil only occupied the 10th position among the world's palm oil producers (USDA, 2014). Brazil's current palm oil production is insufficient to meet the country's internal demand (Brazil imports RBDPO

¹⁷ All the RSPO Principles and Criteria for Sustainable Palm Oil Production can be found on: http://www.rspo.org/file/PnC_RSPO_Rev1.pdf

¹⁸ Currently, the RSPO counts to more than 1,300 members from 50 countries. In 2013, 15 percent of the world's palm oil (up from 11 percent in 2011) had the RSPO certification which configures 8,2 million tons of oil coming from 2,4 million hectares of certified plantations.

¹⁹ Countries facing difficulties to produce in agreement with RSPO requirements have been developing their own standards, such as Indonesia which have created the Indonesian Sustainable Palm Oil Foundation (ISPO) (Meijaard and Sheil, 2013). Moreover, sustainable palm oil supply has been greater than demand.

and exports crude palm oil because the country only has few refineries that cannot refine the current national CPO production). Almost two thirds of the palm oil used by national industries is imported, which generates a deficit in the country's palm oil trade balance (Ministry of Agriculture, 2010; Villela et al., 2014). However, Brazil is the country with the greatest capacity to produce palm oil in the world. If it uses its full production potential, Brazil can overcome Asia current production (Meijaard and Sheil, 2013). Brazilian government has been strongly investing in oil palm expansion in the past few years. For 2015 the industry forecast estimates that Brazil will become the fifth largest global palm oil producer. Nevertheless this increase will still not cover the country's demand (Villela et al., 2014).

In Brazil, palm oil production is restricted to three states: Bahia, Amazonas and Pará²⁰, the former one located in the northeast coast and the other two located in the amazon region. Pará is the biggest producer of palm oil, representing 90 percent of Brazil's entire production. During the past decade Brazilian government launched several initiatives to promote palm oil production. In 2004, the National Plan for the Production and Use of Biodiesel (PNPB) was created to officially include biofuels as one the main energy sources of Brazil and palm oil was among the vegetable oils chosen to produce biodiesel. In 2010, the government elaborated the Agro-Ecological Zoning of Oil Palm (ZAE-Palm), a study that aimed to identify deforested areas that were suitable for sustainable cultivation of oil palm. This study indicated 31,8 million ha where oil palm can grow in Brazil²¹. In this same year, the Brazilian Sustainable Oil Palm Production Program was also established²² (Villela et al., 2014).

Before the PNPB, ZAE-Palm and the Sustainable Oil Palm Production Program, one company, the Agropalma Group, monopolized the palm oil production in Pará, being

²⁰ Oil palm trees were brought to Brazil by African slaves in the 16th century and it was disseminated along the Brazilian northeast coast by birds. However, oil palm found perfect adaptation conditions in the amazon region where it is concentrated most of the Brazilian current plantations (Müller et al., 2006; Villela et al., 2014).

²¹ From this amount 29 million of is located in the Legal Amazon, an area which encompasses the amazon forest region and a small part of cerrado biome.

²² This program was developed to strengthen public actions in order to accelerate and regulate sustainable oil palm expansion in Brazil. It prohibits deforestation and restrains plantations to anthropic areas that were cleared before 2007. It also seeks to include family farming in the palm oil production to increase rural household income, as well as provides tax incentives, financial support and technical assistance to big and small producers (Ministry of Agriculture, 2010). The Sustainable Oil Palm Production Program was publically launched by the Brazilian former president, Luiz Inácio Lula da Silva, in the municipality of Tomé-Açu, located in the northeast of Pará. In this region of Pará (micro-region of Tomé-Açu) there are 44 municipalities encompassing an area of 5,5 million ha that are suitable for oil palm cultivation (Müller et al., 2006).

responsible for more than 70 percent of Brazil's production²³. After the creation of these incentive programs other enterprises came to the region interested in growing oil palm mainly to produce biodiesel, such as BioVale, Petrobrás/Galp and ADM (Archer Daniels Midland Company)²⁴ (Nahum and Marcher, 2012; Villela et al., 2014). These three companies intend to considerably increase their plantations until 2020²⁵, as shown in table 4.1.

Table 4.1 Palm oil plantations area (ha) in Pará per company

Oil Palm Plantations Areas (ha) in Pará		
Company	Cultivated area (ha) 2013	Cultivated area (ha) 2020 (Estimation)
BioVale	42,000	80,000
Petrobrás	4,000	75,000
ADM	3,000	50,000
Total	49,000	205,000

Fonte: Sagri and Repórter Brasil in Glass (2013).

Backhouse (2013) criticizes this expansion of oil palm plantations in the region. This author states that the expansion of oil palm is causing processes of green grabbing in the region. Most of the land ownership in Pará are not regulated which can provoke expropriation of smallholders using a 'sustainable' production as an excuse. She also points that this expansion results in a restructure of power relations. In the new social configuration brought about by the palm oil production powerful figures reserve for themselves new roles, such as middle men negotiating land or the supply of outsourced services, allowing them to maintain their 'status' and hierarchy and the rural demographic remains marginalized.

²³ Agropalma production has been basically directed to food and cosmetic industries.

²⁴ BioVale and Petrobrás/Galp grow oil palm to produce biodiesel. ADM's plantations are focused on food industries (Villela et al., 2014).

²⁵ Agropalma stated that the company does not intend to increase its cultivated areas. Instead they are investing to increase the productivity of their already existing plantations, which occupy 45,000 ha.

The Brazilian public policies directed at increasing and regulating the expansion of palm oil production has been stimulating the establishment of partnerships between the government, big companies²⁶ and family farmers²⁷ of the northeast of Pará. These partnerships are based on the pilot project analyzed in this research. In this PPP (Public-Private Partnership) family farmers are encouraged to grown oil palm on their land (at least than 10 ha) with the support of the government and enterprises. Once the partnership is settled a contract to the cultivation of oil palm over 25 years is signed between the three parties²⁸. These partnerships have been extensively promoted by the government. The Ministry of Agriculture (2010) argues that oil palm cultivation will increase income and improve family farmers' well-being.

However, this positive view about the inclusion of family farmers in the palm oil production has been contradicted by NGOs and researchers. Glass (2013), for instance, argues that growing oil palm does not increase farmers' income as it is predicted by the government. She calculates that oil palm cultivation generates a great number of expenses for smallholders, such as the use of pesticides and fertilizers²⁹. In addition, part of the income is destined to pay the bank loans that are required to start the production. Therefore, when the expenditures are subtracted from the amount earned, the resulting income does not differ much from what farmers earned previously from other crops. This author also claims that the chemicals present in pesticides and fertilizers contaminate soil and rivers, and are harmful for farmers' health.

Despite such criticisms, more and more family farmers are joining the PPP's projects. Public opinion shows signs of support for this initiative and syndicates of the region are mostly supportive or waiting for more concrete results (Backhouse, 2013). Most of the partnerships are still in the beginning and it is difficult to have definitive conclusions. Nevertheless, the pilot partnership experience can provide important insights about the inclusion of smallholders in global production networks. The present work aims to provide a deeper look into this experience and make conclusions based on the findings.

²⁶ Companies receive benefits to take part in PPP, such as tax incentives.

²⁷ To more information on family farming in Brazil, see appendix B.

²⁸ . It is estimated that more than 2,000 contracts of partnership were signed between 2010 and 2013 in the micro-region of Tomé-açu. The main companies which have been taking part in this PPP are BioVale, Petrobrás/Galp and ADM (Glass, 2013). Though active in the pilot program, Agropalma declared that the company does not have plans to initiate new partnerships.

²⁹ Glass (2013) also states that many cases family farmers need to contract outsourced services to assist with the work, since oil palm cultivation is labor intensive.

4.3 Oil palm cultivation: family farmers' livelihood and well-being

Figure 4.1 Oil palm plantations, São Vicente, PA



Source: taken by the author, São Vicente, July 2014.

Figure 4.2 Tractor purchased by family farmers to assist on the oil palm plantations, São Vicente, PA



Source: taken by the author, São Vicente, July 2014.

Figure 4.3 Location of Mojú, Pará, Brazil



Source: Wikimedia (2013)

In 2002, Pará state government proposed to the company Agropalma and family farmers who lived in the rural area of Mojú, a municipality located in the northeast of Pará, a partnership for the cultivation of oil palm. This partnership was part of a pilot project that aimed to include family farmers in the palm oil production network. At that time, Agropalma and 50 family farmers accepted the proposition and started to plant oil palm crops. Family farmers were integrated into an association named the Association for the Community Development Ramal Arauaí, which was responsible for representing and taking care of farmer's interests. Two years later a new partnership was settled and more 50 smallholders started another association, the Association for the Community Development of Soledade. In 2005, one more group of 50 farmers was selected and they were incorporated to the Association of Arauaí that now numbered 100 associates.

Pará's government conceded the land for oil palm plantations, 1500 hectares, to both associations, and each family farmer received nearly 10 ha³⁰ to produce. However, farmers do not own the land. They only have the right to cultivate in it. The land titles belong to the associations and their members who can revoke the rights to the land for producers that do not comply with the partnership's agreements³¹. Along the years, some farmers sold their right to cultivate oil palm to other family famers. The

³⁰ The area received by farmers varies between 6 to 12 hectares.

³¹ This was done to avoid that the land was sold or used to other purposes.

associations allowed this since the farmers who bought palm crops were from the same communities and continued the oil palm cultivation³². A local bank provided to families with the credit needed to start the plantations and to assist with subsidies until crops start to produce.

According to the findings, it is possible to characterize the family farmers who integrate into the partnership to oil palm cultivation. They were mostly born in the northeast of Pará or already lived in the region for many decades before entering into the partnership. Their average age is 46 years old. The large majority are married, but there are also widows and some few divorced. The partnership project can be in the name of the wife or husband, though it is more common that men work on the oil palm crops. As it was reported, wives and husbands worked together in the beginning of the project planting and caring for the plantations. Currently that the main activity is harvesting and with the acquisition of animals or machines, women do not need to work on oil palm plantations. In addition to take care of household tasks, women cultivate subsistence crops (cassava, rice, maize) and also assume family business, such as grocery stores, and other roles in the communities, such as civil servants and sellers.

The research showed that the level of education among the farmers is low, most of them did not finished primary school. The average number of children in farming families is 4 (but this can vary from none to more than ten). All under age children study at the communities' schools and nearly half of the ones who finished high school are engaged in undergraduate studies in the surrounding municipalities. Adult male children usually help their parents on the oil palm production whilst are also involved in other work activities or studying.

When the government first proposed the partnership towards the cultivation of oil palm family farmers were afraid to be part of it. Oil palm plantations were not common among family farmers in the region at that time, and they did not have the expertise to cultivate it. However, after more than 10 years producing oil palm seeds, 78,57 percent of the smallholders interviewed declared that their income³³ and well-being improved substantially with their inclusion in the palm oil production network, and 21,46 percent

³² Three of the interviewed farmers declared to have bought the area where they produce.

³³ According to a study conducted by Peabiru (2014) the average income of family farmers who participate in the partnership project is US\$ 610,27 with a minimum of US\$ 86,85 and a maximum of US\$ 2,608,69.

claimed that oil palm cultivation was good for the region, but it did not bring all the benefits they had expected. The family farmers who stated that the oil palm cultivation did not fulfill their expectations were from the same association, the Association of Soledade (their main complaint was about their yields). These farmers pointed out that their production is not stable, with the production season lasting only three months over the year. Though they did not know how to explain why it happens. Notwithstanding, the annual productivity in ton per family farmer from both associations is in general very similar, around 200 ton, even for the individuals that reported instability in the crop's yields.

Table 4.2 Rates of income and well-being improvement brought by oil palm cultivation according to family farmers

	Yes, substantially	Yes, but not as expected	No	Total
Improvement in income and well-being (quality of life)	22 (78,57%)	6 (21,46%)	0 (0%)	28 (100%)

Source: elaborated by the author, based on interviews with family farmers, July 2014.

“Before oil palm we lived in extreme poverty. People used to change a sack of cassava flour of 60 kg to a 1kg of dry meat. After they created the partnership things got much better for the community, mainly for local business. Income increased a lot [...] This partnership was the best thing that ever happened here” (Male farmer, 03 July 2014).

“The partnership brought a lot of benefits to our community. Income increased. Access to education and transportation also improved, and deforestation decreased. As they entered in the partnership, many family farmers stopped deforesting [stopped to work with wood exploitation and clearing areas to start crops]” (Male farmer, 03 July 2014).

“Oil palm is good, but not that much because of the long offseason period. When we are in offseason our income is very low” (Female farmer, 14 July 2012).

Before taking part in the partnership, the main livelihood activity of the family farmers was the cultivation of cassava in their own land to produce cassava flour, one of the basic components of the region's food basket. Some also cultivated rice, maize and black pepper, raised cattle, had grocery stores or worked exploiting wood (mostly

illegally). After oil palm, many farmers stopped to produce cassava flour to generate income, but they still cultivate cassava and few other crops for household consumption. Interviewees declared that the production of cassava flour demands long hours and days of hard work and the price to sell it is too low, then it is not worth to work with it³⁴.

“Working with oil palm is much better than with other crops. I worked 30 years with cassava [producing cassava flour] and it was never as good as it has been with palm. Also, the workload in palm crops is lower. With cassava you need to work every day and the work is hard” (Female farmer, 14 July 2014).

Nevertheless, in just a few cases oil palm production is the only source of income for family farmers. In general family farmers are engaging in diverse livelihood activities to improve and complement their income. Most of the farmers kept the land they had before starting to work with oil palm, whilst others bought new land where they maintained previous cultivations (cassava, rice, maize) or started to cultivate new crops (black pepper, banana, acai berry). Some of them stated that they have initiated, or have plans to initiate, oil palm plantations in partnership with other big enterprises. In addition, other livelihood sources to family farmers are grocery stores, cattle and the rental of tractors and other machines. Many declared that the income brought by oil palm enabled the investment in other activities. Governmental social benefits are also a source of income to family farmers, such as pensions or the *bolsa familia* program (family allowance), a cash transfer program.

Table 4.3 Family Farmers livelihood before and after the oil palm partnership³⁵

Livelihood before oil palm	Family farmers	Livelihood after oil palm	Family Farmers
Cultivate cassava flour and other crops, such as rice, maize and black paper	18	Cultivate cassava flour and other crops, such as rice, maize and black paper	14
Raise cattle	2	Raise cattle	2
Exploit wood	4	Exploit wood	0
Own a grocery store	2	Own a grocery store	4
Other activities	1	Other activities	2

Source: elaborated by the author, based on interviews with family farmers, July 2014.

³⁴ Some also stated that they are old and cannot handle cassava production workload.

³⁵ Family Farmers are often engaged in more than one livelihood activity.

Family farmers pointed the acquisition of credit as one the main benefits acquired with the establishment of the partnership. They stated that before starting to cultivate oil palm many farmers did not have a bank account or access to credit. This situation changed with the increase in their income and security brought by the partnership to cultivate oil palm. Currently, a local bank offers to family farmers credit facilities that enables them to invest in the oil palm production or in other activities, as well as in household assets. For instance, in the first half of 2014 at least ten tractors have been purchased by family farmers of both associations to assist on the oil palm plantations. Nevertheless, some family farmers raised a concern about indebted generated with the irresponsible use of the credit access they acquired³⁶.

“Before [oil palm cultivation] we could not buy a bicycle [...], but now we have access to credit and I could buy a tractor” (Male farmer, 05 July 2014).

4.3.1 Oil palm cultivation: Consequences for the communities

Figure 4.4 Oil palm seeds being transported from the plantations to the refineries, Arauaí, PA



Source: taken by the author, Arauaí, July 2014.

³⁶ Interviewees reported that many family farmers have been buying expensive cars and household assets with the credit facilities and, consequently, they are getting indebted.

Figure 4.5 Community of São Vicente - oil palm crops in the back, São Vicente, PA



Source: taken by the author, São Vicente, July 2014.

The interviewees pointed out that the oil palm production allows them to dedicate themselves to other activities because of the reduced hours of labor on the plantations. Family farmers explained that in the first years the workload was high, but after the plant grew and started to produce, the working hours decreased substantially. The plant is usually harvested twice a month taking on average two or three days each time to harvested. Weeding and the application of fertilizers and pesticides are made few times during the year. With the increase in production and income, family farmers could then contract local workers to help them with the production. These workers were usually paid per day of work or per ton harvested³⁷.

“Family farmers do not need to work harvesting oil palm crops. They are not that young anymore and they can pay someone to do the work” (Male farmer, 05 July 2014).

³⁷ One Family farmer said he used to pay a worker US\$ 8,00 per day of work and another declared that paid US\$ 22,00 per ton harvest.

Whilst this type of work agreement is illegal according to Brazilian legislation because it does not guarantee labor rights to workers, more than half of the interviewees declared that they hired on average between one and three workers to harvest their production. However, since the beginning of 2014 this practice has been eliminated. In order to comply with RSPO P&C³⁸ Agropalma demanded from family farmers the regularization of work in their plantations with the threat of rescinding the partnership contract. Accordingly, the company supported family farmers to create a consortium to be responsible to contract regulate workers to provide services to members of both associations³⁹. The participation in the consortium is not compulsory and farmers can choose what type of service they will hire, e.g. harvesting, weeding. Many farmers decided do not take part in the consortium, instead they prefer to work in partnership with other farmers, which are usually relatives, exchanging the day of work, i.e. one day a group of farmers work in the crops of one farmer and in the next day this farmer works in the plantation of some of the farmers who worked in his land the day before.

The compliance with RSPO P&C also influenced in the quality of family farmers' work conditions. Agropalma staff stated that the company started to strictly supervise the use of safety equipment and the correct application of chemicals (pesticides) in the crops after the establishment of the certificate. According to interviewees, in the beginning of the partnership with the company family farmers did not care much about using the safety equipment to work in the plantations and the enterprise did not demand it from them. However, in the past few years the Agropalma started to monitor the use of the equipment and currently nobody works without it. Additionally, the company provided courses about the correct use of pesticides for the farmers to minimize risks of environmental contamination and avoid damages to people's health.

In addition, family farmers stated that the inclusion in the partnership also brought economic, social and environmental improvements to their communities. The increase in family farmers' income enabled the development of local business, e.g. grocery stores, restaurants and a transportation company were opened in the communities after the oil palm project. This scenario contributed to income increase and job creation in the

³⁸ In order to maintain the RSPO certification all Agropalma suppliers need to comply with the certificate P&C, which also includes the family farmers.

³⁹ During this field work the consortium was object of severe critiques from family farmers. The consortium was not providing regular services to the farmers and it was causing disagreement among family farmers, the association representatives and Agropalma. Most of the family farmers were upset with the whole situation.

region, which prevented migration from rural to urban areas and brought people back from cities to the villages. The interviewees stated that the communities of Arauaí and São Vicente did not exist before the partnership, and that both villages were created by family farmers after they started to cultivate oil palm and more people moved there since then. Farmers said that there used to be just two or three houses where these two communities are now located. According to a community representative the population of Soledade grew from nearly 700 inhabitants to more than 2000 in the decade that the partnership was settled.

Moreover, the creation of the partnership was crucial for the construction of roads in the region. Roads were opened in the region for the transportation of the fruit from the fields to the company's industry, which also enabled the connection between communities and municipalities⁴⁰. Electric service was another gain that came with the partnership. In order to sign the contract with the government and family farmers the enterprise demanded the establishment of a power network in the region (neither the Arauaí, São Vicente and Soledade nor the enterprise were covered by power service until mid-2000s and many communities that in region still do not have access to electric services). Primary public schools were built in the communities to contribute to the education of smallholders' children and school buses started to transport students from one community to another (students from São Vicente or Arauaí need to go to Soledade to complete their secondary education). However, family farmers substantially complained about the quality of the education in the communities⁴¹. The decrease in deforestation was also appointed as an important improvement in the region since the establishment of the partnership. Many family farmers used to work with illegal wood exploitation before entering into the oil palm project. Additionally, interviewees declared that the partnership avoided that their land was sold to big farmers and cattle raisers, which would result in the family moving to big cities. Nevertheless, According to a study conducted by Peabiru (2014) the increase in income contributed to the growth in violence rates in the region, where there is no or few police force. In addition,

⁴⁰ Before the establishment of the partnership there were few roads connecting the communities of Arauaí, São Vicente and Soledade to their main municipality (Mojú), most of the transportation was made by boat. For instance, to go from the community of Soledade to Mojú people used to spend from 12 to 24 hours, depending on the type of the boat. Nowadays, for the same trip it takes three hours by bus, as explained by one family farmer who lives in Soledade. This farmer continued saying that despite the roads are not good (they are dirty roads), they improved the communities' well-being.

⁴¹ Farmers claimed that the quality of the education is very low in the communities and the number of teachers is not enough to cover all the subjects.

healthcare was pointed out as a major problem in the region that has only one healthcare center (that it is located in Soledade) to cover 34 communities, which can number 2000 inhabitants.

According to the interviews carried out, informal talks and observations, it is possible to conclude that since the establishment of the pilot project of partnership the livelihood opportunities and well-being of family farmers have improved. Their inclusion in the palm oil global network not only increased their income, but also provided family farmers with resources and time to invest in other activities. Furthermore, the compliance with the RSPO contributed to the attainment of better work conditions for farmers and outsourced workers who previously had informal work agreements. The communities where the family farmers live in have been also benefited with the partnership. It increased income in the region and prevented that people migrated to urban areas, as well as influenced in the construction of roads and in the establishment of power services.

4.4 Representativeness and participation

Figure 4.6 Head office of the association of Arauaí, PA



Source: taken by the author, Arauaí, July 2014.

Figure 4.7 Meeting of the association of Arauaí, PA



Source: taken by the author, Arauaí, July 2014.

Each family farmer association, the Association of Arauaí and the Association of Soledade, has a director elected by the members of the association (by simple majority) and a board of secretariats chosen by the director to assist her or him. Only members of the association can apply to be director and the mandate lasts two years in total. The director and her or his board do not earn a salary or any other benefit to exercise their positions. In addition to representing the interests of family farmers, the associations' boards are also responsible for the associations' budgets. Family farmers provide a monthly quantity for the associations that it is used to pay services that all farmers need, such as to pay the company they outsource to bring the fruit from the crops to Agropalma's manufacturing plant.

There is one open meeting⁴² with the director board and family farmers every month in each association in which a representative of Agropalma also participates. Departments of the government that took part into the partnerships should also be present in these meetings, but the interviewees claimed that since the first year of project government representatives do not attend associations' meetings. In the meetings any associate who desires to express an opinion or raise some complaint has the right and freedom to do so⁴³. The majority of the farmers declared they are present in every meeting and only a small minority stated that they hardly attend the meetings. However, according to the director of the Association of Arauaí and observations, less than half of the association's members are present in the meetings.

The majority of the interviewees declared to be satisfied with the work of their respective boards, and that they believe the associations represent well the interest of the family farmers. However, some farmers claimed that the associations' boards could be more efficient and look for better conditions for them. Previous directors of the Association of Arauaí and Soledade stated that the board works to bring benefits to the farmers and communities, such as better roads. However, sometimes it is difficult to make improvements because they do not have enough strength to pressure the government or the enterprise, making negotiation difficult.

⁴² The meetings are open to any person from the community or outside to participate.

⁴³ The meetings normally happen on the first Saturday morning of every month and can last several hours, depending of the amount of subjects and farmers who want to deliver an opinion.

Table 4.4 Level of satisfaction with the associations' representativeness

Satisfied	Rates
Yes	57,14%
No	39,28%
Do not know	3,57%

Source: elaborated by the author, based on interviews with family farmers, July 2014.

The interviewees highlighted that after the establishment of the partnership for the cultivation of oil palm the government organizations stopped assisting family farmers or did not comply with points settled in the partnership contract. For instance, the land that was provided for family farmers to cultivate oil palm are still not regulated, i.e. it was not transferred to the associations' names, which should have taken a place few years after the contract⁴⁴. The government also failed in their commitments to provide support in matters such as administration and domestic economy to family farmers, as pointed out by Agropalma's corporate social responsibility manager. This lack of assistance by the government hampered the accomplishment of better social conditions. In other situation their income increased fast and some did not know how to administrate their holdings in a way that could improve their livelihood opportunities and well-being. For example, instead of buying tractors to increase and facilitate production, some family famers bought new and expensive cars.

Despite having freedom of association and the levels of satisfaction the representative boards being high. Family farmers cannot pressure to assure better conditions (e.g. better roads, education and healthcare). Their insecurity and lack of education hinder their actions and make them dependent of the current social relations they have been inserted in since the agreement was signed.

4.5 A relation of dependence

Examining the relation with Agropalma, some few interviewees complained that the enterprise demands a lot from them. Family farmers were upset with the failing of the

⁴⁴ Recently, after insistence of family farmers, Agropalma is assisting the associations' boards to reach the land regularization, which it is a bureaucratic process that it would be difficult to the family farmers to cope, according to the worlds of the Agropalma's corporate social responsibility manager.

consortium to provide a good service and they blamed the company which persuaded them into it. However, a big majority of the interviewees declared that the company is a good partner that is present and able to provide support when it is needed. The company has a department with more than five employees exclusively dedicated to work with the family farmers. This staff is daily in the crops and the villages to supervise the quantity that has been produced, to assist with some technical issue and to monitor whether family farmers are complying with the use of the safety equipment and not hiring irregular outsourced work. Family farmers pointed out that the company pays them on the right date and provides some courses, such as the use of chemicals which improved their knowledge about oil palm cultivation. As stated by its corporate social responsibility manager, Agropalma also supports the municipality government with the maintenance of roads and outsourced services of private institutions or NGOs, e.g. to start the consortium and to bring awareness about environmental and social issues in the communities. In conclusion, Agropalma is very present in the daily life of family farmers and the communities that surrounds the company's property.

Table 4.5 Level of satisfaction with Agropalma

Satisfied	Rates
Yes	78,57%
No	17,85%
Do not know	3,57%

Source: elaborated by the author, based on interviews with family farmers, July 2014

In this context, despite family farmers appointing Agropalma as a good partner, it is possible to observe that there is a dependence relationship between the company and family farmers. A partnership agreement that has only one buyer for their production, coupled with the lack of support from government, and the constant presence of Agropalma in their everyday life, as well as low rates of education and expertise in oil palm cultivation and market has generated a dependence of family farmers in relation to the enterprise. They are dependents of the company in the running of their production and, consequently they do not have freedom to make their own decisions. For example, it is the enterprise that provides fertilizer, pesticides and safety material for them. Fertilizers are used twice a year and it is Agropalma that sell it to them, the value being

deducted automatically from their accounts. The same happens with the acquisition of chemicals and security material.

“If this partnership is over, I do not know what would happen with us” (Male farmer, 03 July 2014)

Therefore, if the company decides to stop buying their production or to revoke their assistance to them, the family farmers would be in a very difficult situation. The way in which the partnership has been configured hinders the agency of family farmers and their capacity to take responsibility for their business. Their inclusion in the palm oil global network has certainly increased income and the livelihood strategies of family farmers, but this *status quo* is very fragile. It is highly dependent on the will of a company. The family farmers have the potential (the room for manoeuvre) to become more independent (many of them can count on other livelihood activities), but they are afraid to lose what they have reached, which constraint the accomplishment of more social and economic benefits.

5. Conclusions

The present research aimed to call attention to a broader and interdisciplinary conceptualization of social upgrading that encompasses the notions of agency and livelihood strategies. Accordingly, it was also argued that factors that enable or constraint social upgrading should be taken into account in GPN analysis. For the matters of this study two of these factors were chosen: government actions and the establishment of standards. Nevertheless, a broad range of variables can enable or hinder social upgrading, such as social capital, access to information and the role of civil society organizations. Therefore, the analysis of these factors might be subject of further studies.

To address these theoretical propositions the case study of the inclusion of family farmers from the Brazilian amazon region in the palm oil global production network was chosen. Family farmers as small-scale producers occupy the most vulnerable position in value chains. Small-scale producers usually have low education, no access to credit and limited skills and resources, and the family farmers of our case study were not different. However, the insertion in the palm oil GPN helped them to improve some

of these aspects. They started to have access to credit and resources, though the level of education remained low among family farmers, but not to their children. Many family farmers were proud to say that now they can afford to send their children to the university.

These were not the only benefits brought by the oil palm cultivation. It also enabled the diversification of livelihood activities of household members. Moreover, the communities where the family farmers live in also have experienced positive impacts with the inclusion of oil palm in the region. Roads and schools were built and power service started to be provided. Though roads conditions and quality of education are not good, family farmers pointed these factors as benefits generated through the establishment of the partnership because before it they did not have easy access to any of these assets.

Nevertheless, the participation in an agreement with a big company has created the conditions for a relationship of dependence between family farmers and Agropalma. Though the inclusion in the palm oil GPN brought livelihood opportunities to family farmers, their agency potential was not fostered, which hinders their actions to pressure for better social conditions. Therefore, family farmer's opportunities for the attainment of higher levels of social upgrading decrease. The lack of support from the government, which did not comply with the commitments established by the partnership, also prevents family farmers of fully achieving social upgrading.

The partnership analyzed in the present research was a pilot project that has been taken as an example for new PPP on oil palm cultivation in the north of Brazil. The Brazilian government has launched several programs to promote the production of palm oil in the past years, regarding the country's comparative advantage in the cultivation of oil palm. In this context, large companies have started large oil palm plantations in the Brazilian amazon region aiming to produce biodiesel. Since 2010, these enterprises have initiated partnerships with local family farmers for the cultivation of oil palm. Currently thousands of smallholders have entered into these partnerships.

There has been opposite opinions about the expansion of palm oil in Brazil and the inclusion of family farmers in this value chain. The government provides a positive view about these partnerships, emphasizing the increase in income that this production can bring. Nevertheless, some civil society organizations highlight that the inclusion of

family farmers in the palm oil GPN will bring more harm than benefits for smallholders. The case study presented in this research provides a representative picture of the insertion of family farmers in the palm oil chain. Notwithstanding, the configurations of the new partnerships in the northeast of Pará may differ from the ones found in the pilot project. Therefore, further studies will be needed.

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Appendixes

Appendix A – Family farmers interview guide

A) Social – Economic Background:

- Sex
- Age
- Education
- Marital status
- Number of Children
- Time in Locality
- Wife/husband occupation
- Children activities
- Family's sources of income

B) Production and Labor Indicators

- How many Time crops are harvest per month
- Annual average yield
- Size of area
- Outsourced services
- Division of tasks within the household members

C) Livelihood/Quality of life

- Cultivation of other products: for sale/for home
- Cultivation of products in the past
- Change in quality of life
- Social change
- Future perspectives

D) Representation and Participation

- Freedom of association
- Willingness to associate
- Participation in meeting
- Satisfaction with representation
- Relation among the associates
- Relation with the partner company

Appendix B

Family Farming in Brazil

Family Farming⁴⁵ has been part of important discussions on the international development agenda for years as a sustainable tool to reduce poverty and improve food security. Accordingly, the United Nations declared 2014 the International Year of Family Farming (IYFF). Family farming is the predominant form of agriculture worldwide and it is responsible for generating food and income for hundreds of millions of people living in rural environments. The UN estimates that 76 percent of the world's poorest and malnourished people live in rural areas, where agriculture is their main source of livelihood. Family farming creates job opportunities to women, men and young people, not only within their family farms, but also in related enterprises along food and agricultural value chains. In this sense, the UN calls attention to the importance of smallholders and family farmers to sustainable development in the global, regional, national and local level (IFAD, 2014).

In Brazil, the government estimates that 84 percent of rural residences are involved in family farming. This sector represents 33 percent of the country's agricultural GDP (and about 10 percent of total GDP) and employs 74 percent of Brazilian rural labor force. The income of family farmers grew 52% in the past ten years. For the biennium 2013-2014 the president, Dilma Rousseff, announced an investment of R\$ 39 billion towards family farming. For the same biennium R\$ 21 billion were designated to the National Program for the Strengthening of Family Farming (PRONAF), a national microcredit program (Presidency of the Republic, 2013).

This data demonstrates the importance of family farming for Brazilian's society and economy. Nevertheless, it was only in the recent history of Brazil that this sector started to be covered by public policies. The exclusion of family farming from agricultural policies in Brazil lasted until the first years of the 1990 decade when rural social movements' pressures influenced the creation of PRONAF (Peraci and Bittencourt, 2011). The National Program for the Strengthening of Family Farming was established

⁴⁵ The UN defines family farming as following: "family farming includes all family-based agricultural activities, and it is linked to several areas of rural development. Family farming is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family labor, including both women's and men's" (IFAD, 2014: 3).

in 1995 to provide credit and institutional support to smallholders that at the time were passing through serious difficulties to maintain their rural activities.

Since PRONAF, Brazilian rural syndicalism and civil society intensified their demands to the creation of more policies directed to family farming (Schneider, 2003). This pressure has been bringing results. Currently, family farming policies include specific tax rates, marketing support, price guarantee, climate and income insurance, and technical and financial assistance. In addition, microcredit policies destined to family farming target different groups, e.g. PRONAF Woman, PRONAF Youth and PRONAF-Eco, benefiting more people (Peraci and Bittencourt, 2011; Presidency of the Republic, 2013). Notwithstanding, family farmers still face difficulties which constrain their activities, such as land shortage, credit restraints, scarce and fragile technical support and underutilization of labor force (Guilhoto et al., 2007).

In 2006, the law n. 11,326 which provides concepts, principles and tools to facilitate the development of specific policies to family farming was ratified by Brazilian congress. Before this law, family farming did not have an official definition and it was simply categorized as small-scale family-based agricultural production. The law n. 11,326 states that family farmers are those who execute activities in rural areas and comply with the following requirements: a) do not have under any tenure regime rural areas larger than four (4) fiscal modules⁴⁶; b) predominantly rely on their own family labor in their property or undertaking; c) their household income largely originates in the family property or undertaking; d) their property or undertaking must be ran by the family members (Presidência da República, 2006). Currently, to benefit from family farming policies farmers must satisfy the criteria established by the law 11,326 and have an annual gross income that does not exceed US\$ 48,000⁴⁷ (Peraci and Bittencourt, 2011).

In Brazil, family farming is most concentrated in the south region⁴⁸ where it represents nearly 40 percent of the agricultural GDP. The region with the smallest concentration of family farming is the mid-west, where a great part of the land is in the hands of large-scale farmers. In other regions family farming also plays an important role in rural life, besides not having an expressive participation in the GDP (Guilhoto et al., 2007).

⁴⁶ One fiscal module is equivalent to 50 ha.

⁴⁷ Value based on the current exchange rate Brazilian real versus US dollar.

⁴⁸ Brazil is geographic and political divide in five macro regions: North, Northeast, Mid-West, Southeast and South, where 26 states and one federal district are distributed.

Researchers and social movements argue that most of the investment and policies directed to family farming go to south and southeast of Brazil which prevents the development of family farming in other regions. As an alternative to this criticism the government saw in the oil palm cultivation a way to incentive family farming and increase income of small-scale farmers in the north of Brazil.