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Inclusive Business
Within the Nicaraguan Coffee Sector

Added value for farmers and cooperatives?

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SNV

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Within the Nicaraguan Coffee Sector:

Added value for farmers and cooperatives?

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SNV

Executive Summary

Nicaragua is considered the second poorest nation in the Central and Latin American region. This is mostly due to years of political conflict, natural disasters and civil war, together with unfavourable economic conditions. 43% Of the population lives in rural areas and it is estimated that two out of three of them live on little more than US$1 per day. The agricultural sector in Nicaragua suffers from drought and poor irrigation systems, limited infrastructure, and inadequate credit at high interest rates. Raw coffee is among the leading agricultural products in Nicaragua, but the sector is hit hard by these factors as well. More than 30,000 farmers cultivate coffee – usually on small parcels – and in coffee harvesting roughly 150,000 rural families are involved. Most farmers manage family enterprises (<3.5 ha of coffee area), however more than 80% of exports is generated by medium- and large-size firms. Coffee yields in Nicaragua are relatively low compared to neighbouring countries. Also, although 80% of Nicaragua's coffee production is classified as '*strictly high grown'*, only 15-20% is actually sold under premium conditions. Although natural conditions in Nicaragua are perceived to be favourable for the coffee sector, infrastructure and (public and financial) institutional support are key limiting factors. Low education, precarious labour conditions, insecure land rights and natural hazards impose major constraints on investments for technological improvements. A huge barrier towards coffee production among small producers is the fact that the majority of coffee plants is not being renovated, which makes these plants produce at half. One of the key challenges for Nicaragua is to increase the productivity of smallholder farmers so that they would increasingly benefit from the small plot of land, and generate a sustainable livelihood for themselves and simultaneously contribute to a growing economy. SNV Development Cooperation is one of the organisations that has started to develop programs to face this challenge.

SNV has started an initiative in which low-income coffee farmers are being integrated in the value chain of one of the largest Nicaraguan exporting companies: Exportadora Atlantic S.A. This way of doing business is called *inclusive business* and claims to build bridges between business and the low-income producers for mutual benefit. The model is based on two principals: a) improving the productivity as well as the quality of the products of the small producers through access to finance, capacity building and technical assistance and b) the strengthening of the value chain of the company. Questions still exist about the impact of such an initiative on the base of the pyramid and the benefits it may create for the company. Both aspects are seen to be necessary in order to create a sustainable inclusive business model. The main focus of this research has been on the small coffee producers and cooperatives and the possible impact the inclusive business initiative may have on their lives and organisations. The central question has therefore been as follows:

Does the inclusive business initiative (potentially) create added value for the low-income coffee farmers and cooperatives in Nicaragua?

To answer this question, extensive field research has been performed in the Northern Highlands of Nicaragua from February to May 2011. In order to get the best results for this research, use has been made of both quantitative as well as qualitative strategies.

Poverty is still widespread among the small coffee producers that are part of the IB initiative. A huge lack of basic social services exists and many of the farmers have never had the opportunity to attend school. The new generation of rural areas does have more learning opportunities and most

children do attend primary and secondary school. The quality of the educational system is however still questionable. Many farmers also still struggle with food insecurity and water scarcity. Also, the areas in which they live are risk-zones for natural disasters. Agricultural production, especially coffee, is the main source of income for the producers; other livelihood strategies are limited. However, farmers often do not have access to finance or lack the knowledge to make proper investments in their plots, which leads to a low productivity for many producers. The lack of financial resources is the most important challenge faced by the small coffee producers. Loans are only provided on short terms; loans often arrive too late; and farmers only receive very small loans. Also, the interest rates of market loans are often very high. Challenges related to the lack of financial resources are the fact that many producers are not able to renovate their coffee plantations or fight plant diseases and plagues.

With the IB initiative, the anchor company aims to include some of the smallest coffee producers in the value chain through a) access to capacity trainings; b) access to technological innovations; and c) access to finance. It has however resulted that the company does not necessarily trade directly with the small producers; usually a cooperative works as intermediary. Many of the producers that have been visited were still not properly informed on the IB initiative. Some indicated they'd either prefer their cooperative to export directly or work directly with the company Atlantic itself. The anchor company gives two to three capacity trainings a year to all farmer groups. These trainings are being accompanied by the technological innovations that are promoted in the hope the producers will acquire them. These products should help them in the improvement of their production but they take quite some time to show results for the small coffee producer. Also, the products are not always useful to all producers. The main problem is however that the farmer first and foremost has to invest and producers lack the financial resources to make this investment. This is where the access to finance should formally come in. It has however resulted to be impossible for the majority of producers to receive a loan directly from the company because of a lack of legal papers of their properties and plot and a lack of collateral. Coffee cooperatives and intermediates have therefore started transforming into small banks. By providing collateral they receive the loan from the anchor company and consequently divide the amount received between the producers. It however results that the producer often does not receive the requested amount. Therefore they sometimes have to turn to other parties for financing (such as the *coyotes*). Since the loans are only provided for a short term (one year) the producers do not have enough time to invest. They also have the compromise of selling their coffee to the lending party. At the same time, many heard voices in the field are that cooperatives often lack transparency and organizational capacities. Internal problems that cooperatives have are reflected on the small farmers. A problem is that when the anchor company provides a loan to the cooperative, it does not follow up on what happens with this loan and which conditions are being applied. It is possible that the loans arrive with members that are not necessarily part of the IB initiative. Also, a cooperative is free to charge the interest rate she wishes which can make the outcome less "inclusive" then envisioned by the funding institution and NGO involved. The problems surrounding the aspect of access to finance are very pressing and the IB initiative still does not offer a sustainable solution to it. In theory, the IB initiative could offer a solution to many of the challenges the coffee producers and cooperatives face, but in practice it still does not happen this way. The key towards the sustainable functioning of the IB initiative is access to finance, accompanied by properly managed cooperatives. If through the IB initiative the anchor company works in an 'inclusive' manner, but the cooperative does not, the small producer will still

lose out. If the cooperatives decide to divide the received loans among their best members, the cooperative can benefit. The smallest producers will however still remain stuck in the same position. Inclusive business is certainly not a “magic bullet” to facilitate sustainable development in small farmer communities and weaknesses still have to be overcome. The IB partnership has taken a first step towards creating an inclusive market, but more efforts are needed to take these steps to a further level.

Keywords: Nicaragua, small coffee producers, inclusive business, cooperatives, renovation of plantations, access to finance

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In February 2011 I arrived in Nicaragua to realize my field research, as part of the master thesis of International Development Studies. SNV Netherlands Development Cooperation has received me in their office in Managua, where I could start to contextualize, analyze and investigate an *inclusive business* case in the coffee sector, in collaboration with the company Exportadora Atlantic S.A. After completing the three months of field research I can describe my experience in Nicaragua as extremely valuable and a great learning opportunity. I have learned to appreciate and value the humility, hospitality and positive spirits of the people of Nicaragua. My experiences in the communities, visiting the small coffee producers, their families and the cooperatives are invaluable. I will never forget my trips to the communities – always an adventure with the local public transport – and how upon arrival I would continue by horse or on the back of the motorcycles with cooperatives' technicians, in search of producers…..! I hope the results of the research will be useful for both SNV Nicaragua as well as Exportadora Atlantic S.A., and that together they will keep working on a successful completion of the Inclusive Business initiative. I hope the initiative will be able to play a role in the upgrading of the standards of living of the small coffee producers and that the '*cafeteleros'* of Nicaragua will remain one of the country's most important prides.

I would like to thank SNV Nicaragua for the opportunity they have given me, with special thanks to José María Buitrago – my second professor-, to Juan Francisco Martinez for sharing with me his wide experience in the coffee sector and being such a great support -in both good and bad times-, and to Reintje van Haeringen for her reflections and enthusiasm for Inclusive Business. I would also like to thank Mario Barboza, coordinator of the IB project within Exportadora Atlantic S.A., who has invited me to the capacity trainings and introduced me to the cooperatives involved. Without his help I would not have been able to realize this investigation. I am also very thankful for the support of the technicians of the cooperative Caja Rural who would take me to visit the producers in the communities; for Doña Miriam of the Atlantic agency in Esquipulas for receiving me into their home and making me feel as part of the family; for the Hernandez family in Rancho Grande and the unforgettable experience in one of the most beautiful areas of Nicaragua; and for the people of the cooperatives for being so patient with me answering all my questions. Finally, a very special thanks goes to the coffee producers and their families, without their support this study would not have been possible. They have opened the doors to their homes and shared their experiences with me in such a proud manner, it is something I will never forget.

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Elja de Jong
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Glossary: abbreviations

Atlantic	: Exportadora Atlantic S.A.
BoP	: Base of the Pyramid
CAFTA	: Central American Free Trade Agreement
CIA	: Central Intelligence Agency
DfID	: UK Department for International Development
ESAF	: Enhanced Structural Adjustment Facility
FSLN	: Frente Sandinista de Liberación Nacional
GDP	: Gross Domstic Product
HDI	: Human Development Index
IADB	: Inter-American Development Bank
IB	: Inclusive Business
IDS	: Institute for Development Studies
IMF	: International Monetary Fund
MDGs	: Millennium Development Goals
MNC	: Multinational Company
NGO	: Non Governmental Organisation
SJRC	: San Juan del Río Coco
SL	: Sustainable Livelihoods
SLA	: Sustainable Livelihoods Approach
UNO	: Unión Nacional Opositora
U.S.	: United States
VCD	: Value Chain Development
WB	: World Bank
WBCSD	: World Business Council for Sustainable Development
1 Quintal	: 100 Kilo
1 Manzana	: 0.7 Hectares
1 US dollar	: 22.6 NIO (Nicaraguan Córdoba) (September 2, 2011)
1 Euro	: 32.1 NIO (Nicaraguan Córdoba) (September 2, 2011)

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Introduction

The development debate throughout the world is changing. Many question the use of development aid and the development sector has received a lot of critics. Over the past years, slowly at first but now more rapidly, the discussion has started amongst a large number of NGOs, academics and managers about the need for an alternate approach to poverty alleviation. The potential role of the private sector and entrepreneurship became one of the critical elements. Corporate Social Responsibility became a new buzz word and whether for philanthropic or marketing reasons, many companies have picked up the vibe and started working with it. Some have even taken it a step further and call for the whole private sector to change their strategy's for the betterment of our planet. One of those people is professor C.K. Prahalad who has become known for his work on the *Base of the Pyramid.* Prahalad (2010) urges companies to include those people that are situated at the bottom of the economic pyramid in their businesses – either as consumers, distributors or producers. For these ideas to work out, Prahalad (and others such as Ted London & Stuart L. Hart (2010)) call for a cooperation between the private and public sector, as well as with donors and NGOs, to combine different knowledge and strategies. These actors may be able to help companies through supportive policies, sharing risk with the private sector, using their convening power, and investing in building markets and the capacity of people at the base of the pyramid to participate in them. One NGO that has tapped into the ideas of Prahalad is SNV Netherlands Development Cooperation. The value chain had already become the core approach of the organisation to really try and change the position of small farmers in developing countries. The organisation however indicated how many of the initiatives that focused on the value chain never got to the high end – companies- which made some of these initiatives unsustainable. SNV has therefore begun to work together with the private sector under the name of *inclusive business* initiatives. These initiatives have started out in Latin America and have up until now focused on including producers of the base of the pyramid (BoP) within the value chains of companies. This "inclusive" way of doing business claims to build bridges between business and the base of the pyramid for mutual benefit. Companies that apply the inclusive business approach are to give low-income communities access to the formal economy. This way, the communities should gain access to the provision of training, access to finance and income. For businesses on the other hand the benefits can include higher incomes, driving innovations, building markets and strengthening supply chains. Many of these programs are however still in the pilot phase and still lots of evidence is needed to prove the successes that so far have been made on paper.

For this research therefore one particular inclusive business project has been picked to evaluate: an initiative in which low-income coffee farmers are being integrated in the value chain of one of the largest Nicaraguan coffee exporting companies: Exportadora Atlantic S.A. The main aim of the initiative is to create mutual value for the low-income coffee farmers on the one hand, and the company on the other hand. The model is based on two principals: improving the productivity as well as the quality of the products of the small producers through capacity building and technical assistance and the strengthening of the value chain of the company. Inclusive business suggests a positive development outcome from integration of smallholder producers into value chains, the precise foundations for these development strategies are however still underdeveloped. Questions still exist about the impact of such an initiative on the base of the pyramid and the benefits it may create for the company. Both aspects are seen to be necessary in order to create a sustainable inclusive business model. The main focus of this research is on the small coffee producers and the

possible impact the inclusive business initiative may have on their lives. The coffee cooperatives are also expected to play a crucial role on that matter. 2012 Has been declared by the United Nations as the International Year of Cooperatives. It emphasizes that cooperatives contribute to socio-economic development and poverty reduction, but to what extent do we actually have knowledge on local cooperatives? The central question guiding this research has been formulated as follows:

Does the inclusive business initiative (potentially) create added value for the low-income coffee farmers and cooperatives in Nicaragua?

To answer this question, extensive field research has been performed in the Northern Highlands of Nicaragua. Coffee cooperatives involved in the inclusive business alliance have been visited and interviewed, and surveys as well as ethnographic studies have been conducted amongst the small coffee producers. The outcomes of the research may be a learning opportunity and serve for the improvement of the particular inclusive business case. It might also provide lessons for future inclusive business initiatives.

This study starts with a regional framework in which the Nicaraguan context will be clarified. Any development intervention is to a certain extent dependent on the historical, social, economic and political context of a country and these issues are examined in the first chapter. It continues to take a more in-depth look at the Nicaraguan coffee sector and the challenges this sector faces. The chapter then provides an introduction to the inclusive business case and gives an introduction to both SNV as well as the anchor company involved. Also, the three different research locations are being introduced. Chapter two continues with a theoretical framework, in which the different issues surrounding “inclusive business” are being examined. Introductions are given to the concepts of the sustainable livelihoods approach; value chain development and upgrading strategies; base of the pyramid; and inclusive business itself. The chapter then provides the research questions that guide this study, followed by the conceptual model. The third chapter explains the different methodologies that have been used to answer the central question. The chapters four until seven provide the empirical context, in which the direct results of the field research are being outlined. It starts with the characteristics and livelihood strategies of the small coffee producers in chapter four, including a conceptualization of the coffee value chain. Chapter five takes a look at the internal and external challenges the small producers face and will go more into detail on the functioning of the coffee cooperatives. Chapter six examines the different aspects of the inclusive business initiative and whether this initiative could play a role in dealing with the challenges faced by producers. It follows by outlining the anchor company’s perspective on inclusive business. The final part of this study is the discussion of the results, providing space for the researchers’ personal interpretations of the results as well as reflection. It will also provide the final conclusion in which the central question will be fully answered.

Prologue

"Si pequeña es la patria, uno grande la sueña"
Rubén Darío, 1867-1916 – Nicaraguan author and poet

My final research area: Rancho Grande in the department of Matagalpa. The municipality was situated at 83 km from my apartment in Matagalpa, I was in for a bumpy ride. The only bus left at 4:30 a.m. from the dodgy market place at Matagalpa, four hours later I arrived at the bus stop where one of the technicians of Atlantic was waiting for me. I hopped on the back of his motor and we continued for half an hour in the direction of the community "La Lana arriba". After half an hour the road conditions got so bad it would be impossible to continue together on the motor. Luckily the technician was well prepared for this and had already asked my host for the coming days to meet us halfway. And there he was, a 73 year old gentleman with a big smile on his face accompanied by his horse (of just the same age?) to guide me to the communities. No, I was not allowed to walk. He would walk ánd carry my bag (I felt awful but could not reject) and the horse would take me up to their house. I had no horseback riding experience, but this was not a problem, "*he knows the way!"*.

Constantino García Hernandez is a 73-year old coffee farmer who lives with his 55 year old wife and his eight year old grandson in the community of Lana Arriba, Rancho Grande. The couple got a total of six children of which five are still alive and four live close by in the same community. Although these children are now adults and have their own families and homes they still join together every day in the "central house" of Don Hernandez. Women cook together, men eat together, the bible is read together and information is shared on their plantations because yes – also the sons of Don Hernandez are coffee producers. Coffee is the only source of income of the families and although they sometimes face hard times, they would not want to change their lives with anyone else. "*When I see new coffee is growing I am happy"* (don Hernandez). The families would not want to live in the city, as don Hernandez indicates "*in the city I get bored".* Over here, no rent has to be paid and since there are no basic services (no electricity, no water or formal toilet facilities) there are also no costs. Don Hernandez, his wife and none of their children have ever gone to school. They have however taught themselves how to read and learn from the bible. The new generation of children does go to primary school from 8 am to 1 pm every week day and they walk about 40 minutes to get there.

The families are working hard to try and extent their products. At the moment they also grow maize and beans for their own consumption and they would like to add banana. Amongst the families a number of cows are being shared for the production and consumption of milk and cheese. The products that come from the land and animals are shared between the families. While the men work on the land the women take care of the household and prepare dinner. Hernandez' sons indicate how thankful they are for the trainings they sometimes receive from the company Atlantic and express their hope to be able to keep on receiving these trainings and improve their coffee production. The principal problem for all families is however the lack of financial resources to be able to invest in their plots. The family is a member of a coffee cooperative situated in Rancho Grande, but this cooperative is struggling to get funding. They sometimes receive loans from this cooperative which they have to re-pay the next harvest. These loans however always arrive very late and are basically too small to make a proper investment. Don Hernandez would like to grow new coffee

plants but at the moment he does not have the money to buy the plastic bags that are needed for it. The families especially face difficult times when there is a bad harvest of maize and beans. May to September are the most difficult months. But between the different families they have always been able to resolve issues and make sure everyone has got something to eat. When asked if the family would like to change anything within their community they indicate how they would really like to have better roads. The only way for them to transport their coffee beans is still by horse. Also cell phone signal would be a great help to be able to "*communicate better and be better informed about coffee prices*". Other services are not considered to be that important, at least this way "*we also do not have to pay for them*".

I have stayed with the Hernandez family for a couple of days and it turned out to become the best experience I had in Nicaragua. The long walks with Don Hernandez through the mountains visiting other producers and the preparing of tortillas with his wife: moments to remember forever. It is mainly because of this family I will stay clear from the term of "*poor people*" throughout this report, a term used so often by Western scholars and writers. These families may not have much but they do have happiness. This might make them a lot richer than many other people in our Western societies.

1. REGIONAL FRAMEWORK

Nicaragua, officially the Republic of Nicaragua, is the largest country in Central America with an area of 130,373 km2. The country is bordered by Honduras to the north and Costa Rica to the south. The Pacific Ocean lies to the west of the country, the Caribbean Sea to the east. The capital city of Nicaragua is Managua. Roughly one quarter of the nation's population lives in the capital, making it the second largest city and metropolitan area in Central America (following Guatemala City) (CIA World Factbook, 2011). Nicaragua is potentially one of the richest countries in Central America, with abundant arable land, considerable hydroelectric, thermal, and (possibly) fossil energy reserves, and significant timber and mineral resources. It also has access to two oceans and a lake and river system that could make it an ideal site for an inter-oceanic waterway. Yet Nicaraguans today are among the poorest Central Americans and Latin Americans (Booth *et al,* 2006).

Source: World Bank Group

1.1. History

Since its independence from Spain in 1821, Nicaragua has undergone periods of political unrest, military intervention on behalf of the United States, dictatorship and fiscal crisis – the most notable causes that lead to the Sandinista revolution in 1979. The revolution was led by the *Frente Sandinista de Liberación Nacional* (FSLN or Sandinistas) against the Somoza's, a family dictatorship which had subsequently brutalized and oppressed Nicaragua for over four decades. Already in 1981 however, the incoming U.S. Reagan administration began trying to reverse the Nicaraguan revolution and destabilize the Sandinista government. Washington convinced multilateral lending and development agencies to cut off credit to Nicaragua, and in 1985 embargoed trade with Nicaragua. The

centrepiece of the Reagan administration's strategy for Nicaragua was a proxy military-political effort to topple the Sandinistas. Reagan gave the CIA $19.8 million to support and augment an exile army of anti-Sandinista counterrevolutionaries known as the "Contras", operating out of Honduras and Costa Rica. The Sandinistas responded by instituting conscription and building an army with Soviet and Cuban military aid pouring in. In 1984, a CIA scheme to mine Nicaragua's harbours was revealed and resulted in a judgment against the U.S. by the International Court of Justice. The Contras by 1985 had established a clear record of economic sabotage and atrocities and had killed an estimated 13,000 people. Despite more combat operations within Nicaragua, the Contras' military success remained limited. After the Central American Peace Accord was signed in August 1987, the Contras eventually entered negotiations with the Sandinista government, and the war began to wind down (Booth *et al,* 2006). A continuation of the political environment since the end of this war can be found in paragraph 1.4.

1.2. The Nicaraguan society

Nicaragua is considered the second poorest nation in the region after Haiti (WB, 2011). This is mostly due to years of political conflict, natural disasters[1] and civil war, together with unfavourable economic conditions. The estimated population of Nicaragua in 2010 was almost 6 million people and the country is the least densely populated one in Central America. A slight majority (57% in 2008) of the country lives in urban settlements (CIA World Factbook, 2011). The social context is characterized by sharp inequality and a concentration of poverty in rural areas, which is particularly severe on the Caribbean coast (IDB, 2008). Of the 43% of the people living in rural areas, it is estimated that two out of three of them (68%) live on little more than US$1 per day. The most vulnerable people in rural areas include the families of small-scale farmers and landless farm workers, and families that combine both agricultural and other income-generating activities on the farm (IFAD, 2011).

The main ethnic group in Nicaragua is the Mestizo[2] containing 69% of the population. This is followed by 17% white, 9% black and 5% Amerindian, according to the 1995 census. In 2003 67.5% of the total population was estimated to be literate[3] and the life expectancy at birth for the total population was estimated at 71.78 years in 2010. When we look at the HDI[4] index of 2010 Nicaragua was ranked 115th out of 169 countries with a score of 0.565. For comparison, the average score for Latin American and Caribbean countries was 0.706. The biggest challenges for the country which are in line with the Millennium Development Goals (MDGs) lie in net primary school enrolment, chronic malnutrition, access to water and illiteracy (World Bank 2011).

[1] E.g. The devastation of Hurricane Mitch in 1998 killed thousands, rendered 20% of the population homeless and caused billions of dollars worth of damage (World Bank 2011)
[2] Mixed Amerindian and white
[3] Definition: Age 15 and over can read and write
[4] A composite index measuring average achievement in three basic dimensions of human development – a long and healthy life, knowledge and a decent standard of living; http://hdrstats.undp.org/en/countries/profiles/NIC.html

1.3. Economic environment

In 2009, Nicaragua was placed 137th on the World Banks gross domestic product (GDP) ladder with an annual GDP of 6,140 million US dollars. The average GDP per capita[5] was estimated at US$ 2,900 in 2010 with a GDP real growth rate of 2.8%. Although Nicaragua's economic growth has outpaced population growth (1.74%), it has not been high enough to bring about a substantial reduction in poverty levels (CIA World Factbook, 2011). The country is highly dependent on remittances (about 12% of GDP) and international donations (about 4% of GDP and 16% of the central government's total budget) (IDB, 2008). According to the WB group, macroeconomic management under the Ortega Administration has remained broadly favourable. However, external shocks such as the Hurricane Felix, high food prices and the financial crisis did leave their impact on Nicaragua's economy. The country relies on international economic assistance to meet internal- and external-debt financing obligations. Foreign donors have however curtailed this funding after the 2008 municipal elections that were perceived to be fraudulent (EC, 2011). The official unemployment rate in 2010 contained 8%, it is however estimated that more than half of employed Nicaraguans work in the 'informal' sector - as street vendors, maids, artisans – without benefits or job security. The U.S. provides for the main export market of Nicaragua (61.98%) followed by El Salvador and Costa Rica. Nicaragua has been a member of the US-Central America Free Trade Agreement (CAFTA) since April 2006. Overall, the export of manufactures counts for the highest returns, followed by coffee as can be seen in table 1.1:

Table 1.1: Trade indicators for Nicaragua in US$ millions

	2007	**2008**
Total Exports	1,202	2,621
Coffee	188	213
Shrimp&Lobster	76	86
Manufactures	641	725
Total Imports	3,572	4,959
Food	844	1,013
Fuel&energy	837	1,059
Capital goods	655	783

Source: World Bank Development Data (2009) Nicaragua at a Glance

Every year the World Bank Group in cooperation with the International Finance Corporation (IFC) provides an overview in which economies are being ranked on their ease of doing business. A high ranking on the ease of doing business index means the regulatory environment is more conducive to the starting and operation of a local firm. In 2011, Nicaragua was placed 117th out of 183 economies in the WB's *Doing Business 2011* report. The report states that Nicaragua did make some improvements and compared to other Latin American and Caribbean countries it is doing averagely with a score of 23 out of 32 economies. Nicaragua scores particularly positive on the enforcement of contracts. Additionally, *Enterprise Surveys* provides an overview of the challenges facing a business in Nicaragua, which is based on surveys of over 120,000 firms worldwide. Political instability is being regarded as the biggest business environment constraint. A full overview can be found in appendix 1.

[5] Method: Purchasing Power Parity

Although Nicaragua remains a highly agricultural country, the main contributing sector to GDP is the service sector, as can be seen in table 1.2. This is also the sector occupying the highest labour force rate: 53% in comparison to agriculture 28% (2006 est.).

Table 1.2 GDP – composition by sector as estimated in 2009

Agriculture	17.6%
Industry	26.5%
Services	56%

Source: CIA World Factbook

The agricultural sector in Nicaragua suffers from drought and poor irrigation systems, limited infrastructure, and inadequate credit at high interest rates. Without the means to offset the resulting shortfall in domestic food production with commercial imports, Nicaragua is a large food aid recipient. Raw coffee, beef, sugar, peanuts, rice, poultry and horticultural production are among the leading agricultural products (FAS, 2008). One of the key challenges for Nicaragua is to increase the productivity of smallholder farmers so that they would increasingly benefit from the small plot of land, and generate a sustainable livelihood for themselves and simultaneously contribute to a growing economy.

1.4. Political environment

After the Contra war, by the late 1980s the Nicaraguan economy was again in desperate. As it became clear that the U.S. Congress was preparing to grant the Contras further aid, FSLN government leader Daniel Ortega called elections that he expected would give the Sandinistas a popular mandate to govern. Economic problems because of the war had however eclipsed the dramatic accomplishments of the Sandinistas' early years, such as the redistribution of land to small farming cooperatives, reducing illiteracy from 50% to 13%, eliminating polio through a massive immunization program and reducing the rate of infant mortality by a third. All social reforms, medical, health, and educational programs and public services had suffered from the heavy military spending. Meanwhile, the Unión Nacional Opositora (UNO), a broad coalition of 14 political parties opposing the Sandinistas, was formed in 1989. UNO's presidential candidate Violeta Barrios de Chamorro had the backing and financing of the U.S., which had promised to lift the embargo and provide economic aid if UNO won. The UNO took the elections of 1990 and gained 55% of the presidential votes and 51 of the 110 seats in the National Assembly, compared with the FSLN's 39 (Booth *et al,* 2006). The Chamorro administration embraced neoliberalism with enthusiasm. The Nicaraguan government signed its first Contingency Agreement with the IMF in 1991, and then signed a comprehensive Enhanced Structural Adjustment Facility (ESAF) with the Fund in 1994, followed by a second ESAF in 1998. Government properties were privatized, public expenditures cut, budgets balanced, and tariffs lowered. These implementations did not make the situation better for ordinary Nicaraguans. Despite slow economic recovery and high unemployment rates FSLN's Ortega again got rejected in the 1996 elections. Instead, the people opted for former Managua mayor Arnoldo Alemán of the PLC, a center-right liberal alliance. Alemán made major investments in infrastructure and downsized the army by a factor of 10. His administration was however plagued by scandal, as corruption soared and Alemán amassed a personal fortune from the state's coffers. It placed him on Transparency International's list of the top 10 corrupt public officials of all time. Meanwhile, also the Sandinistas had to deal with their own image problems. Ortega's thirty-year-old stepdaughter accused him of having sexually abused her for many years. In 1999, the two leaders

unexpectedly conspired to their mutual benefit. With both men facing legal problems, Ortega and Alemán forged a broad pact (known as *el pacto)* to reform the constitution and electoral law (Booth *et al,* 2006). It was however not until 2007 that Daniel Ortega was re-elected President for a five-year term. He won the elections with only 37.9% of the vote, but Nicaraguan law allowed him to avoid a run-off vote since he was more that 5% ahead of the next closest candidate, Eduardo Montealegre, the head of the Nicaraguan Liberal Alliance (FAS, 2008). After 16 years of opposition, the leftist FSLN (Sandinista) party returned to political power. The European Commission (2010) however states that as from early 2008, there have been growing concerns regarding the observance of underlying principles, such as respect of human rights, rule of law and democratic processes. Following the November 2008 municipal elections that have been regarded as irregular and fraudulent, the European Commission and the other donors decided to suspend budget support disbursements. This context has induced a thorough reflection on aid delivery modalities which is still going on (EC, 2010). The next legislative and presidential elections will be held in November 2011.

1.5. The Nicaraguan Coffee sector

The two primary coffee varieties are Arabica and Robusta. Farmers in Latin America, Ethiopia, and Kenya have historically cultivated most of the Arabica beans that are generally considered of higher quality and sold to specialty markets at slightly higher prices than Robusta. Most of the world's Robusta coffees are being produced by Brazil, Vietnam, and Uganda. There are however two tendencies that are eliminating the previous competitive advantages held by countries producing Arabica coffee varieties (such as Nicaragua). From 1995-2005, Brazil more than doubled its production of Arabica coffee and now produces close to half of the world's Arabica coffee. Furthermore, in their blends many roasting companies can substitute between Arabica and Robusta beans, which makes the price differential between both varieties marginal (Bacon, 2005).

Coffee production and exports have always been very important to the Nicaraguan economy. Although Nicaraguan coffee only represents a 1% share in world coffee trade, almost a quarter of the national export value is generated by coffee sales. More than 30,000 farmers cultivate coffee – usually on small parcels – and in coffee harvesting roughly 150,000 rural families are involved. Most farmers manage family enterprises (<3.5 ha of coffee area), however more than 80% of exports are generated by medium- and large-size farms. (Ruben, 2010). According to the World Bank, coffee yields in Nicaragua are relatively low compared to neighbouring countries. Expensive credit facilities and inefficient input provision networks are some of the reasons that classify Nicaragua as a high-cost producer (Varangis *et al*., 2003).

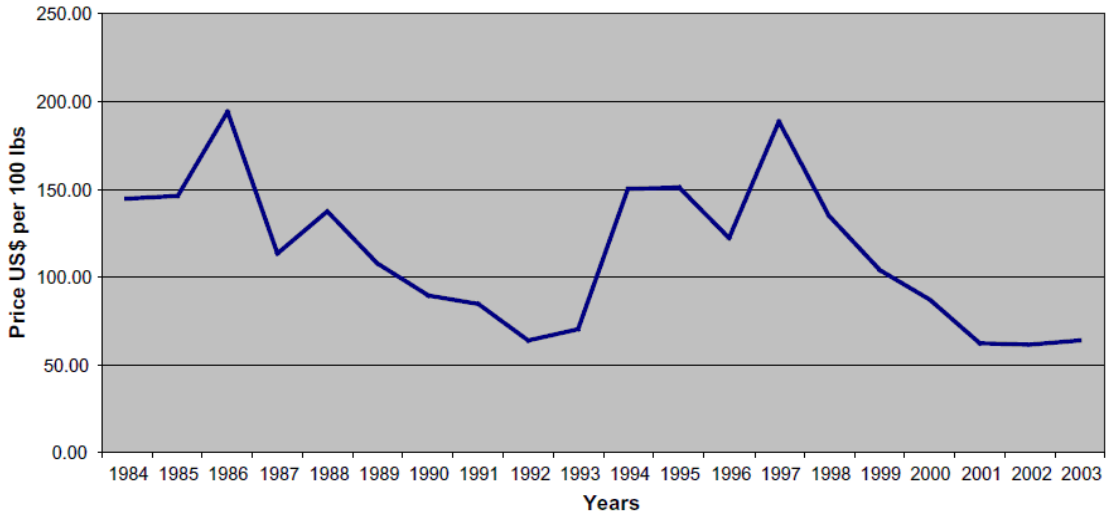
Of Nicaraguan coffee production, 80% is classified as *'strictly high grown'* (synonym for high quality), however only 15-20% is actually sold under premium conditions. Neighbouring countries like Costa Rica and Guatemala on the other hand are able to reach almost the double amount. The main problems refer to the low processing quality, infrequent deliveries, and long distances resulting in high quality losses between farm and factory. Although natural conditions in Nicaragua are perceived to be favourable for the coffee sector, infrastructure and (public and financial) institutional support are key limiting factors. Low education, precarious labour conditions, insecure land rights and natural hazards impose major constraints on investments for technological improvements (Ruben, 2010).

1.5.1. Aftermaths of war and international coffee crisis

During the Sandinista liberation war and the following Contra war, coffee yields deteriorated in Nicaragua. Afterwards, a process of land reforms initiated, expropriating large coffee estates and installing coffee cooperatives. This made it easier for the government to maintain and consolidate its control over the strategic coffee sector. Also, coffee trade became centrally controlled, which resulted in a reduction in market supplies of more than 50 per cent. After the gradual privatization of land ownership started in 1990, together with the liberalization of trade, recovery of coffee production remained slow due to limited financing options and structurally low world prices (Ruben, 2010). Another major drawback to coffee production occurred afterwards in 1998, when hurricane Mitch devastated major parts of Northern Nicaragua. Almost 500,000 people lost their homes and damages to agriculture have been estimated at US$ 200 million. It resulted in a volume and value decrease in coffee exports of almost 50%. Afterwards however, large-scale international support started flowing into the country to make efforts to recover and renew the coffee sector (Ruben, 2010).

The decline of world coffee prices (see figure 1.1) and the 2002 coffee crisis however, have not made life better for the small coffee farmers. In 2002, production costs were even beyond price levels. Between 2000 and 2004, green coffee prices fell from US$1.20/lb to between US$0.45 and 0.75/lb (Bacon 2005 from CEPAL 2002; IADB 2002). Low prices devastated many rural economies and threatened the biodiversity associated with traditional coffee production. In Matagalpa, falling coffee prices accelerated migration to urban poverty belts (Bacon, 2005).

Fig 1.1. Average yearly prices for Arabica coffee beans (other milds) in US$ per 100 lbs 1984-2003



Source: Bacon (2005) from International Coffee Organization (2003)

After the coffee crisis of the 1990s, a movement to re-unionize coffee cooperatives gained momentum in Nicaragua. Many communities decided to organize themselves into their own cooperatives to be able to protect their land. Within many of these cooperatives, the Sandinista revolutionary ideals got reborn, with the belief that one is stronger in numbers and united. These coffee cooperatives have unionized, for example to obtain fair trade certifications and get access to social programs funded by NGOs. However, the cooperatives also carry weaknesses. A lack of transparency and corruption is threatening the future of the cooperatives (O'Connel, 2010).

1.5.2. Present-day situation of the Nicaraguan coffee sector

In terms of volume, Nicaragua is one of the smallest coffee producers of Central America. Table 1.3 shows the top 10 total Arabica coffee production per country. Brazil remains by far the leading country. Compared to Nicaragua's neighbouring country Honduras, the country still remains far behind with a total production of 1,750 (*thousand 60 kg bags) in 2010. This is mostly due to the fact that Honduras has a bigger area of production and planted more coffee, including during the crisis. Also in coffee exports, Brazil is the leading company for green coffee beans. About 86% of the total coffee production in Nicaragua is being exported (Table 1.4).

Table 1.3: Coffee *Arabica* production * Thousand 60 kg bags

		2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
	World Total	82,224	73,145	82,886	73,920	85,780
1	Brazil	36,000	27,650	40,500	33,000	41,800
2	Colombia	12,164	12,515	8,664	8,100	9,000
3	Ethiopia	4,036	3,906	3,650	4,000	4,400
4	Mexico	4,300	4,100	4,300	3,950	4,300
5	Peru	4,400	2,800	4,000	3,300	4,000
6	Guatemala	4,040	4,100	3,970	3,900	3,990
7	Honduras	3,460	3,642	3,225	3,350	3,500
8	Nicaragua	1,300	1,850	1,650	1,925	1,750
9	India	1,415	1,580	1,325	1,575	1,650
10	El Salvador	1,400	1,650	1,550	1,300	1,600

Source: FAS USDA GOV 2010

Table 1.4: *Green Coffee Bean* Exports * Thousand 60 kg bags

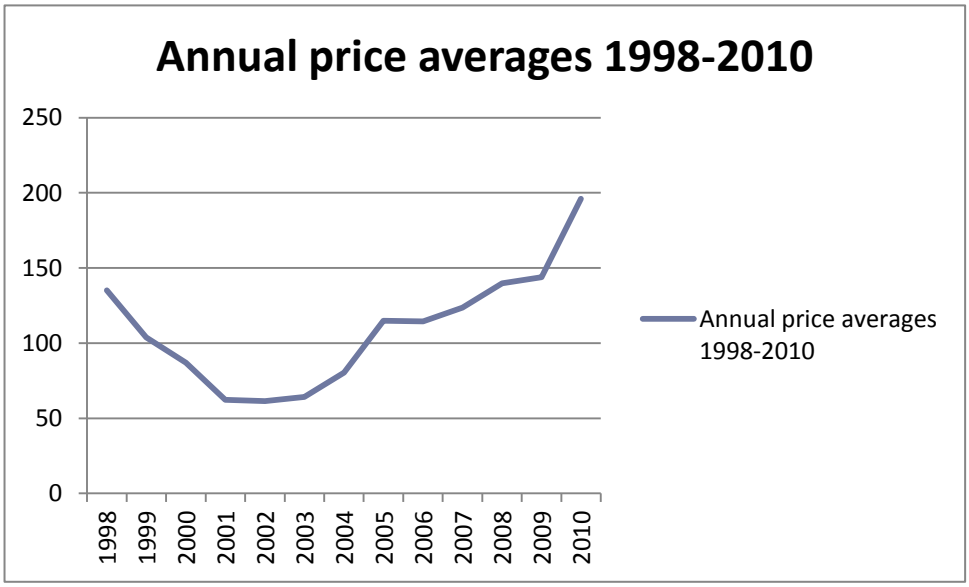
		2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
	World Total	93,774	86,086	89,312	89,788	93,298
1	Brazil	26,185	23,770	28,396	26,580	28,600
2	Vietnam	18,740	15,600	15,430	18,190	17,200
3	Colombia	10,460	10,770	8,160	6,445	7,900
4	Indonesia	6,000	5,510	6,625	7,425	6,000
5	Peru	4,200	2,660	3,830	3,150	3,900
6	Guatemala	3,980	3,890	3,783	3,860	3,850
7	Honduras	3,370	3,440	3,050	3,175	3,300
8	Uganda	1,840	2,160	2,770	2,350	2,800
9	India	2,550	2,620	2,120	2,560	2,775
10	Ethiopia	2,225	2,110	1,850	2,260	2,600
11	Mexico	2,260	1,190	2,125	1,830	2,200
12	Cote D'Ivoire	1,710	1,550	1,180	1,755	1,600
13	El Salvador	1,320	1,580	1,506	1,300	1,575
14	Nicaragua	1,130	1,580	1,425	1,650	1,500
15	Costa Rica	1,582	1,588	1,410	1,170	1,270

Source: FAS USDA GOV 2010

One of the major problems that prevents farmers from investing in their farms is that many peasant farming households in Nicaragua continue to struggle with a legacy of indebtedness caused by years of low farm-gate prices and declining productivity between 2000 and 2004. Even the various

certification schemes such as fair-trade have not been able to sufficiently deal with this problem yet (Wilson, 2009). Also, according to a study performed by "La Asociación de Cooperativas de Pequeños Productores de Café de Nicaragua" (Cafenica) and the "Centro Internacional de Agricultura Tropical" a shortage of financing, access to technology and a bad management of the productive cycle of coffee prevent Nicaragua from exporting more grain at a better price. The study shows that only 17% of Nicaraguan coffee is being commercialized as specialty coffee, while the produced amount with this qualification could get to 30% of the total volume. Another barrier that makes the production of specialty coffee difficult is the fact that the majority of coffee plants are not being renovated, which makes the majority of the plants produce at half (La Prensa, 2010). An opportunity for coffee farmers in Nicaragua today could however be the momentarily increase of international coffee prices. Coffee prices have a very important and direct influence on the farmers' lives and prices vary each year and every minute. Where farmers were hit extremely hard by the 2001-2003 coffee crises, prices since 2011 have not been this high for 34 years. The high coffee prices are a combination of the growing demand for different types of coffee and the poor harvests over the past years. Colombia, one of the leading coffee producers, has suffered its third consecutive "disappointing" crop, which is one of the biggest factors in driving up prices (Money.CNN, 2011). Small farmers could benefit from higher wholesale prices if they have coffee to sell. If however more people start planting coffee, in two to three years prices will most likely come down again. Figure 5.2 shows how coffee prices have started to rapidly increase since 2010 and the average monthly price of July 2011 has even reached US$ 266.87 cents per pound (International Coffee Organization, August 2011).

Fig. 1.2. Average yearly prices for Arabica coffee beans (other milds) in US$ cents per pound 1998-2010



Source: Adapted from International Coffee Organization, August 2011

1.6. The inclusive business case

SNV Netherlands Development Cooperation and the Inter-american Development Bank (IADB) started an alliance of technical cooperation in September 2008 to develop a Regional Program for Economic Inclusion of the Base of the Pyramid. This program included 6 inclusive business (IB) cases in Honduras, El Salvador and Nicaragua. This research takes a closer look at a particular IB project in Nicaragua, entailing a number of small coffee producers and the anchor company Exportadora Atlantic S.A. (Atlantic) which started out in January 2010. The plan of the IB project is to incorporate 2,000 small coffee producers in a sustainable manner within the value chain of Atlantic in a period of three years. These producers are to come from the departments of Matagalpa, Jinotega, Nueva Segovia, Madriz and Estelí, with coffee cultivating areas of less than 10.5 hectares and a maximum yearly net income of US$ 3,200. The project aims to include a minimum of 10% female producers. Also, the organizations of small coffee producers are to be beneficiaries of the project. The project is co-financed by the IADB and the anchor firm Atlantic. The selected small producers should be integrated in the value chain through capacity trainings, technical assistance and access to finance. The IB model is based on two principles: the improvement of the coffee bean quality and productivity of the beneficiaries through technology transfers and the strengthening of the value chain of the company. At the moment, two technicians have been hired by Atlantic for the particular IB project. One project coordinator is in charge. The company has however made requests to be able to hire a third technician, as two technicians for 2,000 producers is considered not to be enough. Table 1.5 shows the results chain of the IB program. In appendix 2 the more specific objectives can be found. To measure the results of the IB program a yearly survey is supposed to be held among producers which will be compared with the base line results. Also, the administration of cooperatives and of Atlantic will be used to measure results. One particular objective that stands out is that the Inclusive Business project aims to generate an increase of **37.5%** of the income of the beneficiaries through sales of specialized coffee.

Table 1.5. Results Chain *General* IB program with Exportadora Atlantic, S.A.

Strategies	Outcomes	Key outcomes	Impact	Impact
Promote technical vocational training of small producers	Technical teams of the anchor firm offer services of technical assistance and trainings to small producers and cooperatives	Small producers produce coffee of better quality	Exportadora Atlantic rejects less coffee offered by small producers and buys more quality coffee	
Provide technical assistance to small producers for improvement of production systems	" "	Small producers implement practices of sustainable production	Small producers increase their productivity	
Financing technological innovations and marketing of coffee	Small producers access financing	Small producers adopt one or more of the three technological innovations offered		Small producers increase their income through the production of coffee

Expand the commercialization and marketing of small producer's coffee to the international market	Small producer cooperatives expand relations with international buyers Small producers apply knowledge of international market demands for coffee production	Cooperatives sell coffee to new international buyers *	Small producers increase the volume of total coffee sold	

*Via the anchor firm, who hopes to bring international buyers to the farms of the beneficiaries and 10 of which to a fair.

Source: SNV Nicaragua Plan de Negocio Inclusivo – Selección de Beneficiarios, Diseño y Datos de Linea de Base

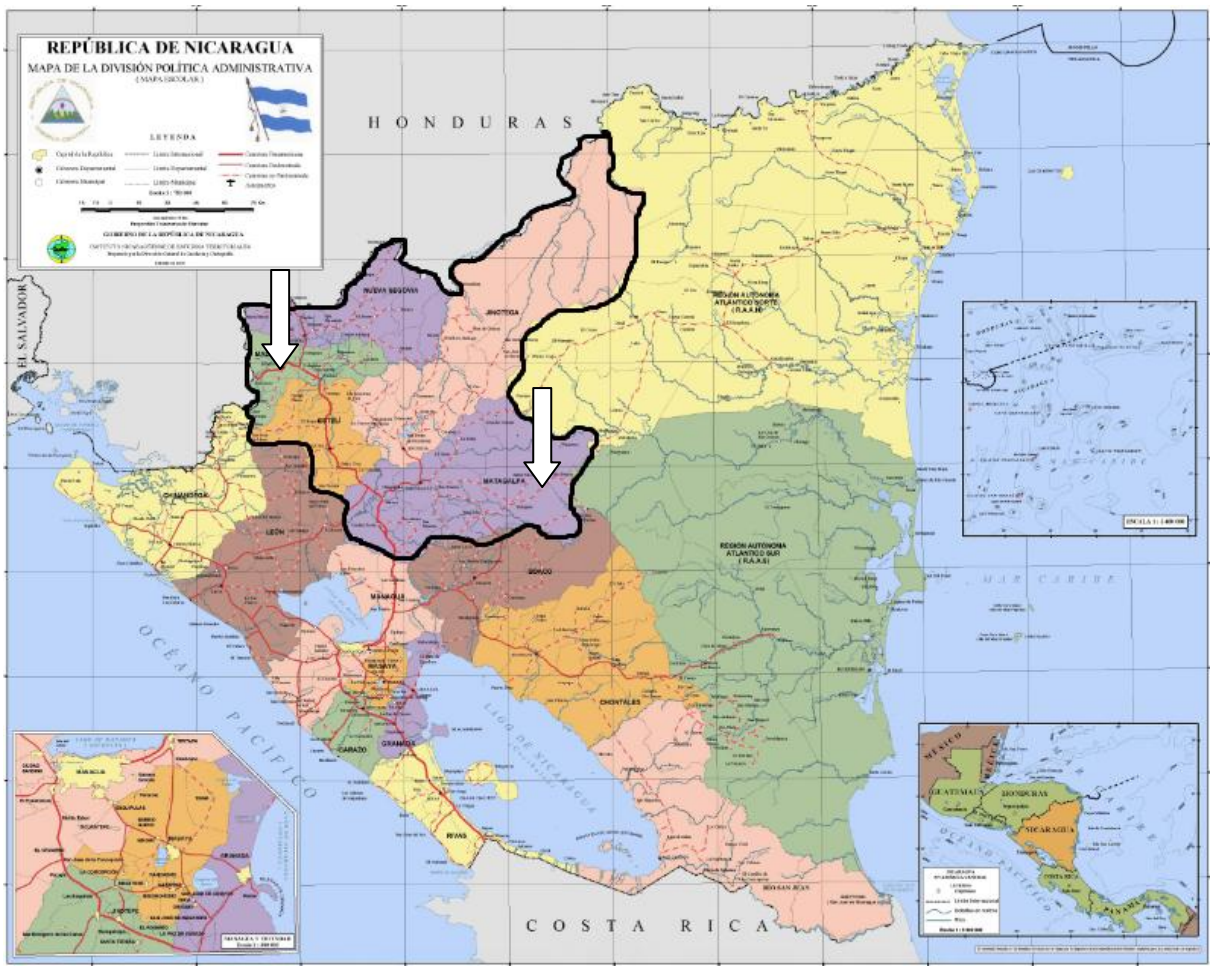
1.6.1. Selection of beneficiaries

Together with local coffee cooperatives or coffee buying agencies of Atlantic the IB team of the company locates potential beneficiaries of the project. With the first 300 producers that are part of the project introductions were being given to the different farmer groups that find themselves located in the same community. Mostly one farmer provides his land for the reunion where all farmers come together to receive the introduction of the project, mostly given by the IB project coordinator and the two technicians of Atlantic. Besides a short introduction the team promotes three different "technological innovations" that are part of the IB technical assistance. After the explanation the producers receive a free lunch and a drink and consequently some forms have to be filled out in which the producer indicates his interest to participate. If the producer is interested, some other data are being provided in order to obtain a baseline and to see whether the producer is indeed eligible to participate. Between 16 April and 12 June 2010, a total of 23 introductory sessions were held in eight different municipalities. 351 Small producers in total were part of these introductions, of which 11 declined their participation. Also, 40 producers turned out not to be eligible because of some standards in accordance with the IADB. The company has solicited that some of these cases will be reconsidered. As a final result of the selection process, 300 producers could be part of the first cohort of the IB program.

1.7. The research locations

The coffee production within Nicaragua is principally located in the Northern, Central and Eastern parts of the country. Jinotega, Matagalpa and Las Segovias (Nueva Segovia, Estelí and Madriz) are the places where more than 71% of the country's green coffee is produced.

Figure 1.3. Map of administrative divisions in Nicaragua – Main coffee lands highlighted in black



Source: Instituto Nicaraguense de Estudios Territoriales

For the research, two of these departments have been visited: Matagalpa and Madriz (indicated with two white arrows in figure 1.3). Matagalpa is a department in central Nicaragua. It covers an area of 8,523 km2 and has a population of 484,900 (2005 Census). The capital is the city of Matagalpa. Because of the altitude, the region has a cooler climate than the southern regions of the country. This is also the reason much coffee is being cultivated in Matagalpa. Besides coffee, the province produces amongst others cattle, milk produce, vegetables, wood, gold, and flowers. The extensive forests, rivers and geography of the region make it highly suitable for ecotourism. The city of Matagalpa is an important regional trading hub. Within the department of Matagalpa, two municipalities have been visited for the research: Esquipulas and Rancho Grande (figure 1.4). Part of these municipalities are the mountainous areas where different (coffee) farmer communities exist. Within these areas the research population was to be found.

Figure 1.4. Department of Matagalpa

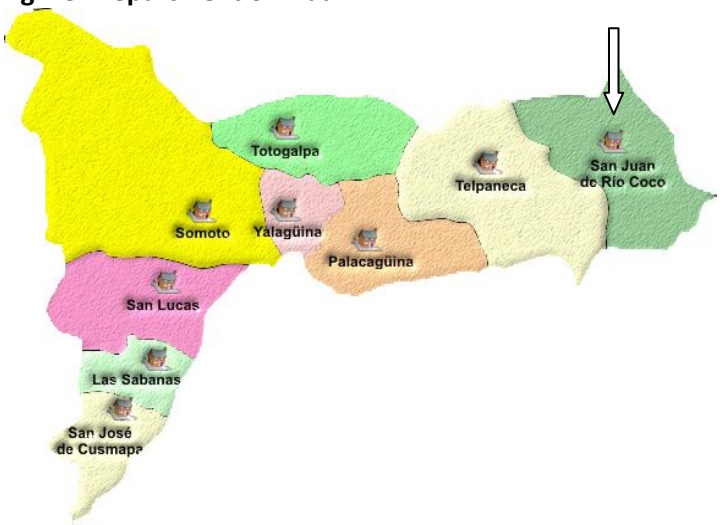
Source: Alcaldía Municipal de Matagalpa

Esquipulas has a population of 16,684 habitants of which 6,003 (36%) habitants live in urban areas. Apart from the municipal village of Esquipulas, the rural zone is divided in 14 regions, which are in their turn subdivided in 32 communities. The principal economic activity of the municipality is agriculture of which basic grains are mostly produced. Also cattle is of certain importance, 80% of which is destined for meat production and 20% for milk. Although the municipality of Esquipulas counts with a collective transport system with buses commuting to Managua and Matagalpa, the region is still quite difficult to access, especially the rural areas. These same areas also still have difficult access to electricity; only one out of 14 rural zones counts with electricity. 45.9% Of the municipality has direct access to drinking water at their homes. There is no sewage system in place yet, 65% of the homes uses the traditional latrine. The other part of the population has constructed septic tanks. The educational sector of the Esquipulas municipality counts with a total of 4,702 subscribed students in 35 scholar centres which are located in the urban zones. There is also one health centre in the urban zone and 4 health posts in the rural areas (Inifom, 2011).

The total population of Rancho Grande consists of 17,077 habitants of which 1,195 people (7%) live in urban zones. The principal sources of income are cacao, coffee and cattle but basic grains predominate in most areas. The municipality of Rancho Grande is divided in 22 regions, which are subdivided in four micro regions. Within the municipality, telephone network does not exist and only the small urban centre counts with direct drinking water. A sewage system is not in place and mostly latrines are being used as toilet facilities. In the small town, one health centre exists even though conditions are minimal. Throughout the rural areas, 3 health posts can be found . Transport to the municipality of Rancho Grande and the surrounding mountainous areas is still highly difficult (Inifom, 2011). Access to the communities is sometimes only possible by motor or horse. The small village can be reached from bigger towns as Matagalpa, but be prepared for a bumpy ride.

Madriz is a department in the mountainous North-western part of Nicaragua, bordering Honduras. It covers an area of 1,602 km2 and has a population of 133,300 (2005 Consensus). The capital is Somoto. Together with the departments of Nueva Segovia and Estelí the area is known as Las Segovias. Madriz is characterized by a cool climate, coffee plantations and mountains covered with pine and oak forests.

Fig 1.5. Department of Madriz



Source: Instituto Nicaraguense de Fomento Municipal (INIFOM)

The department of Madriz consists of 9 different municipalities of which the research location was the municipality of San Juan del Río Coco (SJRC) (indicated with the white arrow in figure 1.4). The total population of this municipality consists of 18,657 habitants of which 2,254 habitants (31.78%) live in the urban area. The population is distributed over 41 communities of which one urban (the municipal village SJRC) and 40 rural. 83.5% Of the municipal village counts with electricity, as well as some of the communities that are situated at the periphery of the village. Most houses in the urban area count with direct water and sanitation, in the communities generally wells and latrines are being used. The village counts with bus services to the major cities, but transportation in the communities still remains limited. The municipality counts with 43 primary scholarly centres registered by the Ministry of Education, Culture and Sports. There is a health centre with beds in the municipal village and 6 health posts throughout the rural areas with communication equipment to contact the urban health centre if needed (Inifom, 2011).

1.8. Presentation of host organisation

SNV Netherlands Development Cooperation is a non-profit, international development organisation, established in the Netherlands in 1965. SNV has been present on the ground in developing countries for over 40 years, and now operates in 35 countries in Africa, Asia, Latin America and the Balkans. The aim of SNV is to contribute to the alleviation of poverty by enabling those with the lowest incomes to be part of social and economic networks and increase their income and employment opportunities. More than half of the work of SNV is focused on economic and private sector development, the inclusive business initiatives playing a major part in this (especially in Latin America). Within Latin America, where the inclusive business alliance SNV-World Business Council for Sustainable Development (WBCSD) has been initiated, SNV mainly works as a consulting organisation for public institutes, private companies and civil society organisations. A big part of their operations includes a “think tank”. The principal goal is to promote the economic inclusion of the lowest-income sectors. SNV works with over 1,300 professionals worldwide, of which a hundred are situated in Latin America within the offices of Bolivia, Ecuador, El Salvador, Peru, Honduras, Nicaragua, Chile and Colombia.

1.9. Introduction to anchor company involved

Exportadora Atlantic S.A. is part of Ecom Agroindustrial Corporation Ltd. that operates within the soft commodities (cotton, coffee, oilseeds, grains, cocoa) industry. The Ecom Group was founded in Barcelona in 1840 and has since then internationally expanded its services within 28 countries, operating as a group of different companies. In 1997, ECOM established Exportadora Atlantic S.A. in Nicaragua. Within Nicaragua, 209 fixed staff members operate throughout the country and during coffee harvest 1,700 temporal workers are being contracted. Besides the central office in Managua, also 2 regional offices exist in Matagalpa and Madriz. The company works together with over 10,000 producers and is the second-biggest coffee exporting company of Nicaragua. The main export markets are the U.S. followed by Belgium, Germany and Spain. Part of the company's exports are destined for differentiated markets. At the moment, 1,275 producers participate in the C.A.F.E. Practices (Starbucks) program, 120 producers in the 4C program, 6 producers in the Rainforest Alliance program, 3 producers in the Utz Certified program and 5 coffee cooperatives in organic and other programs. Among the services offered to its coffee suppliers are commercialization and marketing; access to finance and technical assistance; support with certification processes and better economic, social and environmental practices. Part of the company are 15 dry mills (*beneficios secos)* and three coffee-testing laboratories. Since the founding of the company, Atlantic has concentrated on coffee. At the moment however opportunities are being considered for expansion in the cacao industry.

1.10. Summary

Since its independence from Spain in 1821, Nicaragua has undergone periods of political unrest, military intervention on behalf of the United States, dictatorship and fiscal crisis which eventually led to the Sandinista Revolution. In 2011, Nicaragua is still a politically unstable country. The leftist FSLN has returned to political power, but there have been growing concerns regarding respect of human rights, rule of law and democratic processes. The social context of Nicaragua is characterized by sharp inequality and a concentration of poverty in rural areas. The most vulnerable people in rural areas include the families of small-scale farmers and landless farm workers. The biggest challenges for the country lie in net primary school enrolment, chronic malnutrition, access to water and illiteracy. Economically, the country is highly dependent on remittances and international donations. The agricultural sector in Nicaragua suffers from drought and poor irrigation systems, limited infrastructure, and inadequate credit at high interest rates. Almost a quarter of the national export value is generated by coffee sales. Coffee yields in Nicaragua are however relatively low compared to neighbouring countries. Although natural conditions in Nicaragua are perceived to be favourable for the coffee sector, infrastructure and (public and financial) institutional support are key limiting factors. A shortage of financing, access to technology and a bad management of the productive cycle of coffee prevent Nicaragua from exporting more grain at a better price.

2. THEORETICAL FRAMEWORK

Throughout the research use is being made of the *sustainable livelihoods approach* (SLA) to be able to improve understanding of the livelihoods of the people involved in the inclusive business project. Also, the concept of *value chain development* is important to understand *base of the pyramid* and *inclusive business* strategies. All three concepts will be outlined in this chapter. Furthermore, the research questions that guide this investigation will be revealed. This will be followed by a conceptual framework that schematically shows how the different research questions correspond to each other.

2.1. The sustainable livelihoods approach

The idea of sustainable livelihoods has first been introduced by the Brundtland Commission on Environment and Development in 1987. Their report "*Our Common Future"* offered the first appearance in policy debate of what was conceptualised later as SLA (Solesbury, 2003). The 1992 United Nations Conference on Environment and Development (UNCED) expanded the concept, and advocated for the achievement of sustainable livelihoods as a broad goal for poverty eradication (Krantz, 2001). By using the concept of Sustainable Livelihoods (SLs) attempts are being made to go beyond the conventional definitions and approaches to poverty eradication which have been found too narrow. When studying poverty more attention is now being given to the various factors and processes which either constrain or enhance the ability of people living in poverty to make a living in an economically, ecologically, and socially sustainable manner (Krantz, 2001). So far, most of the discussions on SL have focused on rural areas and farming communities. In the classic paper, *Sustainable Rural Livelihoods: Practical concepts for the 21st Century* (1991:6) by Robert Chambers and Gordon Conway the following definition of a sustainable rural livelihood was being proposed:

> *"A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term".*

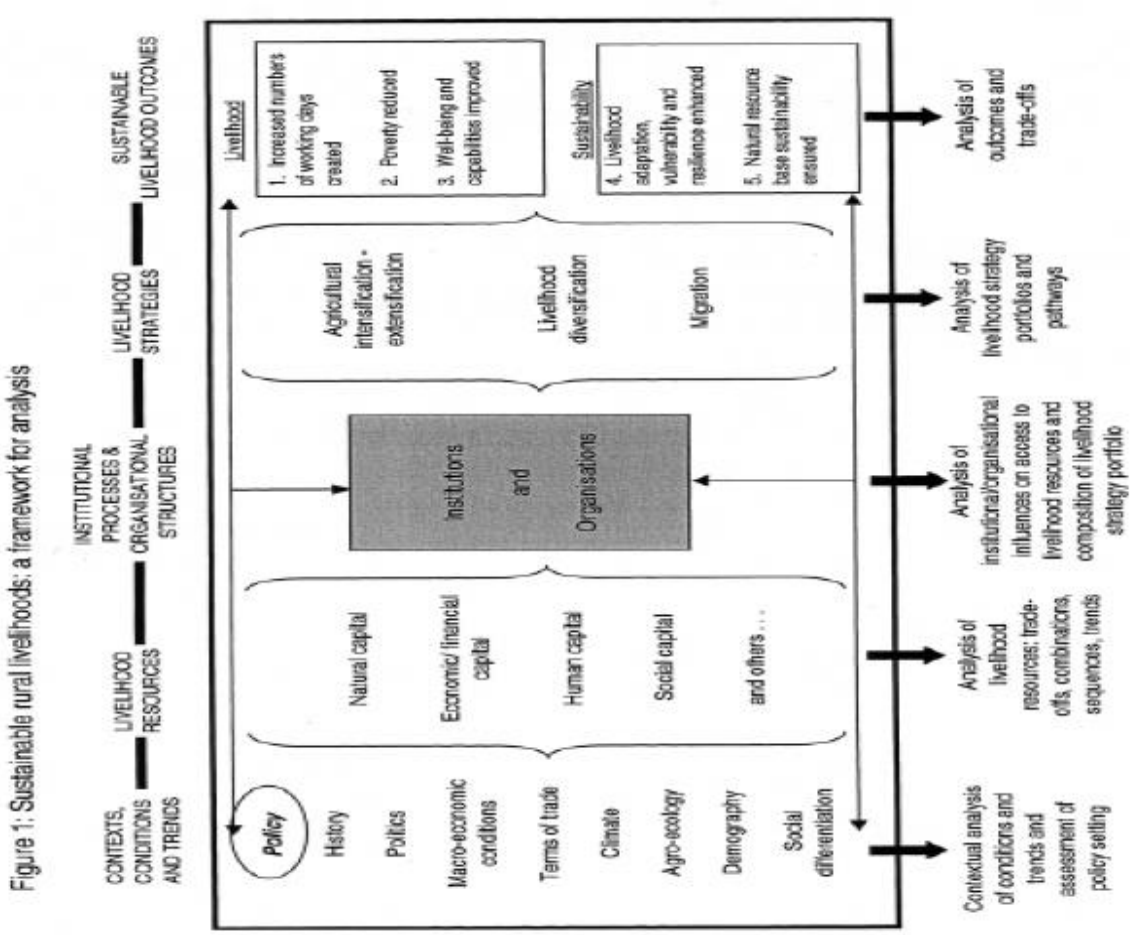
With the huge anticipated population increases of the future in mind the authors are trying to look for concepts and analysis that could help in meeting the challenge of fighting poverty. To confront the question of how a vastly larger number of people can gain at least basically decent rural livelihoods in a manner which can be sustained the authors take a starting point in examining some aspects of conventional analysis in the social sciences. They argue that livelihoods and sustainable livelihoods are concepts which have evolved more from open-ended fieldwork than from the closed concerns of surveys and statistics. It is however acknowledged that the empirical reality which is being sought to encompass is not simple. Sustainable livelihoods, they argue, include not just income and consumption, but the ability to handle stress and shocks, and to satisfy basic needs. They include environmental sustainability, and good effects on others' livelihoods. Also, SLs have many dimensions and multiple causality. They take different forms for different people in different environments. The authors therefore recognize sustainable livelihoods are not easy to measure or estimate, but stress that making attempts is better than making no effort at all (Chamber & Conway, 1991)

Since the report of Chambers and Conway much effort has gone into further refining the SL concept, both analytically and operationally. Important contributions have been made by researchers connected to the SL Research Programme of the Institute for Development Studies (IDS) at the University of Sussex, Brighton, UK, and the work within the British Department for International Development (DFID) to make the approach more practical. An influential report on SL from the IDS team was published in 1998 and written by Ian Scoones who proposed a somewhat modified definition of SL:

"A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base"

Additionally, a tentative framework was being introduced to analyse sustainable livelihoods (Fig. 2.1). This framework can be seen as the base for other similar 'SL frameworks' that since then have been developed by for example DFID and CARE. The framework shows how, in different contexts, sustainable livelihoods are achieved through access to a range of livelihood resources (natural, economic, human and social capitals) which are combined in the pursuit of different livelihood strategies (agricultural intensification or extensification, livelihood diversification and migration). Central to the framework is the analysis of the range of formal and informal organizational and institutional factors that influence sustainable livelihood outcomes (Scoones, 1998)

Figure 2.1. Sustainable rural livelihoods: a framework for analysis



Source: Scoones (1998:4)

According to the IDS team, when using the framework, a specification of the scale of analysis is critical, as is an analysis of the interactions between levels in terms of net livelihood effects, both positive and negative. In figure 2.1, four different types of 'capitals' are identified that people may or may not have as a basis for pursuing their livelihoods. The IDS team offers the following simple set of definitions:

- Natural capital – the natural resource stocks (soil, water, air, genetic resources etc.) and environmental services (hydrological cycle, pollution sinks etc.) from which resource flows and services useful for livelihoods are derived
- Economic or financial capital – the capital base (cash, credit/debt, savings, and other economic assets, including basic infrastructure and production equipment and technologies) which are essential for the pursuit of any livelihood strategy
- Human capital – the skills, knowledge, ability to labour and good health and physical capability important for the successful pursuit of different livelihood strategies
- Social capital – the social resources (networks, social claims, social relations, affiliations, associations) upon which people draw when pursuing different livelihood strategies requiring coordinated actions (Scoones, 1998).

Within the sustainable livelihoods framework, also three broad clusters of livelihood strategies are being identified by the IDS team: agricultural intensification/extensification, livelihood diversification and migration. Broadly, these are being seen to cover the range of options open to people living in rural areas. Unravelling the connections between such complex and dynamic processes and the outcomes of different strategy combinations is being seen as a key part of any investigation of sustainable livelihoods (Scoones, 1998). The SL framework gives particular emphasis to the study of institutions and organisations. The IDS team takes a broad definition of institutions, following Giddens (1979): Institutions are "*regularized practices (or patterns of behaviour) structured by rules and norms of society which have persistent and widespread use*". Institutions (the "rules of the game" by North's terms) are being distinguished from organisations (the players) (North 1990, Scoones 1998) and the interplay of both are of importance within the framework.

2.1.1. More to poverty than low income

Why has the SL approach been applied to poverty reduction? Three factors were proposed by Krantz (2001) to give an explanation. Firstly, there was the realisation that while economic growth may be essential for poverty reduction, there is no automatic relationship between the two since everything depends on the capabilities of those living in poverty to take advantage of expanding economic opportunities. It is therefore important to investigate what precisely prevents or constrains people from getting out of poverty in a given situation. Secondly, it was realized that poverty is not just a question of low income, but also includes other dimensions such as bad health, illiteracy, lack of social services, etc., as well as a state of vulnerability and feelings of powerlessness in general. Finally, it is now recognized that people living in poverty often know their situation and needs best and must therefore be involved in the design of policies and projects intended to improve their situation. Their participation will improve project performance. The intention of the livelihoods approach is to "*employ a holistic perspective in the analysis of livelihoods to identify those issues or*

*subject areas where an intervention could be strategically important for effective poverty reduction, either at the local level or at the policy level" (*Krantz, 2001).

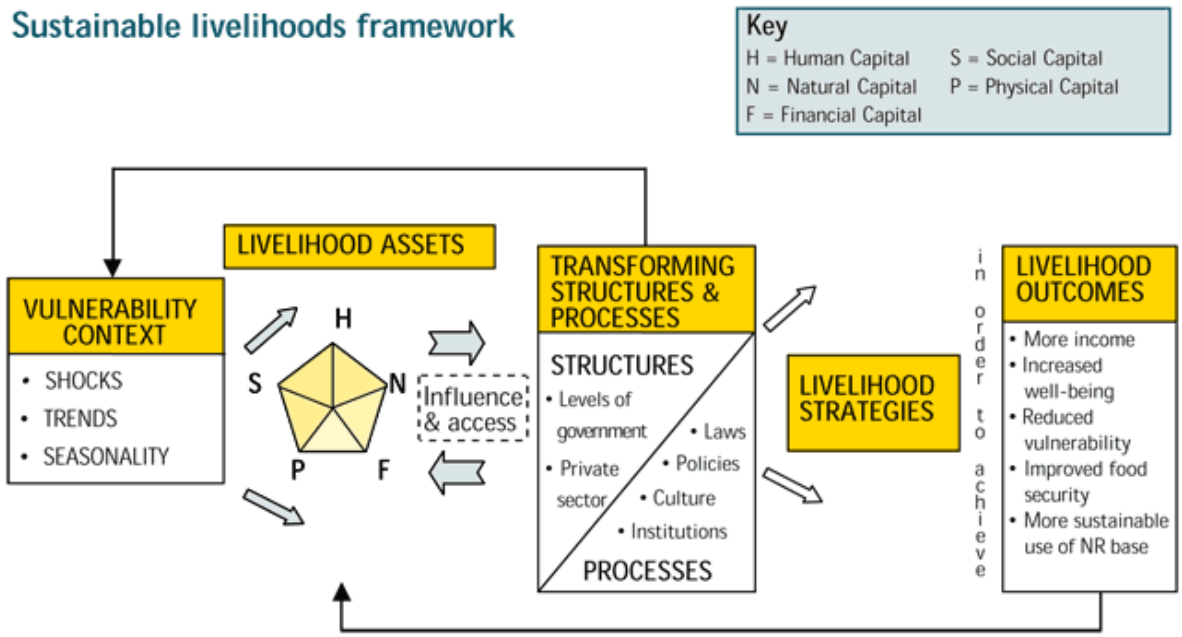
2.1.2. DFID's livelihoods framework

One of the livelihoods frameworks that has been widely used after the introduction of the previously mentioned framework is the one developed by the UK Department for International Development (DFID). The framework (fig. 2.2) is an adaptation of the framework developed by the IDS team and also provides an analytical structure to facilitate a broad and systematic understanding of the various factors that constrain or enhance livelihood opportunities, and shows how they are related. The framework is however not intended to be an exact model of reality. It also does not give an explicit definition of poverty, since this is context-specific and should be investigated on a case-by-case basis with different groups (DFID, 1999). In particular, the framework:

- Provides a checklist of important issues and sketches out the way these link to each other;
- Draws attention to core influences and processes; and
- Emphasises the multiple interactions between the various factors which affect livelihoods

The main elements are similar to the ones described above. Successful livelihood strategies should lead to more income and more economically sustainable livelihoods, increased well-being, reduced vulnerability and more sustainable use of the natural resource base.

Figure 2.2. Sustainable livelihoods framework according to DFID



Source: DFID (1999–2005), Sustainable Livelihoods Guidance Sheet 2.1.

The DFID framework gives an extra 'capital' distinction – physical capital - which would previously fall under the economic/financial capital. The physical capitals according to DFID contain for example infrastructure (transport, roads, vehicles, secure shelter and buildings, water supply and sanitation, energy, communications), tools and technology (tools and equipment for production, seed, fertilizer, pesticides, traditional technology). A large part of people's assets status, however, is the external

environment in which people operate, termed the 'vulnerability context' in the SLF. Vulnerability is characterized as "*insecurity in the well-being of individuals, households, and communities in the face of changes in their external environment*" (DFID, 1999, Serrat, 2008) and is used to draw attention to how the poorest groups often have very little control over many of the factors that are responsible, directly or indirectly, for their poverty. Vulnerability knows an external side of shocks, seasonality and critical trends as well as an internal side of defencelessness caused by a lack of ability and means to cope with these factors. The vulnerability aspects as shown in figure 2.2 contain:

- Shocks, e.g., conflict, illnesses, floods, storms, droughts, pests, diseases
- Seasonality, e.g., prices, employment opportunities, food availability, production
- Trends, e.g., demographic, environmental, economical, governmental and technological trends (DFID, 1999, Serrat, 2008)

Consequently, also in the DFID framework, policies and institutions play an important role. Livelihood strategies and outcomes are not just dependent on access to capital assets or on the vulnerability context; the environment of structures and processes also plays a critical role. Structures as can be seen in figure 2.1 are the public and private sector organizations that set and implement policy; deliver services; and purchase, trade, and perform all manner of other functions that can affect livelihoods. The processes include the laws, regulations, policies, operational arrangements, societal norms, and practices that determine in what way structures operate (DFID, 1999).

2.1.3. Difficulties with SL approach

One of the many problems of development is that projects while favouring some, can disadvantage others. According to DFID (1999) when considering livelihood strategies it is important to recognise that people can compete (for jobs, for markets, to secure better prices, etc.). This makes it difficult for everyone to achieve simultaneous improvements in their livelihoods. There is no 'solution' to this problem. However, DFID does underscore the importance of a) extending choice and opportunities for people and building up their ability to take advantage of these opportunities while leaving them to make the final choice of what they will do; and b) thinking about safety nets for those who remain unable to achieve their livelihood objectives in what will always be a competitive environment.

According to Serrat (2008) the SL approach is only one way of organizing the complex issues that surround poverty. He states it must also be made appropriate to local circumstances and local priorities. Some of his critics are that the SL approach does not pay enough attention to inequalities of power and that it underplays elements of the vulnerability context, such as macroeconomic trends and conflicts. Also according to Krantz (2001) some difficulties with the SL approach can be distinguished, which can be summarized as follows:

- The social relations of power: According to Krantz, the DFID's SL approach puts great emphasis on transforming the structures and processes that have the capacity to 'transform' livelihoods, in a way which provide better opportunities for the poor. But the process is complicated because informal structures of social dominance and power within communities influence people's access to resources and livelihood opportunities. And these inequities are often invisible to outsiders

- Gender aspects: Most SL approaches do ensure that gender is being addressed in principle, but this does not guarantee that women can express their genuine perceptions, interests and needs in relation to specific livelihood issues in practice
- Household as basic unit of analysis: The concept of livelihood tends to direct attention to the household as the decision-making unit. This makes it risky that intra-household inequalities in economic control, interests, opportunities, and decision-making power, which often have a gender basis, are not given sufficient attention.
- The SL approach is a demanding approach in terms of analytical capacity and information requirements which might make the approach a bit beyond the practical realities of many local development administrations (Krantz, 2001).

2.2. Value chain development

Over the past years, the debate on globalisation has been polarised between two views – globalisation is good for the poor *or* globalisation is harmful for the poor. Yet nowadays this is seen as a much too simplistic perspective, since it is less a matter of globalisation being intrinsically good or bad, than *how* producers and countries insert themselves in the global economy in a way which provides for sustainable economic growth. Throughout this research it has been analysed how a local coffee exporting company of Nicaragua is including some of the smallest producers within her value chain. The company, together with the NGO SNV Netherlands Development Cooperation, is developing a strategy called '*inclusive business'*, an approach complementary to the approach of 'value chain development' (VCD). Within this chapter, the VCD approach will be further outlined, followed by a paragraph particularly focused on inclusive business.

2.2.1. Value chain analysis throughout the years

Policymakers and development practitioners are increasingly using value chain analysis to frame pro-poor development interventions. The so-called value chain approach intends to reinforce the competitiveness and bargaining position of smallholder producers within the framework of contractual exchange networks of traders, processors and retailers (Ruben & Zuniga, 2010, adapted from Muradian&Pelupessy, 2005). Several definitions of a value chain have been given over time, but the one provided by Kaplinksy and Morris (2000) is found to capture all distinctive facets: "*the value chain describes the full range of activities which are required to bring a product or service from conception, through the different 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".* These activities can take place within a firm or among different firms in one or several geographic locations.

The first studies on value chains were conducted in the 1960s when the *filière* concept was being introduced after analyzing the value added process in U.S. agricultural research and the processes of vertical integration and contract manufacturing in French agriculture (Raikes *et al.,* 2000). Later on, some important elements of modern value chain analysis came from the work of Michael Porter in the 1980s, who focused on individual firms. He launched the value chain concept to examine how a firm might gain a competitive advantage over rival firms and capture added value by reducing costs, by delivering more services for the same price as its competitors, or by concentrating on a market niche (Hospes and Clancy, 2011). Porter distinguished various *activities* which were

performed in particular links in the value chain. Hereby, the distinction was made between different stages of the process of supply (inbound logistics, operations, outbound logistics, marketing and sales, and after sales service), the transformation of these inputs into outputs (production, logistics, quality and continuous improvement processes), and the support services the firms marshals to accomplish this task (strategic planning, human resource management, technology development and procurement) (Kaplinsky and Morris, 2000). All activities are to be scrutinized on their value addition. Porter argued that those activities that add value should be maintained, while those that do not should be outsourced or eliminated. Porter referred to *value system* as intra-link functions within the concept of the multi-linked value chain itself. This can basically be compared with what is nowadays called the value chain (Porter 1990, Kaplinsky and Morris, 2000).

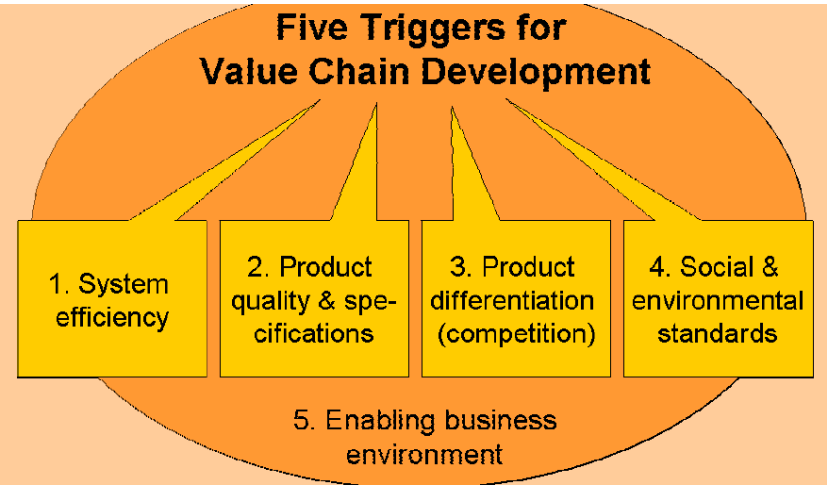
Another concept which has been used to describe the value chain is that of *global commodity chains*, introduced into the literature by Gereffi during the mid-1990s. An important contribution of Gereffi was his focus on the power relations which are embedded in value chain analysis. Gereffi explicitly focused on the coordination of globally dispersed, but linked, production systems and showed that many chains are characterised by a dominant party (or sometimes parties) who determine the overall character of the chain. This way, lead firms become responsible for upgrading activities within individual links and coordinating interaction between the links. Gereffi hereby refers to the 'governance' of a chain and makes a distinction between 'buyer-driven commodity chains' (cases where the coordination is undertaken by buyers) and 'producer-driven commodity chains' (cases in which producers play the key role) (Gereffi 1999, Kaplinsky and Morris, 2000). Producer-driven chains tend to have high barriers of entry as many commodity chains require capital/technology intensive production and economies of scale, such as in the automobile and aeronautical industries. Buyer-driven chains tend to have low barriers to entry. Producers are bound to the decisions of buyers through the functions of design and marketing, notably when retailing and brand names are concerned. The most significant sectors concern agriculture, garments, footwear and toys (Gereffi, 1999). The distinction between producer- and buyer-driven chains has been challenged from various perspectives. For example, it has been argued that this classification does not reflect governance patterns in agricultural commodity chains and it does not help to specify degrees of governance in certain global chains (Laven, 2011 adapted from: Fold, 2002; Gibbon, 2001; Humphrey and Schmitz, 2000). The concept of chain coordination was introduced in this context; it focused on 'inter-firm relationships and institutional mechanisms through which non-market coordination of activities in the chain is achieved' (Humphrey and Schmitz, 2002:7). Further work (Humphrey and Schmitz, 2002; Gibbon and Ponte, 2005) also argues that power and coordination within chains is not necessarily found in one firm. Rather, certain chains are decisively marked by different actors.

Additionally, since international trade is increasingly undertaken through the organized global value chains in which quality-based competition plays a central role, increasingly complex standards are being introduced. It also involves the introduction of new productivity-enhancing technologies both at the level of individual nodes in the chain and at the level of their interactions (transactions and logistics). This raises the complexity and interdependence of the chain as a whole (Helmsing and Vellema, 2011).

The following "five triggers" (Fig. 2.3) are often mentioned as a means to achieve local value chain development: the need to improve system efficiency; product quality and specifications;

product differentiation (competition); social and environmental standards; enabling business environment (ILO, 2007; Mitchel *et al*, 2009). Using them as a methodological framework can help to identify opportunities and constraints to making the local target sector more competitive and integrate it more effectively into value chains and markets.

Figure 2.3. Five Triggers for Value Chain Development



Source: ILO (2007:13) *An operational guide to local value chain development*

2.2.2. Agricultural value chains

Within agricultural value chains, a notable characteristic is buyer power. Agricultural production has a structure which includes many small-to-medium-size farmers which leaves the coordination mechanism often in developed countries (Gereffi and Memedovic, 2003 – adapted from Fromm, 2007). Yet through this coordination mechanism, producers are often excluded (see Dolan *et al.,* 1999 and their finding on the Kenyan fresh fruit and vegetable chain). A reason for this feature is given by Humphrey (2005) who argues that economies of scale exist in governance. Large firms possess management capabilities that give them the ability to coordinate complex relationships with suppliers and customers, but it is easier to deal with a few large suppliers or customers than to deal with many small ones (Humphrey 2005; Fromm, 2007). Large buyers have more buying power, which gives them the opportunity to enforce compliance with their standards and manage logistics. Small producers often have no choice but to accept and comply with these standards. Examples of these can be found in several agricultural value chains (i.e. coffee, cocoa, horticultural, fresh cut flowers), where retailers in industrialized countries coordinate small producers in developing countries (Fromm, 2007). To become or remain "interesting" to international traders, suppliers/supplying locations have to match certain price, volume and reliability criteria over the short-to medium-term. Individual suppliers have an interest in "keeping onside" of international traders because of the huge disparities in resources (financial and informational) between the two parties, because international traders can supply cheap credit and because seasonal contracts with them represent an important form of local collateral (Gibbon, 2001).

2.2.3. Upgrading strategies

A key contribution of value chain analysis to an understanding of how the incomes of the rural poor can be augmented lies in the notion of upgrading. Upgrading refers to the acquisition of technological capabilities and market linkages that enable firms to improve their competitiveness and move into higher-value activities (Kaplinsky and Morris, 2001). Kaplinsky and Morris (2001) provide four types of upgrading in firms:

- *Process upgrading:* Increasing the efficiency of internal processes, both within individual links in the chain and between links in the chain
- *Product upgrading:* Introducing new products or improving old products faster than rivals
- *Functional upgrading:* Changing the mix of activities conducted within the firm or moving the locus of activities to different links in the value chain
- *Inter-sectoral upgrading:* When firms of clusters move into new productive activities, also referred to as horizontal moves into new sectors

Difficulties with this classification include that of distinguishing product and process upgrading in specific instances, especially in agro-food products, where the introduction of new processes, such as organics or sustainable products, can generate new categories of products (Fromm, 2007). Also, although process upgrading can put forward a strategy in which matching food safety or complying with socio/environmental standards could lead to products with "*better intrinsic qualities*", it does not necessarily translate into higher value for the producer (ibid).

The upgrading categories discussed above are especially based on the experience of technological upgrading by the East Asian newly industrialised countries. It has however been found that the problems faced by those working in agricultural activities in some of the poorest parts of the developing world often are, unsurprisingly, not the same as those faced by industrial entrepreneurs in Singapore. For example, a lack of financial or other resources in poor, rural areas often prevent producers from accessing viable value chains. As such, horizontal coordination (producers organizing themselves in order to bulk-up produce or inputs or gain access to technical support) is often an important precursor to more conventional forms of upgrading (Mitchell *et al* 2009). A team of COPLA[6] and the ODI[7] has therefore developed a more nuanced category of upgrading strategies as part of a research programme with the International Development Research Centre (IDRC). The framework is found to be more sensitive to the choices available to rural residents of developing countries, and extends the relevance of upgrading strategies to agricultural and basis craft goods. A menu of seven different types of strategy is proposed to upgrade the position of the rural poor in value chains. It is however pointed out that upgrading strategies are not, and cannot be, implemented in isolation and follow a sequential path. Table 2.1 shows the different upgrading strategies, followed by a short explanation and some examples:

[6] Comercio y Pobreza en Latinoamérica (COPLA)
[7] Overseas Development Institute (ODI)

Table 2.1: Typology of upgrading strategies

Type of upgrading strategy	What it means	Examples
Process upgrading	Improving chain efficiency	Introduction of irrigation to rice paddies (process upgrading, von Braun and Webb 1989)
Product upgrading	Improving product quality	Shift to organic cotton production (process and product upgrading, Eyhorn et al. 2005)
Functional upgrading	Changing the mix of functions performed	Coffee farmers adding value by processing their cherries (Bolwig et al. 2008) and shortening the chain by removing intermediaries (Singh 2008)
Horizontal coordination	Development of relationships among actors within functional 'nodes'	Formation of new fish traders' groups (Walker 2001) and strengthening of producers' groups (Naved 2000)
Vertical coordination	Developing relationships among actors between nodes	Horticultural production on a contract (Raynolds 2002) and the provision of extension services and credit in kind by a maize processing firm (Simmons et al. 2003)
Chain upgrading	Applying existing skills to a new chain	Farmers moving from mixed agriculture to fish farming (Naved 2000), or fishers shifting from targeting anchovies and tilapia for the local market to Nile perch for processing and export in Tanzania (Kadigi et al. 2007)
'Upgrading' of the enabling environment	Changes to the external governance of the value chain	Changes to policy, law, institutions, support organisations, for example, reduced local government sales taxes for beekeepers' products in an Indian state and the revision of matrilineal inheritance legislation in Ghana (Walker 2001)

Source: Mitchell *et al* 2009 p. 20

Studying the global coffee trade, Daviron and Ponte tried to avoid the vocabulary of upgrading and chose instead to focus on its components: 'the ability of producers to create and control the value' (2005:30). This approach provides the basis for what Laven (2011) refers to as 'inclusive upgrading'. Laven argues that although most debates on social inclusion in value chains still focus on insertion of the poor, this does not automatically result in upgrading. Therefore, it is important to analyse the impact that inclusion in a value chain has on farmers. To determine whether upgrading is 'inclusive' Laven distinguishes three types of impact that can result from upgrading strategies. The first impact is 'raising competitiveness and adding value', which conventional approaches present as the main goal of upgrading. According to Laven however, these notions seem to presume two basic conditions: (i) the presence of an open market system and (ii) the absence of a limit to upgrading, as long as there is access to new knowledge and technologies. These preconditions are not always fully present for producers. Moreover, adding value can entail costs that outweigh benefits. Laven therefore includes two other types of impacts: 'remunerative income' and 'empowerment'.

2.2.4. Rents and barriers to entry

Two conceptual issues which are critical in understanding who benefits from involvement in global value chains are *rents* and *barriers to entry* (Mitchell *et al*, 2009). Rents arise from the control of scarce valuable resources and require protection from competition. This is realized by taking advantage of, or creating, barriers to entry. The ability to generate and appropriate rents is central to

chain rents distribution, at one point in time and over time. Kaplinsky (2005) distinguishes four families of rent: a) The ability to shape market relations, by building monopoly power and using anticompetitive practices, such as predatory pricing or cartels, to exclude competitors. An example is tariffs in high-income countries that discriminate against food imports; b) Resource rent, for example high-yielding agricultural land; c and d) The power of human agency to cut costs and improve products by augmenting production processes, organizational systems and product and service design and delivery. A distinction can be made here between endogenous rents and exogenous rents. Endogenous rents are generated largely by firms and in interactions between firms and local research and technology organizations. Exogenous rents are created largely by actors who are not directly productive participants in the value chain, and often result from activities initiated by, or under the control of, governments (Mitchell *et al*, 2009).

Andriesse *et al* (2011) have sought to complement value chain analysis with the 'business systems' approach, an analytical framework that focuses explicitly on the institutions steering economic relations within a geographical context. Both are part of relational approaches and their key insight is that the performance of firms depends not only on their 'in-house' assets and capabilities, but also on the environment in which they operate, i.e. on the nature of their links with other actors (Andriesse *et al,* 2011:151). This notion is famously encapsulated in Granovetter's (1985) concept of 'embeddedness' and will be kept in mind throughout the research.

2.3. Base of the Pyramid strategies and Inclusive Business

The Inclusive Business model that is central to this investigation is partly based on Base of the Pyramid strategies. These type of models, just like value chain development, have one word in common: *Inclusion*. Inclusion is mostly defined as facilitating or enabling the participation of small producers in more remunerative, often global, value chains (Helmsing and Vellema, 2011). Hospes and Clancy (2011) however argue that the concept itself is too often taken for granted. According to them, a positive development outcome of inclusion in value chains should not be taken as a given, though this is often an implicit assumption in policy frameworks promoting inclusion. It is important to keep this in mind throughout the research. In this chapter, the concepts of Base of the Pyramid and Inclusive Business will be further outlined.

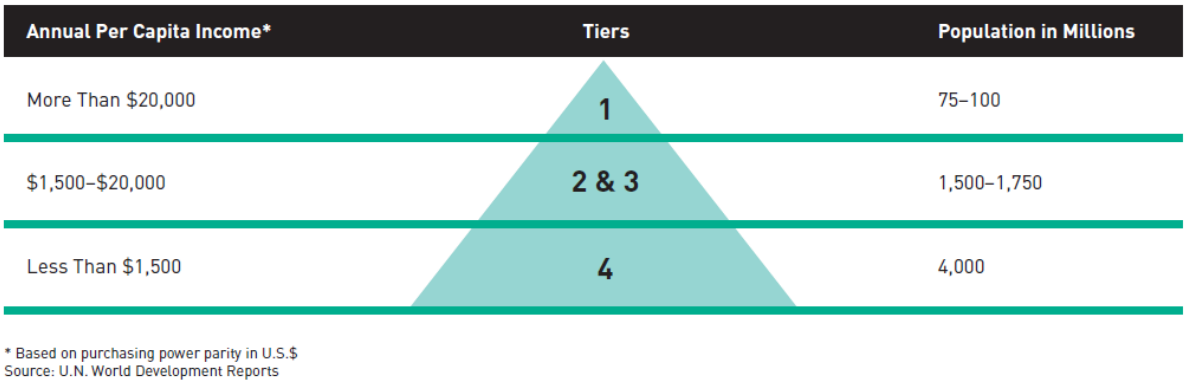
2.3.1. The Bottom of the Pyramid

"If we stop thinking about the poor as victims or as a burden and start recognizing them as resilient and creative entrepreneurs and value-conscious consumers, a whole new world of opportunity will open up". (Prahalad, 2004, p.1).

Although a bottom of the pyramid has likely existed throughout the history of commerce, probably the earliest use of the phrase "bottom of the economic pyramid" was by U.S. President Franklin D. Roosevelt in his April 7, 1932 radio address, *The Forgotten Man,* in which he said: "*These unhappy times call for the building of plans that rest upon the forgotten, the unorganized but the indispensable units of economic power...plans that build from the bottom up and not from the top down, that put their faith once more in the forgotten man at the bottom of the economic pyramid*." More recently, Professors C.K. Prahalad and Stuart L. Hart inspired many scholars and businesses with their 2002 article *The Fortune at the Bottom of the Pyramid.* In this article efforts are being made to convince multinationals to look at globalization strategies through a new lens of inclusive

capitalism. The authors focus attention on the greatly untapped market of the people that find themselves at the bottom of the economic pyramid by capturing the division of the worlds purchasing power parity in a pyramid with four consumer ties (see Figure 2.4). According to the authors, the bottom tier consists of more than four billion people with an annual capita of less than US$1,500.

Figure 2.4. The World Economic Pyramid



Source: Hart & Prahalad 2002

Thereupon, they enthusiastically state that although these bottom tier people are poor, they represent an underserved multitrillion dollar market. "*For companies with the resources to compete at the bottom of the world economic pyramid, the prospective rewards include growth, profits, and incalculable contributions to humankind*". Moreover, the Bottom of the Pyramid (BoP) is being perceived as the ideal testing ground for developing environmentally sustainable technologies and products for the entire world. For multinational companies (MNCs) the BoP market poses a major new challenge: how to combine low cost, good quality, sustainability and profitability. It is however being emphasized that no firm can go on this quest alone. Multiple players must be involved, including governmental authorities, nongovernmental organizations (NGOs), communities, financial institutions, and other companies. The article has however not been received without critiques. Especially since the article of Hart & Prahalad mainly emphasizes the BoP as potential consumers, the most important critique was that we need to view the poor as producers, and emphasise buying from them, rather than selling to them (Karnani, 2007). According to Karnani, there is no fortune at the BoP and for most multinational companies the market is actually very small. He emphasizes that the only way to alleviate poverty is to raise the real income of the poor. Also, many question the vague estimates of the size of the BoP market and the suitability of multinational corporations for this market (Jenkins, 2005; Karnani, 2007). Most of the critiques are related to the part where companies are supposed to sell to the poor – something that does not necessarily improve their welfare or reduce poverty.

A few years after the article, C.K. Prahalad published the book *The Fortune at the Bottom of the Pyramid. Eradicating Poverty through Profits* (2004). This work outlines a need for free and transparent private-sector competition which will reduce corruption, a challenge to our current logic and assumptions regarding the BoP and emerging economies, and the need for transition to a market-based economy in emerging economies. For the companies that are ready and willing to engage themselves with the BoP Prahalad envisions that they become part of the company's core business. He again makes clear that collaboration between all stakeholders - private sector,

governments, NGOs and the BoP itself - is necessary. He then provides twelve principles for innovation which are necessary for companies to operate within the BoP. The result should be that BoP consumers enjoy increased engagement in the global economy, increased dignity and self-esteem, and reduced poverty levels. Two crucial interventions are however emphasized when doing business with the BoP: Providing access to credit and increasing the earning potential of the poor (Prahalad, 2004).

Meanwhile, Hart and his colleague Erik Simanis at Cornell University's Centre for Sustainable Global Enterprise have started to take a slightly different approach towards the BoP, one that focuses on the poor as partners and innovators, rather than just as potential consumers or producers. Hart and Simanis have led the development of the *Base of the Pyramid Protocol*, an entrepreneurial process guiding companies in the development of business partnerships with low-income communities in order to "*co-create businesses and markets that mutually benefit the companies and the communities" (BoP Protocol).* The word 'Bottom' has been changed into 'Base' of the Pyramid to make it a more holistic approach. For this approach, the input of BoP consumers in determining what best suits their needs is highly important. The Protocol asks MNCs to, among other things, admit their ignorance in serving the BoP market, to seek out the unheard voices of those representing the BoP, to promote development as defined by the local people and to modify any unintended negative impacts of their BoP approaches (Landrum, 2007). The Protocol also challenges MNC teams to live within the targeted BoP communities for weeks or months, at local wages, to fully appreciate the local way of life.

Furthermore, Ted London at the William Davidson Institute at the University of Michigan focuses on the poverty alleviation implications of Base of the Pyramid ventures. London (2009) has also developed the BoP Impact Assessment Framework, a tool that provides an holistic guide for BoP ventures to assess and enhance their poverty alleviation impacts. The basics of this framework will also be used throughout this research amongst the small-coffee producers in Nicaragua. The main importance for this research is however to view the BoP as producers, and although Hart & Prahalad do provide some examples of this (e.g. Starbucks) it does not have the emphasis. It is mainly therefore that new concepts have started to arise, one of them being the concept of inclusive business.

2.3.2. Inclusive Business

Agriculture is of critical importance to the livelihoods of millions of poor people in rural areas. Therefore, poverty-alleviating growth largely depends on access to lucrative consumer markets for poor producers. Historically, research has emphasized the resource and asset constraints faced by smallholder farmers as impediments to agricultural growth (Bitzer *et al,* 2011). Over the last two decades, this has been complemented with insights on the relevance of institutions for economic and agricultural development (Bitzer *et al,* 2011, adapted from North, 1990; Harris *et al.*, 1995; Dorward *et al.*, 2003). For smallholders it is still difficult to reach out to international markets or to emerging domestic ones because of a lack of information on prices and technologies, few or no connections to market actors, underdeveloped financial markets and scale diseconomies. The gap between current local practices or institutions and the institutions required to enable farmers to participate in value chains needs to be filled. It is therefore that partnerships between businesses, NGOs, farmers and public agencies have started to emerge to facilitate the inclusion of smallholders in value chains

(Bitzer *et al,* 2011). SNV Latin America is one such organ that has been seeking to build these kind of partnerships, under the name of "Inclusive Business".

Broadly seen, the concept of Inclusive Business (IB) comes down to the same idea as Base of the Pyramid strategies. The NGO SNV Latin America and the World Business Council for Sustainable Development (WBCSD) have together formed the Alliance of Inclusive Business, in which they elaborate on and put in to practice the ideas of the Base of the Pyramid. The aim is to contribute to poverty reduction through commercially viable initiatives led by the private sector. The initiative has started in Latin America, in which already more than 70 IB cases have been developed. According to SNV (2010) IB provides "*Profitable ways to integrate low-income segments into business operations of large companies in a way that benefits these communities and creates sustainable livelihoods"* (SNV & WBCSD 2010). The core idea of IB is the generation of mutual value for both the ("anchor") company involved and the low-income sector (or Base of the Pyramid) by including this sector within the value chain of the company:

- As producers or service providers
- As distributors
- As consumers by providing access to basic services or quality products that respond to needs at a lower cost

Where many of the example cases of Prahalad, London and Hart mainly focus on the inclusion of the BoP as valuable consumers, inclusive business puts its main emphasis on the inclusion of the BoP as producers and / or distributors. At the moment, the SNV and WBCSD alliance of IB only cooperates with companies that focus on including the BoP into the first two parts of the value chain.

The inclusive business approach is complementary to the concept of *value chain development*. IB is focused on value creation with the anchor firm involved and its relationship with a cluster of Small- and Medium Enterprises (SMEs). Value Chain Development (VCD) on the other hand begins with enhancing the competitiveness of and creating access to markets for smaller firms and connecting them with larger firms in the value chain from a systems perspective (SNV & WBCSD, 2010). As has also been emphasized as a critical success factor in the BoP strategies, also IB cannot be the entire solution to poverty reduction. It works in combination with other strategies and approaches to achieve scale and sustainability. Cooperation of all stakeholders involved is necessary. Similarly, generating an enabling environment is crucial for a successful IB case. Companies must be able to count on an adequate legal, institutional and financial framework. Frequently, absence of these conditions prevent markets from developing their positive effects on a wider scale. Companies, governments and NGOs all need to work together to realize a truly inclusive and sustainable globalization (SNV & WBCSD, 2010).

2.4. Research questions

The main focus of this research is on the small coffee producers and the coffee cooperatives and the possible impact the inclusive business initiative may have on their lives and organizations. The central question guiding this research is therefore as follows:

Does the inclusive business initiative (potentially) create added value for the low-income coffee farmers and cooperatives in Nicaragua?

The central question has been divided into four sub questions which as a whole are expected to formulate an answer to the central question.

1. What are the characteristics and livelihood activities of the farmer communities involved in the IB initiative?

This question makes use of the SLF and aims to give a better understanding of the daily reality of the small coffee producers involved in the IB initiative. This question will be answered in chapter 4.

2. What are the main internal and external challenges the coffee farmers face?

This question takes a closer look at the challenges in the lives of the coffee farmers. The external challenges are focusing on the context in which the development intervention takes place, something that can play a highly important role in the outcome. This question will be answered in chapter 5.

3. How do the different aspects of the IB initiative function and is the initiative able to play a role in offering a sustainable solution to the challenges the coffee farmers face?

This question goes into detail of the different aspects of the IB initiative – access to free trainings, access to technological innovations, access to finance – to see if these can play a role in a sustainable solution of the farmers' problems. This question will be answered in chapter 6.

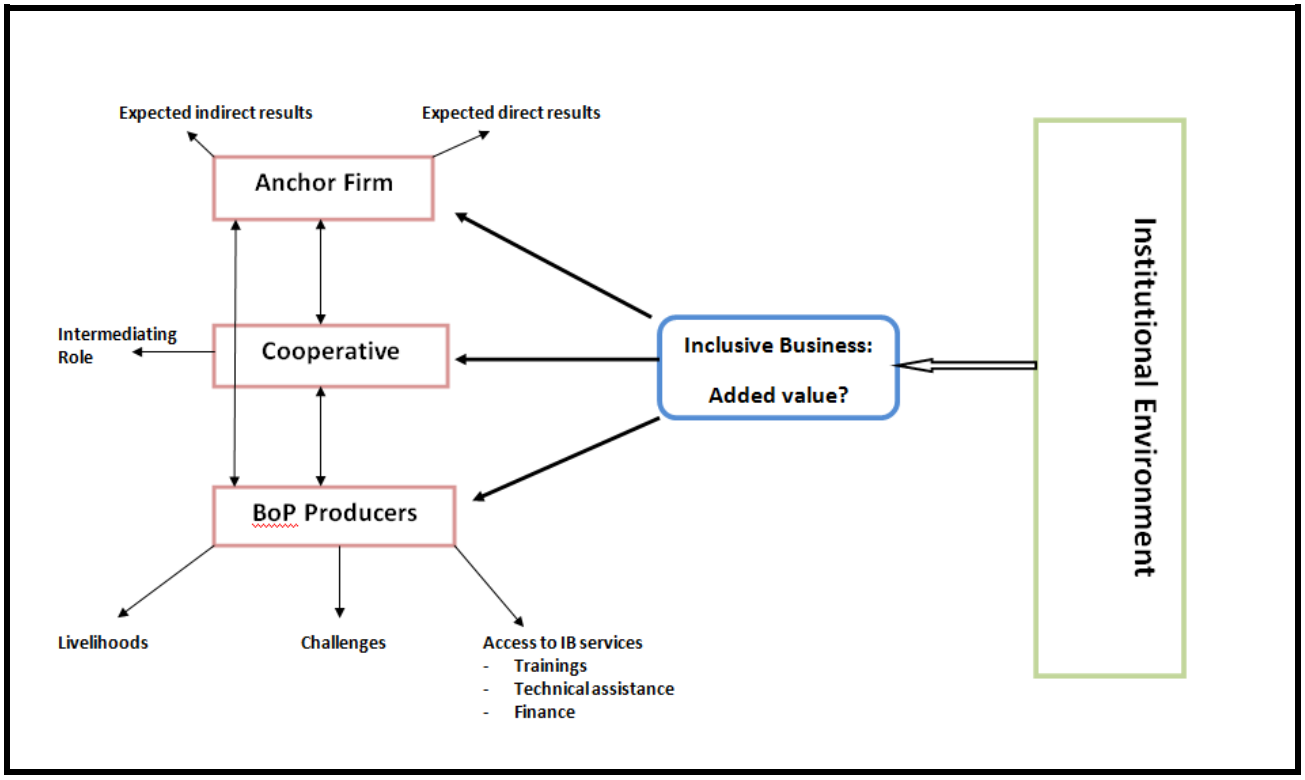
4. What will be the direct and indirect expected results of the IB initiative for the anchor company?

This question will look at the anchor company's perspective on the inclusive business initiative and will investigate what kind of results can be expected for the company. This question will also be answered in chapter 6.

2.5. Conceptual Model

The conceptual model in figure 2.5 displays a visualisation of the central and sub questions to this research.

Figure 2.5. Conceptual model



The central question of this research is whether the inclusive business initiative creates added value for the low-income coffee farmers and cooperatives in Nicaragua. The context of Nicaragua and the institutional environment will always have an influence on the outcome of this question. Within the coffee sector, the coffee cooperative often plays a vital role for the small coffee producers and is therefore being captured in the model and research question as well. Often –although not always acknowledged as such in the IB project outlines - the anchor firm works indirectly with the small producers and more directly with the cooperative involved. This feature is also expected to play a role in the outcome of the research question.

2.6. Summary

Nowadays, when poverty is studied more attention is being given to the various factors and processes which either constrain or enhance the ability of people to make a living in an economically, ecologically, and socially sustainable manner. It has become clear that livelihood strategies and outcomes are not just dependent on access to capital assets or on the vulnerability context; the environment of structures and processes also plays a critical role. When studying poverty amongst small producers in developing countries, it has now become more important to look at *how* producers and countries can insert themselves in the global economy in a way which provides for sustainable economic growth. International trade is increasingly undertaken through organized

global value chains in which also increasingly complex standards are being introduced. To achieve local value chain development, triggers as a) the need to improve system efficiency b) product quality and specifications c) product differentiation, d) social and environmental standards and e) an enabling business environment are often being mentioned. An upgrading framework is being proposed in paragraph 2.2.3 that is found to be sensitive to the choices available to rural residents of developing countries, and extends the relevance of upgrading strategies to agriculture. Although most debates on social inclusion in value chains still focus on insertion of the poor, this does not automatically result in upgrading. Therefore, it is important to analyse the impact that inclusion in a value chain has on farmers. A positive development outcome of inclusion in value chains should not be taken as a given. Often, gaps still exist between current local practices or institutions and the institutions required to enable farmers to participate in value chains. To fill this gap, partnerships between businesses, NGOs, farmers and public agencies have started to emerge to facilitate the inclusion of smallholders in value chains. *Inclusive business* in this way aims to provide profitable ways to integrate low-income segments into business operations of large companies in a way that benefits these communities and creates sustainable livelihoods. Generating an enabling environment is crucial for a successful IB case. Companies, governments and NGOs all need to work together to realize a truly inclusive and sustainable globalization.

3. METHODOLOGY

The research has taken place in Nicaragua from February to May 2011. In order to get the best results for this research, use has been made of both quantitative as well as qualitative strategies, also known as the Q-square method (Hulme, 2007). Using a combination of these approaches permits the strengths of both to be captured and makes sure some of the weaknesses of a single approach are avoided or overcome (Hulme, 2007). The strategies used are as follows:

1. **Observation** by visiting trainings given to small coffee producers
2. **Questionnaires** amongst small coffee producers
3. **Interviews** with coffee cooperatives involved and other relevant stakeholders
4. **Ethnographic studies** with two farmer families

The research is composed of primary and secondary data collection. Secondary data collection includes scientific literature review, a base line study performed by SNV in January 2008 and documents from the SNV Knowledge Institute. Within this section, the primary data collection will be explained.

Upon arrival in Nicaragua, the first three weeks have been spent at the SNV regional office based in the capital, Managua. This time has been used to obtain a proper view on the particular inclusive business project and discuss the project with SNV staff involved. The second week, the first field trip has been made on an invitation by SNV staff and involved a visit to an introductory session to the IB project given by two technicians and the project coordinator of Exportadora Atlantic S.A. (Atlantic). A coffee farmer group was being visited in Palacaguina, Madriz. It proved to be a perfect situation to directly observe the behaviour of both the company as well as the small producers involved. During the remaining time in Managua, desk research has also been continued on the Nicaraguan coffee sector and preparations were being made for the field research. These preparations included the making of draft versions for interviews and the developing of the questionnaire.

From of the second phase of the research, the main base has been the city of Matagalpa where the regional office of Atlantic is also situated. This phase started out with scoping interviews with the project coordinator of the IB project of Atlantic. Two alternative field trips have also been made to observe a training on UTZ certified given by one of the SNV advisors and a Nespresso AAA training given by the technicians of Atlantic. This has mainly been done to get a more open view on the situation of small coffee farmers in Nicaragua.

As of March 2011, the actual field work started out with questionnaires among the small coffee farmers involved in the IB project and interviews with the coffee cooperatives involved. As soon as the questionnaire was being checked by both the project coordinator of Atlantic as well as the project coordinator of SNV the first pilot study of the questionnaire has been undertaken in San Juan del Río Coco, Madriz. After this pilot study it became clear some adjustments had to be made within the questionnaire, an explanation of which can be found in paragraph 3.4 on the limitations of this research.

3.1. The questionnaires

The aim of the questionnaire was to get a better understanding of the farmer situation and determine whether the inclusive business project creates or can create value for the farmer and its family. The questionnaire consisted of the following topics: 1) Economic information, 2) Marketing of coffee, 3) Inclusive business – Trainings, technical assistance and access to finance, 4) Composition of household and education. The full questionnaire can be found in appendix 3. The questionnaires have been conducted by the researcher herself, as no translator was needed. This resulted in a total of 54 questionnaires. The quantitative data has also been entered by the researcher herself and analysed with the use of SPSS 19.0 (Statistical Program for Social Scientists). SPSS is mainly used to provide descriptive statistics, such as frequencies, means, and graphs. Descriptive statistics is mainly focused on summarizing descriptions of characteristics of a group of research units (Boeije *et al*, 2009).

The research population for the questionnaires consisted of the 300 first participants of the IB case with Atlantic. Of these selected beneficiaries a list was available with the names of the producers, their cities, the cooperation of which they are member – if applicable –, their age, name and size of plot, net income and average of temporal workers hired. The participants came from four different departments in Nicaragua: Matagalpa, Estelí, Madriz and R.A.A.N. 86% Of the selected beneficiaries are organized in a cooperative or association and 25% of them are female producers. This list of participants made up the sampling frame for the research and some data can be found in table 3.1:

Table 3.1. Sampling frame

Dpmt / Municipality	Male	Female	Total	%
Matagalpa	**58**	**23**	**81**	**27.0%**
Rancho Grande	33	14	47	15.7%
Esquipulas	25	9	34	11.3%
Estelí	**23**	**4**	**27**	**9.0%**
San Juan de Limay	23	4	27	9.0%
Madriz	**135**	**48**	**183**	**61.0%**
San Juan del Río Coco	59	13	72	24.0%
Telpaneca	76	35	111	37.0%
R.A.A.N.	**9**		**9**	**3.0%**
Waslala	9		9	3.0%
Total	**225**	**75**	**300**	**100.0%**

Source: SNV BID FOMIN – Selección de Beneficiarios

Two out of four departments have been visited to perform the questionnaires: Madriz and Matagalpa. Two municipalities of Matagalpa were part of the sampling frame and both have been visited: Rancho Grande and Esquipulas. Within Madriz, two different municipalities were part of the sampling frame of which one has been visited: San Juan del Río Coco. The latter was the first

research location and the participants were member of a coffee cooperative. Since the producers live very remote and dispersed, the researcher was dependent on the cooperative to be able to locate and visit the producers and their families. Two technicians of the cooperative were willing to transport and guide the researcher to and on the visits. Transportation was being made possible by the use of their motorcycles. As table 3.2 shows, a total of 23 questionnaires have been performed in SJRC. The second field location was Esquipulas, where a group of non-cooperative member participants was located. These producers would sell directly to an Atlantic agency, and many farmers came by the agency daily which made it more easy to perform the questionnaires. Additionally, some producers have been visited in their communities together with the head employee of the Atlantic agency, who would know where to find the producers. These have been visited on foot and by car. A total of 22 producers from this area have participated with the questionnaires as is shown in Table 3.2. The final research location was the municipality of Rancho Grande. This was a very dispersed location and difficult to access. The researcher was introduced in this area by one of the Atlantic technicians who was giving a training to some of the producers involved. By participating on the training some producers could already been interviewed. Others have been visited on foot the next days with the help of a producer who also provided food and shelter to the researcher. A total of nine producers have been found to participate in the questionnaire which made the complete number of questionnaires performed (sample size) 54 out of a research population of 300 producers.

Table 3.2: Performed questionnaires based on sample frame

Dpmt / Municipality	Male	Female	Total	%
Matagalpa	**29**	**2**	**31**	**57.4%**
Rancho Grande	9	0	9	16.7%
Esquipulas	20	2	22	40.7%
Madriz	**16**	**7**	**23**	**42.6%**
San Juan del Río Coco	16	7	23	42.6%
Total	**45**	**9**	**54**	**100.0%**

All producers approached to participate with the questionnaire responded positively, which made the response rate 100%. However, although a sampling frame was available, the difficulties to perform a probability sample soon became clear. Instead, a non-probability or purposive sample had to be performed, which is any form of selection based completely or partly on the judgement of the researcher (Laws, 2003). In the case of SJRC, the researcher was mostly dependent on the technicians who knew where to find the producers involved. At the same time, mostly producers were visited who had to be visited anyway by the technicians in order to fill out some pending forms. In the case of Esquipulas, a convenience sample was performed as many farmers would visit the Atlantic agency in order to check on their credit status. This way, the researcher could make use of the situation by interviewing those who conveniently came by. In the case of Rancho Grande it was mostly through a form of a snowball sample how new farmers would be interviewed. The non-probability sample makes it difficult to make generalisations (Laws, 2003) of those interviewed to the population. However, since three different areas have been visited, both individual producers and members of cooperatives have been interviewed and 16.7% of the participants were women, it can be stated that

the performed research is representative for all 300 producers involved in the IB-case. This argument can be strengthened by one of the outcomes of the research that shows that the producers in general live in the same conditions and face the same problems (chapter 4 and 5).

3.2. The interviews

In order to get a better understanding of the processes of the IB project and the situation of the small producers, interviews have been conducted with some of the coffee cooperatives involved. 86% of the research population is active in a cooperative, divided over four different ones. Of these four cooperatives, two could be visited and interviews were performed with directors and technicians. In San Juan del Río Coco, interviews have been conducted within cooperative Caja Rural. In Rancho Grande, the director of the cooperative Pedro Sergio Rodriguez C. has been interviewed. The producers in Esquipulas were all individual producers selling most of their coffee to the agency of Atlantic; the lady in charge of this agency has also been interviewed. Additionally, an interview has been conducted with one of the directors of a cooperative in SJRC whose members had just received an introduction and invitation to the IB project. Finally, it has been possible to interview an employee of the local municipality office (*alcaldía*) of SJRC. The interviews were semi-structured, a technique which is used to collect qualitative data by setting up a situation (the interview) that allows a respondent the time and scope to talk about their opinions on a particular subject (sociology.org.uk, 2011). The focus of the interview was decided by the researcher and the objective was to understand the respondent's point of view rather than to make generalisations about behaviour. Mostly open-ended questions were used, some suggested by the researcher and some arose naturally during the interview. All interviews were tape recorded and fully transcribed afterwards. A full list of the interviews held can be found in appendix 4.

3.3. Ethnographic studies

In cooperation with SNV Knowledge Institute, two ethnographic studies have been performed by the researcher. Ethnography etymologically translates as the study of ethnicity and means the analysis of the lifestyle of a race or group of individuals, by observation and descriptions of what people do, how they behave and interact, to describe beliefs, values, motivations, perspectives and how these may vary at different times and circumstances (Martinez, 1994:10). The objective of the ethnographic studies performed by the researcher was to better understand the situation in which the families find themselves and to investigate the (possible) impact of inclusive business on the quality of life of the families involved in the program. The focus areas of these studies were:

- Composition of the family
- Family budgets
- Community and associativity
- Access to financial services
- Food, housing, transportation
- Education and health
- Inclusive business

Data collection was done through participant observation, interviews and the use of a field guide ("diario de campo") that was being made available by the SNV Knowledge Institute. The first ethnographic study was being performed at a producer family involved in the IB case and situated in

the municipality of Rancho Grande. The researcher stayed for a period of three days with the particular family, the stay being co-organized by one of the Atlantic technicians who also used to stay with this family when trainings were being given in the area. The same technician made sure possible expenses were covered with the family. The second ethnographic study was performed through a stay with a producer family in San Juan del Río Coco, together with the SNV project coordinator who also got a chance this way to visit the field for the first time. This stay was being arranged by the researcher in cooperation with the coffee cooperative Caja Rural. The same family had previously been visited by the researcher in order to complete the questionnaire. With this family unfortunately the stay was shortened to one day, but due to the fact that the study was performed in a couple still enough information could be gathered. Due to the fact that the researcher was accompanied by the project coordinator of SNV a chance of bias or the interviewee giving answers "we wanted to hear" was realistic. By fully explaining the use of the research to the family beforehand and by assuring the family both parties would not be helped if the family was afraid to be open and honest attempts were made to try and diminish this possible threat. The ethnographic studies turned out to be quite relevant for the investigation since it provided rich information on the life of the producers which gave an important addition to the questionnaires. It was also highly appreciated by the families involved, who felt they were taken seriously and were pleased someone showed genuine interest in their lives. At the same time, it was an exchange of information and experiences, as the researcher would also share information – for example on the life in the Netherlands – with the families involved.

3.4. Limitations of research

Despite the fact that the researcher applied several research techniques, some limitations to the investigation are inevitable. Practical constraints such as a limited budget, limited amount of time to perform the research and an inefficient mode of transport have forced some sacrifices. These limitations of the research will be discussed next.

Firstly, before starting with the investigation it was being envisioned by the researcher to provide a full evaluative research of the particular IB case. Upon arrival in Nicaragua however it soon became clear this was not yet possible, as the project had started only one year ago and had also suffered delay. Instead, it was opted to do a preliminary baseline evaluation with an emphasis on a qualitative and sociological approach in order to complement an evaluative quantitative study that will be performed by SNV as of May 2012.

A second difficulty with the research was the fact that the small producers involved in the IB program live very dispersed in rural and difficult to access areas. This made the researcher dependent on people that are more affiliated with these areas, such as technicians from coffee cooperatives. The researcher had set the goal to reach 60 questionnaires, 20% of the research population. In the end, 54 questionnaires have been realized due to the fact that at the final research location no technician (or other person) was available to guide the researcher to the final 6 –more dispersed- producer families. Also, as explained in chapter 5.2.1. the researcher was bound to perform a non-random sampling which makes it difficult to make generalizations. An important aspect of this research was however to provide a more realistic image of the life of the producers involved in this project and give them a voice to let some of their biggest challenges been heard. The researcher feels this has been successfully accomplished.

Third, the first idea of the researcher was to include three different departments of Nicaragua in the field research. It was however not possible to visit the producers in Estelí as the coffee cooperative involved was not willing at that time to receive the researcher and provide ways of access to the communities. Instead, two different regions in the department of Matagalpa have been visited to be able to come up with three different field locations at the end.

Fourth, due to circumstances, it was not possible to obtain more detailed inside information on the effects of the IB initiative on the anchor company involved. Therefore, a firstly proposed central question had to be adjusted and the focus of the research had to be more on the producer side of the value chain.

Fifth, although the researcher is fluent in Spanish, it is not the mother tongue and also because of a sometimes different rural/local vocabulary some aspects in interviews or during the questionnaires may have gone lost in translation. Also, the cultural distance between researcher and respondent may have caused minor issues concerning validity and reliability of the research. Bias or irregularities can result from differences in gender, age, race, sexuality and educational level. The fact that the researcher is European, female and young may have had an effect on the results. The researcher however always attempted to reflect upon her own position as is also being emphasized by Desai *et al* (2006). Also, a clear introduction was always given to participants and limitations were being explained beforehand.

Finally, at the end of the investigation a presentation has been given by the researcher to present the preliminary findings at the SNV office in Managua. The project coordinator of Atlantic had also been invited to this presentation, as the researcher wished to provide for an opportunity to discuss the IB project and together strive to come to agreements on how improvements can be made. Unfortunately, at the final moment both the project coordinator of Atlantic as well as the country representative of SNV Nicaragua had to cancel. This made it difficult to keep such a discussion.

4. CHARACTERISTICS OF SMALL COFFEE FARMERS

What are the characteristics and livelihood activities of the farmer communities involved in the IB initiative?

The sustainable livelihood approach – primarily the framework – has been used as an analytical tool first to facilitate a process of exploring the issues affecting the rural livelihoods of the producer families involved. This chapter aims to give an idea of who the small producers involved in the IB project are. It will start with exploring what livelihood assets they have and continues to unravel the livelihood strategies. The chapter ends with a visualisation of the coffee value chain in Nicaragua and the particular ones of the IB initiative. During the introductory sessions given by technicians of Atlantic to the small coffee farmers some basic data have been collected by SNV in order to get an overview of the participants involved. This data will be referred to as data from the baseline study. Some of these characteristics have also been checked by the researcher and will be compared if necessary. This chapter makes use of a case study of a typical coffee producer family in San Juan del Río Coco: every new aspect will be introduced with a small peek into the life of this family.

4.1. Livelihood assets:

Human capital

The Gonzalez family comprises of eight members: the parents and their six children, and everyone depends on the head of the household: Don Natividad. Don Natividad is a coffee producer in a community in San Juan del Río Coco. The family comprises of the following members:

Position	Name	Age	Scolary level	Working(*)		Extra income (**)	
			Years	Yes	No	Yes, specify	No
Head	Natividad González Paz	47	Primary completed	✓			✓
Wife	María Jacinta Falcón López	40	Primary completed		✓		✓
Child 1	Misael González Falcón	22	Técnico Superior	✓			✓
Child 2	Rubén González Falcón	20	Secondary education	✓			✓
Child 3	Natividad González Falcón	18	5th year Secundary	✓			✓
Child 4	Denis Omar González Falcón	16	3rd year Secundary	✓			✓
Child 5	Denia Rosa González Falcón	13	2nd year Secundary	✓			✓
Child 6	Dinorah Janeth González Falcón	10	Primary 4th grade		✓		✓

(*) Work related to the plot / coffee production

(**) Additional income (E.g. paid work)

Don Natividad originally comes from the department Nueva Segovia. During the eighties his parents moved to the zone of San Juan del Río Coco because of instability due to the civil war. Don Natividad himself also had to participate in the Military Service and fought in the battle. When he was relieved of his army duties he got "assigned"[8] one manzana[9] of land which is how he started to become a coffee producer. He used the last years of the war and the first post-war years to acquire more land, at times when land was sold for a good price. The family is happy to live in the community of SJRC and proud of the land they have. They do not see themselves living in a city, or even in the municipality. Don Natividad calls himself "hombre del campo" and also his children help him on the plot when they are not studying, although the daughters mostly help out in the kitchen. The family ideal is to give their children the possibility of going to university, although they consider that all of them should enjoy and collaborate on the heritage (land) they will eventually receive. The primary and secondary schools that the children attend are free public schools. The aspiration of Don Natividad is that all children will graduate at university level. They feel that the education of their children should be related to the field, so that eventually they will all make the farm grow. In their free time the sons like to go and play base ball at a small communitarian field. The family is healthy and over the past years no one has suffered from an accident or serious illness. They sometimes catch a cold, mostly in times when the rainy season starts. When someone gets sick, they try to treat him at home first, with pills or injections. If they do not succeed they will take the person to the health centre of the municipality. The principal difficulty of the family is the cost of education. At the moment the oldest son goes to technical college in Palacaguina and the travel expenses as well as food and shelter that have to be covered implicate serious limitations and economic pressures for the family. It is therefore not sure the rest of his brothers will be able to attend this type of education as well. The second major difficulty for the family is "lack of access to finance (loans)" which does not permit them to develop themselves more.

The small coffee producers that are part of the IB project have an average age of 48 years. The average age of their partners is 41.7 years with a minimum of 17 years. Averagely, three children still live in the same house, which is also the average number of children that help the producer at the plantations. The majority of the producers is married. The average household size is 5 persons, similar to the baseline study average of 5.14 and a national average of 5.2 according to the 2005 National Census. Most of the farmers grew up in times of oppression followed by the revolution and consequently the Contra war. It is therefore not surprising to see that many of the producers and their partners have not been able to follow an education. Of the total number of producers interviewed, 38.9% has never gone to school. 55.6% Has managed to get into primary school but the majority has not been able to complete the full six years of the curriculum. Only 5.6% of the producers has gone to secondary school while not one producer has been able to attend any higher education. Of the three municipalities involved in the research, Rancho Grande knows the highest

[8] Term used to describe the distribution of land by the Sandinista government at that time. Although it had legal appearance it was not officially registered as required by Law.
[9] 1 Manzana (Mz) = 0.7 Hectares (Ha)

rate of producers that has not been able to go to school (Table 4.1). The producers in Rancho Grande are also living in the most difficult accessible community.

Table 4.1. Educational level of IB coffee farmers

What is the highest level of education you have attended? * Municipality Crosstabulation

		Municipality						Total	
		SJRC		Esquipulas		Rancho Grande			
		Count	%	Count	%	Count	%	Count	%
	No education	8	34.8%	7	31.8%	6	66.7%	21	38.9%
	Primary	14	60.9%	13	59.1%	3	33.3%	30	55.6%
	Secondary	1	4.3%	2	9.1%	0	.0%	3	5.6%
Total		23	100.0%	22	100.0%	9	100.0%	54	100.0%

Esquipulas knows the highest rate of producers that has attended secondary education. The three producers who did attend secondary schooling are all male producers and possess an above average high amount of land (between six and seven *manzana*).

Related to the lack of education, it resulted that 40.7% of the female heads of households cannot read and write. Again here, Rancho Grande is the area that has the highest illiteracy rate out of the three municipalites. The good news is that apparently the new generation of rural areas has more opportunity to attend school. 33 Producers have children between the ages of seven and twelve. 93.9% of them *does* enter primary school. Also in Rancho Grande, all producers that have children between these ages send their children to school in the community. All children attend public schools or communitarian educational centres. It must be taken into account however that these numbers do not indicate anything about the quality of education received. One explanation of the high primary school attendance is that elementary education is free and compulsory in Nicaragua, although this is not strictly enforced. Although education for children is found to be very important by most farmers, it is mostly assumed that children will stay in the rural areas when they grow up. Boys are often thought to continue the coffee production like their fathers and girls will most likely follow the same path as their mothers.

Box 4.1. Children imagining their future

Family Hernandez lives in the community "Lana Arriba" of Rancho Grande, Matagalpa. The community is difficult to access, to arrive at the house from the village one has to walk or go by horse. The children are going to a small communitarian primary school which is situated on a 40 minute walking distance. Asking the three girls what they would like to do when they grow up one answers: *"Cooking with my mother in the kitchen"*, while the other two girls happily add at the same time: *"Serve God!"*.

Visit of Hernandez family, Rancho Grande, 26-04-2011

An important way for farmers to learn nowadays is through trainings they receive on coffee production from cooperatives, NGOs or companies. These trainings are perceived to be highly necessary by the farmers and most of them are open to learn and willing to receive more trainings. Chapter 6 will go further into detail on the aspect of farmer trainings. Also, a new 'coffee school' can be found in Esquipulas, for the sons of the coffee producers. This can be very helpful and it will give the children a chance to learn more than their parents.

Although some farmers are able to produce other agricultural crops besides coffee, food insecurity is still one of the most critical development challenges facing Nicaragua. The country still remains dependent upon U.S. food aid to meet the needs of its population. Also the coffee farmers included in the IB program sometimes have difficulties to feed their families. 42.6% Of the small coffee producers has received food aid over the last three years. The majority of them is situated in SJRC. There are some zones surrounding SJRC for example, where people grow little other agricultural products due to the cold climate in high mountainous areas[10]. The cooperative Caja Rural of SJRC works together with the World Food Program and through this way a project –sometimes- arrives at the small producers. These are projects that exchange food aid for work, for example road construction. Variety in food is very limited for the farmer families. A basic daily meal consists of beans and rice (and coffee off course!), sometimes accompanied by a maize tortilla. Some families own a cow which gives them the opportunity to add some milk or cheese to their diet. If the family grows other vegetables sometimes in the seasons tomatoes or onions are added. Meat is consumed only occasionally.

Coffee producing family, SJRC

As a producer in Esquipulas indicated:

> *"Last year, because of heavy rainfall, I lost my harvest of maize and beans, therefore it is sometimes difficult to feed my family properly. I can give them three meals a day but there is off course no variation….We try to eat meat every 15 days……".*

Most of the producers that also grow some other agricultural products are situated in Rancho Grande. In that area also no producer has ever received food aid.

[10] Technician of cooperative Caja Rural, March 2011

Natural capital

Esquipulas covers an area of 219 km2 with an average height of 517 metres above sea level. It is a mountainous area and also has two lagoons. The municipality has a tropical savanna climate with average temperatures ranging between 25ºC and 27ºC. Although the area counts with appropriate land for agricultural production, a shortage of financial resources does not permit adequate exploitation of these lands. The municipality counts with arable land of about 10,500 ha of which in the best seasons only 4,200 ha has been cultivated. Rancho Grande covers an area of 648 km2 and has a predominate tropical savanna climate characterized as semi-humid. The average temperature ranges between 28ºC a 30º C. . Over the past years, deforestation has heavily increased which made some precious flora and fauna extinguish. Soil erosion has become a major problem and rivers frequently overflow. Also in SJRC a pressing problem is deforestation. It is estimated that between 1982 and 1995 forested areas have decreased with 89.4%. The municipality is a high risk zone for natural disasters, especially hurricanes. Over the years, many floodings have had their negative consequences on the municipal economy, causing agricultural damages and destructions of homes (Inifom, 2011). In 2010, SJRC suffered from an earthquake that measured 5.2 on the Richter scale, causing a lot of damage on the houses of both urban and rural zones[11]. In all three areas, the risks for natural disasters are quite high with the small coffee producers being a vulnerable group.

Of all 300 small producers the plot with their plantations is owned by the producers themselves. Many of them however lack the legal papers of their properties and plot. This is a consequence of the land reforms when many cooperatives were formed by the state. When these started disappearing every producer took its own terrain and they defined the plots but the property titles were not legalized. Also, there are producers that pass their grounds to their children but do not legalize their properties[12]. Several governments have, in the past, tried to give solution to the land ownership problem, this far unsuccessfully (Gomez, 2010). The average plot size of the 300 producers is 1.5 Ha with a maximum of 6.3 Ha (SNV Selección de Beneficiarios, 2010). Of the 54 interviewed producers the average total plot size is 4.5 Ha and the average size of their coffee plantation is 2.7 Ha with a median of 2.8 Ha. Averagely, those surveyed have 14 years working as a coffee producer, with a minimum of two years and a maximum of 40 years. The producers in Rancho Grande have the smallest average amount of land. As the Anova table with a significance of 0.232 in appendix 4 however indicates, there is no significant difference between the average total area of coffee within the different municipalities. A huge barrier towards the production of (specialty) coffee in Nicaragua is the lack of renovation of the coffee plantations. According to Danilo Saveedra, director of the Nicaraguan Foundation for the Technological Development of Agriculture and Forestry (Funica), the majority of the plantations are producing at half of their capacity because the plants are physically old (La Prensa, 2010). This information can be confirmed by this particular investigation with the IB producers where it resulted that the average age of the plantations is ten years. 27 (50%) Of the 54 producers are working with plants that are over ten years old. To keep a plantation at its most productive level, a plantation should be renovated after six to seven years.

In all visited communities there is a serious water scarcity that afflicts rural subsistence farming. Although water covers ten percent of Nicaragua's surface, environmental degradation, pollution, and water scarcity in some regions threaten the ability of the country to provide potable

[11] Interview with local municipality officer
[12] SNV Nicaragua, assessor

water to sustain the population and productivity. The shallow wells, rivers, streams, and lakes of which the people in communities obtain their water is often polluted with residential sewage and pesticides amongst others. All cooperatives involved indicate this as a huge problem. Farmers that are included in sustainable certification programs often receive capacity trainings on this matter. Also, "good agricultural practices" (Buenas Prácticas Agrícolas) are becoming more and more implemented to prevent producers from polluting their own area, or burn their grounds as often happens. The principal problems of the latter is the loss of soil fertility and that the advancing of the agricultural frontier makes the forest areas eliminate bit by bit when this happens[13].

Financial capital

The only access to financial services the Gonzalez family has is directly from the Cooperative, which in its turn receives financial services from the anchor company (Exportadora Atlantic) involved in the inclusive business initiative. From the Cooperative the family receives a small loan that is being used to cover production costs. Although don Natividad considers himself to be "creditworthy" with other microfinance institutions he is not interested in obtaining funds through these institutions. Nor don Natividad or any other member of the family has a bank account, since no bank has a branch in the municipality. Although he is not averse to the formal institutions, he considers the requirements that these kind of institutions demand "annoying" and it would not be possible for him to meet these demands[14]. The Gonzalez family would like to have a savings account in the bank, but only if this possibility would be given in the municipality. Don Natividad would also like to have a life insurance, an insurance for his harvest and access to long-term loans (8 years) for the renovation of his plantation. However at the moment, he considers the bank as an institution to be impersonal and far from the reality of the community.

The smallholder producers involved in the IB initiative should have a maximum income of US$ 3,200 per year. For the first cohort, 340 producers had been given the introduction to the IB initiative of which their net incomes had been calculated to be as follows:

Table 4.2. Income range 340 IB producers of first cohort

Income Range US$	Male	Frequency	Female	Frequency	Total	Frequency
Up to $ 1,565.00	176	66,9%	70	90,9%	246	72,4%
$ 1,565.01 - $ 3,200	80	30,4%	7	9,1%	87	25,6%
> $ 3,200	7	2,7%	0	0,00%	7	2,0%
Total	**263**	**100,00%**	**77**	**100,00%**	**340**	**100,00%**

Source: Data adapted from SNV (2010) Selección de Beneficiarios

[13] Conversations with technicians, SNV assessors.

[14] Although Don Natividad has the purchase deeds of his property, these are not updated in the Public Registry of the locality

This income mainly comes from agricultural production (98%), especially coffee. Other activities are very marginal with respect to income. On the other hand, the most relevant cost for these small producers is related to the hiring of labour. Another important cost is the one related to financial services and credits. After the selection of the 300 beneficiaries, their net income has been defined as the difference between the total income gained through the commercialization of coffee during the yearly harvest minus the total cost of coffee activities on the plot. The average net income through sales of coffee resulted in US$ 704.19 ranging from a loss of US$ 290.33 and a case of a plantation in development with an income of US$ 3,084.26 (SNV 2010, Selección de Beneficiarios).

Within the baseline study, producers had sold between 1 and 140 quintals of coffee during their last harvest. The average amount of coffee sold for conventional coffee was 29.32 quintals, while organic coffee sales averaged 19.92 quintals. The technicians of Atlantic indicate that "*limited investments are being made by the producers in the plots because of financial limitations or lack of knowledge, which often results in low productivity*". In general, the producers that are member of a cooperative deliver their coffee at the cooperative, also because of compromises due to credits (more information, chapter 5). In some cases producers also sell their coffee to intermediaries ("*coyotes"*) out of direct necessity of money. The intermediaries look for the producers before the harvest and pay the producers directly which could result in a loss of income. However, many producers indicated that there is no, or only a very small, difference between the prices the cooperatives pay for their coffee or the price paid by the intermediary. With the question whether there is room to negotiate about the price paid for their coffee 100% of the producers indicated it is always a fixed price. The group of individual producers living in the surrounding communities of Esquipulas deliver all, or the majority, of their coffee directly to an agency of Atlantic which is situated in the Esquipulas municipality. Table 4.3 and 4.4 show that the average amount of coffee sold per producer in the harvest of 2009/2010 has been 36.2 quintals compared to an average of 37.1 quintals in 2010/2011. The medians for both years are however lower: 24 quintals for 2009/2010 and 21 quintals for 2010/2011.

Table 4.3 Amount of coffee sold in 2009/2010 (Quintals)

	N	Maximum	Mean	Mode	Median
To cooperative	53	80	12.5	0.0	0.0
To Atlantic	53	150	18.9	0.0	0.0
To intermediary	53	50	4.79	0.0	0.0
To other exp. Company	53	0	0.0	0.0	0.0
Total coffee sold	**53**	**150**	**36.2**	**20**	**24**
No response	1				

Table 4.4 Amount of coffee sold in 2010/2011 (Quintals)

	N	Maximum	Mean	Mode	Median
To cooperative	53	100	11.4	0.0	3
To Atlantic	53	100	20.7	0.0	0
To intermediary	53	60	4.7	0.0	0
To other exp. Company	53	15	0.3	0.0	0
Total coffee sold	**53**	**116**	**37.1**	**15**	**21**
No response	1				

One of the reasons the average of the research is higher than the one of the baseline study is that five producers were included who sold an above average high amount between 100 and 150 quintals. These producers are situated in Esquipulas and their area of coffee plantations is between 2.8 and 7 Ha, higher than the average of 2.7 Ha. When defining the coffee sales per area a large difference can be found between the municipality of SJRC in Madriz and the two municipalities in Matagalpa. With an average of 24.4 quintals of coffee sold in 2010/2011 in SJRC, Esquipulas shows an average of 49.3 quintals and Rancho Grande an average of 38.2 quintals sold. The producers of Esquipulas produced twice as much coffee than the producers in SJRC. This can have different reasons, such as differences in altitudes or in plants diseases and the size of the coffee area. It is also a possibility that education influences the productivity. When we look at the research population, those who completed secondary education have the highest productivity (appendix 5). These were however only three producers which makes it difficult to make a generalization. The Anova table of appendix 5 shows a significance of 0.536 which means there is no significant difference between the average amounts of coffee sold according to educational level followed by the producers. Many producers indicate that coffee production differs per year. One year of low production is followed by a year of high production and that cycle continues. Fluctuating yields can cause farmer revenues to change by as much as 50% a year. Between the amount of coffee sold no distinction has been made between conventional and organic coffee. However, only 5.6% of the interviewed producers also sells coffee under an organic certification. Many producers indicated that their coffee is "*traditional*" and that it should be defined as being managed organically. These producers do not use any chemicals or fertilizers (especially because of a lack of resources). Some producers would comment that they always sell coffee of good quality but to a "*street price*" selling their coffee "*like any other thing*". Obtaining the certifications for organic coffee still results to be an obstacle for the smallest producers. On the other hand, a handful of producers indicated they had been selling organic coffee in previous years but since their production fell and benefits were not as expected they decided to return to conventional coffee. For producers to get by year-round they highly depend on a system of credits. These are mostly arranged through the cooperatives, and for the individual producers of Esquipulas directly through the Atlantic agency. These credits are always given out on a short term of one year and should be repaid at the next harvest with coffee. This system does however face some challenges and because the credits and financial resources are a crucial aspect for the small producers chapter 5 will go more into detail on this part.

Social capital

The close circle of the Gonzalez family consists of some friends, the father and brothers of Don Natividad and the family of María of which a part lives close by. However, all these families live separate lives and do not share ground or houses. The Gonzalez family has always been independent and they have not had the experience of sharing their house with other families. They visit each other

when there is opportunity. The brothers of María live far, but they come to visit the family once a year. The relation with neighbours is harmonious, although "everyone finds their own ways of resolving problems". The community is not extremely united, they visit each other but not often. However in special occasions it is always possible to turn to each other for support. When someone dies, people (often from the same religion) of the community tend to support with funeral expenses and demonstrate their solidarity. In another case, one of the children of the family got sick and the neighbours helped in arranging transport to take the boy to the clinic in the village. Don Natividad is the representative for the producers of the coffee cooperative Caja Rural. He has only been member of this organization, but thinks that the organization receives little financial backing. They are now working on a possible alliance with CONACAFE in order for the cooperative to be eligible to receive resources from the bank "Banco Produzcamos".

86% Of the 300 selected beneficiaries is organized in some cooperative or association. 88% of the female producers is organized (SNV Selección de Beneficiarios, 2010). For the research it has been decided to visit two groups of producers that are member of a cooperative and one group of individual producers. The visited cooperatives that are part of the first IB cohort were Caja Rural in SJRC and Pedro Sergio Rodriguez in Rancho Grande. Talking to the producers about the cooperatives, one question within the survey was if the producer considered he received any benefits from the cooperative. It turned out that 76.2% of members of Caja Rural perceived they received benefits against a 66.7% of Pedro Sergio Rodriguez members. The most important benefit considered by the producers is the loan they can obtain from the cooperative, although the majority indicates that:

- The received loans are (too) small
- The loans do not arrive at the adequate time

Table 4.5 presents the two cooperatives and the benefits considered by the producers:

Table 4.5: Cooperatives and benefits – Members of Caja Rural and Pedro Sergio Rodriguez

	Do you consider any benefits received from cooperative?	Which are the most important benefits?	Do you consider any benefits received from cooperative?
Caja Rural	Yes	Loans	11
		Loans, although small	1
		Technical assistance	1
		Trainings	2
		WFP food aid	1
	No	We are waiting	1
	More or less	We are waiting	1
		Loans, although small	2
		Loans, although not in time	1
Pedro Sergio Rodriguez	Yes	Loans	3
		Trainings	1
		Inputs	2
	More or less	Loans, although small	1
		Loans, although not in time	2
			0
Total			30

More information on the difficulties surrounding loans and challenges farmers face with cooperatives can be found in chapter 5. In the case of the individual producers that are situated in the communities around Esquipulas, the open question asked would be: *For what reason are you not (or not anymore) a member of any cooperative or association?* The answers would be as follows:

Table 4.6 Reasons individual farmers of Esquipulas give for not being member of a cooperative

	Frequency	Percent
I will integrate in a cooperative	2	10,5
I am not a member, but sometimes we do have reunions with other producers	1	5,3
There are no cooperatives in this area	3	15,8
I was a member, but never received benefits	4	21,1
I prefer to work individually	6	31,6
I receive a loan from a different institution	3	15,8
Total	19	100,0

Whether or not being a member of a cooperative, the question was asked if a producer sometimes gets together with other producers to discuss the challenges they might face.

Table 4.7. Do you ever meet with other producers to discuss problems? – All producers

			Do you ever meet with other producers to discuss problems?				
			Never	Sometimes	A lot	No answer	Total
	SJRC	Count	0	14	0	9	23
		% within Municipality	.0%	60.9%	.0%	39.1%	100.0%
	Esquipulas	Count	5	16	1	0	22
		% within Municipality	22.7%	72.7%	4.5%	.0%	100.0%
	Rancho Grande	Count	1	8	0	0	9
		% within Municipality	11.1%	88.9%	.0%	.0%	100.0%
Total		Count	6	38	1	9	54
			11.1%	70.4%	1.9%	16.7%	100.0%

The far majority "sometimes" gets together with other producers, even in Esquipulas where the farmers work individually. Those who never get together in Esquipulas indicated for example that "*everyone minds his own business"* and "*it is better to work individually".* Some of the comments that were given by those who sometimes meet with other producers were:

In SJRC:

- "*We sometimes discuss how to renovate our plantations"*
- *"We get together sometimes with the technician of the cooperative and he informs us on how to fight plant diseases"*

In Rancho Grande the same comments were given that they unite to discuss issues such as plant diseases. Within Esquipulas some producers would add:

- *"We sometimes discuss things like problems with soil and climate changes"*
- *"We sometimes unite to organize transport for our coffee"*
- *"I try to convince other producers to also work together with doña Miriam[15]"*

Physical capital

With time and savings, the Gonzalez family has been able to build the house of adobe in which they actually live at the moment. Money had to be saved to buy zinc for the roof, the rest of the materials come from the area (mud and wood from the forests). The house has one room in which all family members eat and sleep. The room counts with two beds while the rest of the family members sleeps in hammocks or on the ground. The household has a latrine and a small bathing area both separated from the house. The family lives without access to the principal basic services; there is no sewerage, electricity or direct drinking water. They express the hope that some project will offer them "solar panels". Also María indicates she would like to have electricity or gas to cook instead of the firewood she uses now, since "the smoke in the kitchen is bad for us". The principal source of drinking water is a well that is situated close to the house. The house is exposed to any landslide caused by heavy rains due to its terrace kind of location. The family hopes to be able to save enough money to move the house to a safer place, more upwards of the mountain. The area where the Gonzalez family is situated is very difficult to access. For the family, the only way of going to the village (at about 7 km.) is by foot. To go to school, also the children have to walk 3.5 km. Around summer it is very hot to walk these distances and the dust of the road makes it quite uncomfortable. In the rainy season it gets worse and movement is very limited due to poor drainage of water. The condition of the roads makes it difficult for buses to pass by. However in harvest time families hire a four-by-four vehicle to transport the coffee to the village. Within the communities primary and secondary public schools are situated, but for technical education or university the older children would have to go the village of Palacaguina or the bigger city Estelí, respectively at 40 and 80 km from their home. Although primary and secondary education is for free, technical education or university has to be covered by the family itself. Within the municipality of SJRC one modern and recently constructed health centre with beds can be found. However, for medical

[15] Doña Miriam is the one that works for the local Atlantic Agency and quite a popular person among the producers

specialists the family would have to go to one of the larger cities. The community where the family lives has one baseball field, the only sport facility around.

The characteristics of the families and houses of the communities are quite similar. In 96.3% of the cases the material of the floor of the houses is clay or earth. 94.4% Of the families is using a latrine as toilet facility (usually organized through the local municipalities), while 5.6% does not have any kind of toilet facility. 92.6% Of the families uses wood from their own plot or surroundings to cook. Within the communities two sources of water exist: Mountain water that arrives through pipes at the plots (61.1%) and a community well (38.9%).

Kitchen and water facility, also for bathing, where a thin pipe transports water from the mountains - Hernández family, Rancho Grande

61.1% Of the producers does not have electricity at their home while also telecommunication remains limited within the communities. Although many people do own a cell phone, only 48.1% of the families actually has access to a cell phone signal at their own house. The communities are quite difficult to access and proper transportation systems and roads are not in place. Also the municipalities themselves are still difficult to access, especially the two municipalities in Matagalpa. To travel from Matagalpa city to Esquipulas by bus (around 55 km) would take approximately 4 hours because of the road conditions. The communities are situated in mountainous areas and families travel by foot or on horse. The interviewed families in the communities of Rancho Grande for example transport their coffee on horse to the villages, which takes quite some time. The municipality of San Juan del Río Coco is better accessible since a new road has been constructed, only a part of 16 km is still left to be covered. This road has been constructed by the municipalities of SJRC and Telpaneca.

4.2. Livelihood strategies

The only source of income for the Gonzalez family is the coffee activity led by Don Natividad with the support of his direct family. This is an annual income but the family tries to use the income from their coffee sales throughout the year. The family does not have relatives abroad that send remittances to them, nor have they considered that option to diversify their income. The family does not have extra income from any source. Even when they have needs and other family members could work, Don Natividad insists on the need for education for his children. He would even reduce his spending on food if it would give the possibility to educate all of his children. Don Natividad explains how last year (2010) his coffee yield was low (20 quintals) but he received a good price. He reached around C$

100,000 córdoba annual gross income. The year before, his income was slightly less even though he reached a higher volume (50 quintals) but at a lower price. The destination of the income of Don Natividad was being summarized by him as follows:

1. Production costs (harvest, coffee picking, wet mill, etc.)	*C$30,000*
2. Cost of inputs (fertilizer, 20 quintals of "urea")	*C$12,000*
3. Food and educational spending throughout the year (remaining)	*C$ 58,000*
Total:	*C$100,000*

The family is left with around C$ 58,000 (+- € 1,800) annually to spend on their household. Because the income has an annual basis, Don Natividad administers the household and plantation expenses with much discipline. When he receives the payment for his coffee he leaves the "balance" (income minus authorization of coffee from cooperative) deposited in the Cooperative, for security reasons. "If they find me here on the road, they cannot take anything from me", referring to the possibility of being assaulted. Every month his wife María prepares an estimate of the needs of the household, "approximately between 3 and 5 thousand Córdoba", after which they go down to the village, remove a deposit at the cooperative and go shopping. No purchases are being made in conjunction with other families in the search of savings or economies of scale. Even though María is the one making the expenditure structure, the limits of the budget are being established by Don Natividad. Except for the authorization of coffee from the cooperative the family does not have any debts. To deal with special situations, the family turns to other family members for support. Over the past years, the family has not had any "extra money" available, nor are they able to save much. The little that they are able to save is being deposited at the Cooperative.

98.1% Of the surveyed producers indicates to work the entire year on their own plot. Also during the months of no harvest the producers stay at home and do not move away in search of other forms of employment. Also for 98.1% of the producers coffee is the principal source of income and 35% does not have any other form of income. 39% Of the producers sometimes sells other agricultural products, such as beans or maize, or products from the shade trees such as bananas. This does however remain a limited source of income since these products are generally used for consumption first while the rest is used to sell.

Table 4.8. Other sources of income – All producers

	Municipality						Total	
	SJRC		Esquipulas		Rancho Grande			
	Count	%	Count	%	Count	%	Count	%
None	9	39.1%	6	27.3%	4	44.4%	19	35.2%
Other Agricultural products	8	34.8%	8	36.4%	5	55.6%	21	38.9%
Another farm	3	13.0%	2	9.1%	0	.0%	5	9.3%
Remittances	1	4.3%	3	13.6%	0	.0%	4	7.4%
Construction	1	4.3%	1	4.5%	0	.0%	2	3.7%
Cattle	0	.0%	2	9.1%	0	.0%	2	3.7%
Partner works in village	1	4.3%	0	.0%	0	.0%	1	1.9%
Total	23	100.0%	22	100.0%	9	100.0%	54	100.0%

The majority of producers that sometimes receives additional income through the sales of other agricultural products is situated in Rancho Grande. The area is also known as one of the 'greenest' places of Nicaragua where many natural resources are still intact. The only area that has two producers that have 'cattle' as another source of income are situated in Esquipulas. This area on its part is known for its cattle industry and is quite a dry area with not much green left. 9% Of all producers sometimes works at other farms and 7% mentioned remittances as another source of income. When asking the producers if they consider themselves to continue with the production of coffee a 100% indicates "*yes*". 96.3% Also thinks that their children will continue with coffee production, added by many: "*Si Dios quiere (If it be God's will)*".

As mentioned, the producers themselves do not move away from their community to try and earn money somewhere else. In some cases (25.9%) however there are family members who work away from home (Table 4.9). Those who have family members in the city (3 producers) send two of their sons to work in construction (2 producers) and one of them a daughter to work at a paid job. One producer has send his daughter to Managua to work for a salary as well, while one other producer has send one of his daughters to another farm in another rural area. Of those producers who have family members that migrated, 64% has migrated out of the country, with the most common destination being Costa Rica (6 cases) followed by United States (2 cases) and El Salvador (1 case). The most common type of job out of the country is also to work on a farm and in the cases that were found, only men migrated (Table 4.10).

Table 4.9. Migration

26% of the producers have family members who migrated:

Out of the country	**64%**
To a city	**22%**
To a farm in another rural area	**7%**
To the capital (Managua)	**7%**
Total	**100%**

Table 4.10. Popular destinations for migration

Where?	Whom?	Type of job
Costa Rica	1 Son	Farm
El Salvador	Husband	Farm
United States	Son	Paid job
Costa Rica	2 Sons	Farm
Costa Rica	2 Sons	Farm
Costa Rica	1 Son	Farm
United States	2 Sons	Paid job
Costa Rica	Brother	Construction
Costa Rica	2 Sons	Farm

4.3. The coffee value chain

For the propagation of Arabica coffee, ripe red cherries are collected, pulped, and the mucilage removed by fermentation by the small coffee producers. The freshly picked coffee beans can either be planted immediately or dried for later use. Coffee seedlings are usually grown by the small producers in polybags and are planted in the coffee fields when they reach 20-40 cm. These and other inputs can be purchased with local providers. Ripe coffee cherries are harvested manually by the small coffee farmers. The cherries undergo primary processing in Nicaragua before they are exported. Primary processing is carried out to separate the coffee bean from the skin and pulp of the cherry. In the wet method, the harvested ripe cherries are pulped, fermented and washed, dried, peeled and polished. The smallholder farmer depulps, ferments and washes the coffee but generally dries it only one or a few days. However, the drier the coffee is when it arrives at the dry mill, the higher the yield. The end products after primary processing are coffee beans, referred to in trade as "Green" coffee. More than 80% of Nicaragua's coffee production is traded internationally as green coffee, generally packed in 60 kg bags. Green coffee is available to buyers either directly or via the spot markets in the U.S. and Europe. Before the produce arrives at the roasters, roast analysis and cup testing are carried out. Consequently, roasters blend together different coffees, roast the blend, and grind it. A large share of the profits in the coffee supply chain go to the middlemen and the large roasters. Almost 45% of the green coffee imports is purchased by the five largest roasters: Philip Morris, Nestlé, Sara Lee, Procter & Gamble and Tchibo[16]. Over the last years, these major roasters have started to take an interest in coffee production standards and to adopt codes of conduct. All of them procure a small amount of coffee from certified sources. Nestlé has a Fairtrade product line and cooperates with Rainforest Alliance for its AAA Nespresso Programme. Sara Lee/Douwe Egberts has a mainstream partnership with UTZ Certified. Kraft works together with Rainforest Alliance, while Tchibo has chosen to work with Rainforest Alliance and Fairtrade[17]. Fair Trade focuses on provisions for a minimum price, premium payments, democratic internal organisation and labour conditions. The attention of Sustainability standards goes to ecological production systems, water and nature conservation, and maintenance of local biodiversity and wildlife. Also standards for Responsible Trade are focused on chain traceability and good agricultural and processing procedures. Both latter segments do not include price premiums, but aim to raise the market value of the production through improved yields and higher coffee quality (Ruben, 2010). The effects of these standards are thought to be positive for the coffee farmers, but in reality it still results to be difficult for the smallest producers to obtain these certificates. As one producer in SJRC indicates: "*The certifications are too expensive for us and there is so, so much paperwork".*

[16] www.theecoffeecocoa.org
[17] www.theecoffeecocoa.org

Box 4.2 – Utz Certifications

For the research, an introduction on UTZ standards given by an SNV assessor to a coffee farmer group in Jinotega was attended. These farmers were member of a cooperative (150 members) and were given a training about "how to become a coffee producer certified by UTZ". It would be the case of a "group" certification, meaning that the cooperative receives the certification but the producers will be responsible. It also means that if one producers fails to comply with the standards, all other farmers lose out as well. The cost of a certification for 150 producers would be US$ 1.600. To be able to obtain a certification, a number of requirements have to be met. Also, a training plan has to be made, a traceability plan and a registration of all different plots has to be delivered. The farmers have to comply with the UTZ Code of Conduct that consists of 175 control points, divided into 11 chapters. The chapters follow the order of the different stages of coffee growing and processing. The chapters of the Code of Conduct are thematically grouped in three parts:

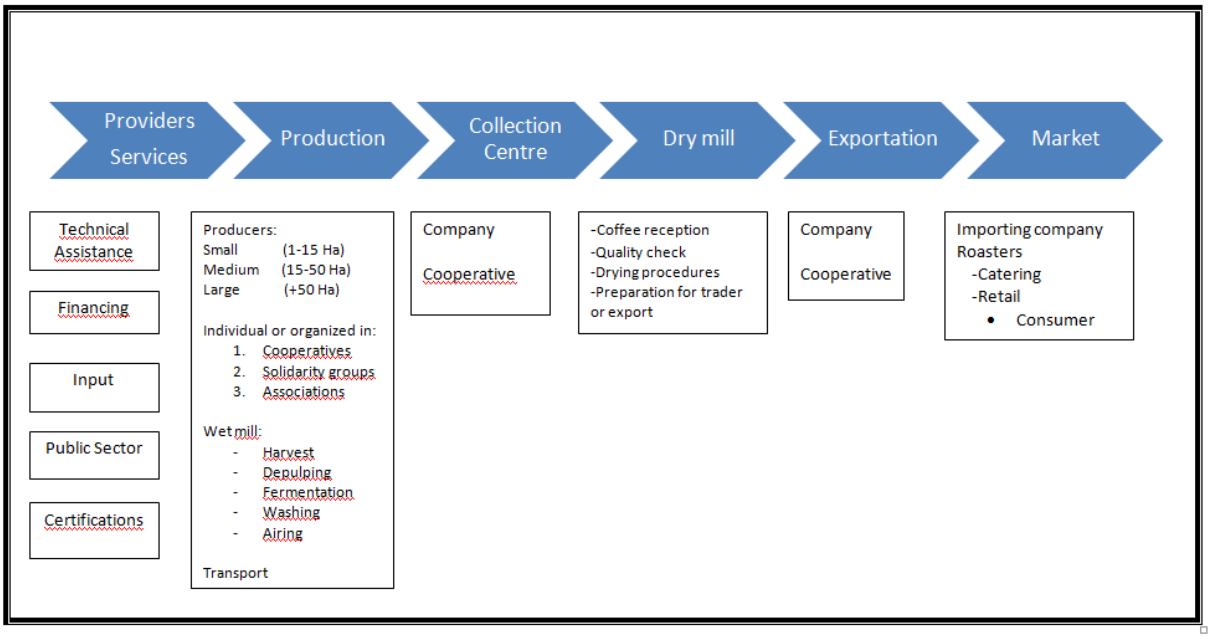
- Part 1 (chapters 1 - 2) covers traceability and general management issues
- Part 2 (chapters 3 – 9) covers good agricultural and farm practices
- Part 3 (chapters 10 - 11) covers specific social and environmental aspects

The certificate holder has to comply with the mandatory control points and an indicated number of additional points (depending on the farmers' circumstances) in all three parts within four years. The certification can however already be obtained during the first year. A certification is for one year and one harvest. Every year one external inspector will be paid to come by for a check-up. From year 1 to year 4 the number of mandatory control points increases. In order to be ready for the yearly external inspectors, internal inspectors have to be pointed out who will be trained to see if the producers are applying with the UTZ standards. 100% Of the farms have to be checked every year. For the cooperative to receive the certification, the cooperative and its different farmer groups therefore have to be extremely well organized. Every member has to be well informed. Some critical control points are that farm workers have to be treated well and that children go to school. Children are however allowed (under circumstances) to help the producer during harvest. Also, every farmer has to invest in a first aid kit, a fire prevention package and protective clothes for the use of chemicals and fertilizers. Alliances with the local fire brigade have to be built to be able to receive trainings on fire prevention. Many of these things can be regarded as far from the daily reality of the producer. With the certification UTZ aims to increase farmers' yields and the quality of coffee and therefore does not automatically guarantee a higher price. A higher price comes with a better coffee quality and will therefore mainly depend on the farmers' own investments. With the certification the specialty markets would however be easier to access.

March 4, 2011 – UTZ training Jinotega – COOMAPCOJ Cooperative

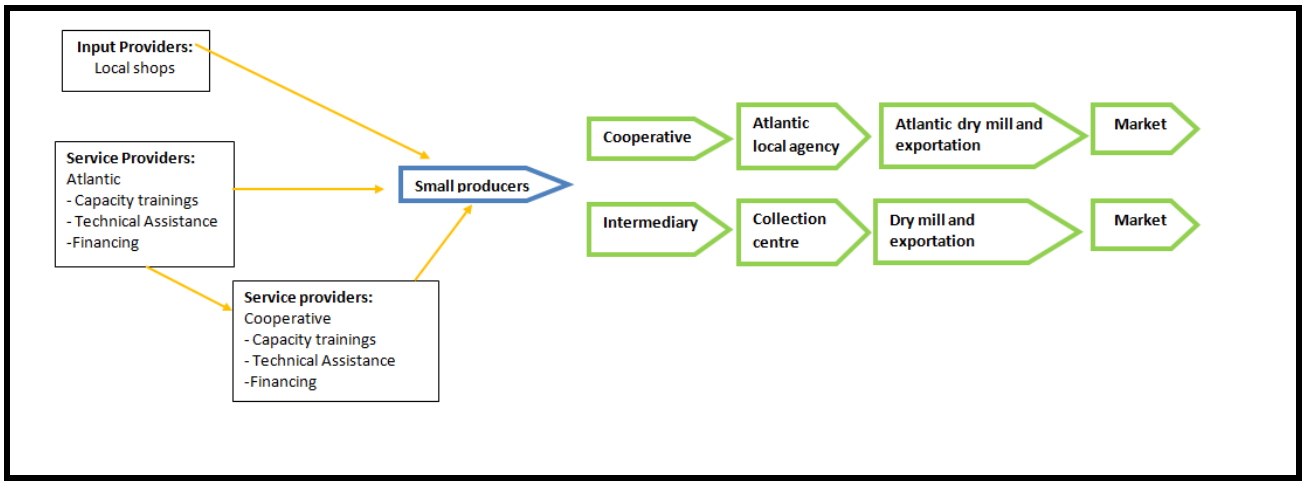
Fig. 4.1 shows the coffee value chain in a way common for Nicaragua. When the company Atlantic is involved, it plays a role from the first part of the chain until exportation. The first part of the chain are providers of products and services directed towards the coffee producers. The providers of technical assistance and financing for small producers are mostly cooperatives. Through the inclusive business initiative, Atlantic also starts to provide technical assistance and financing directed to the small producers. Input (if necessary) can be provided to small producers by local shops, these will be products such as fertilizers or polybags for new plantations. The public sector can also play a role at this part of the value chain, for example when the Ministry of Agriculture provides trainings to the producers. Also NGOs can be visible on this part of the value chain, especially those providing certifications.

Fig 4.1. The coffee value chain in Nicaragua



On the production side, a difference can be made between small, medium and large coffee producers. These producers either work individually or are part of a larger cooperative or association. Before the producers take their coffee to the collection centre, the parts of the wet mill will be in their hands. It is also on their account to arrange transport to deliver the coffee at the collection centre, which is mostly situated in the nearest village. For the producers that are part of the inclusive business initiative the collection centre for the members of the cooperative are the cooperative itself while the producers of Esquipulas deliver their produce at the Atlantic agency. Atlantic owns a total of 57 collection centres. When the cooperative sells to Atlantic it will either bring the produce to one of the collection centres or straight to the dry mill. The company has 15 different dry mills and three tasting laboratories where the products are being prepared for export. The largest exporting market for Atlantic is the U.S., followed by Belgium and Germany. The following figure 4.2. shows the particular value chain for the producers that are part of this research, member of a cooperative, and involved in the IB initiative:

Fig 4.2. Value chain IB initiative cooperative members

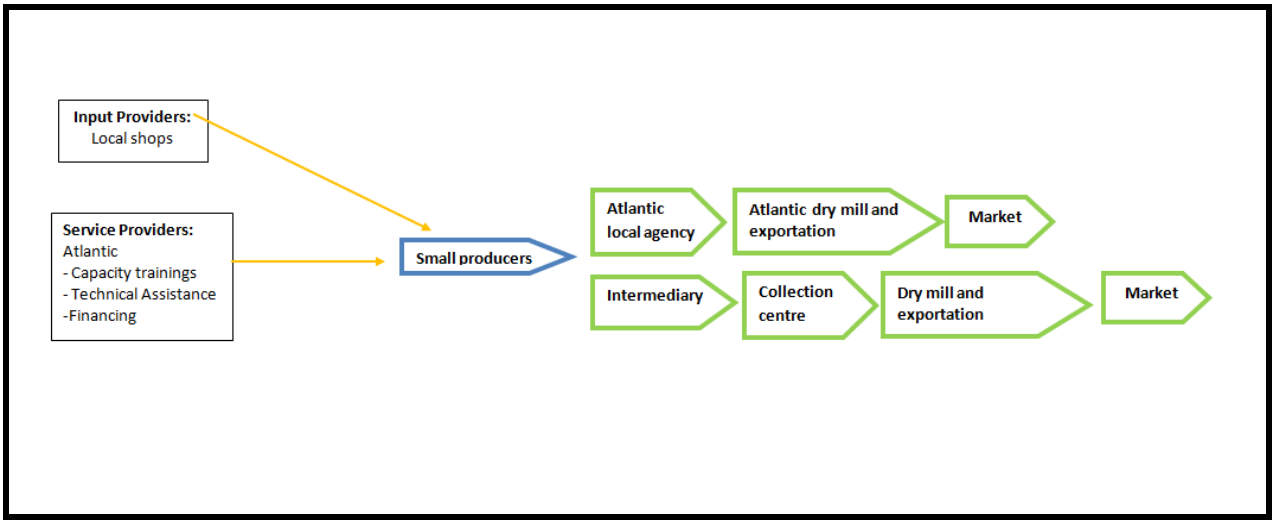


The farmers that are member of the cooperative Caja Rural in SJRC can both receive capacity trainings from Atlantic as well as from the cooperative. Atlantic also aims to train the technicians that are working for the cooperative. Atlantic than provides the opportunities of access to finance and technical assistance and this is usually managed through the cooperative as well. When a producer receives a loan from the cooperative he has the commitment to sell his harvest to the cooperative (up to the amount of credit he received). A producer however sometimes sells part of his produce to an intermediary, especially when he has also received a loan from this part. Occasionally, producers have been heard that sell part of their produce directly to the Atlantic agency in SJRC because they receive a better price.

The farmers situated in the community of Rancho Grande are also member of a cooperative, Pedro Sergio Rodriguez, but this cooperative does not have its own technicians. The only capacity trainings these producers receive come from the technicians of Atlantic. The financing does however go through the cooperative or through intermediaries which gives them the commitment of selling their produce as well. Since the cooperative has received a loan from Atlantic, it will also sell the coffee to the company. Technical assistance also comes from the company, although the producers are able to team up, make a group order and let the cooperative order the supplies.

For the individual farmers in Esquipulas the value chain is slightly different, as can be seen in figure 4.3. These farmers sell their produce directly to the local Atlantic agency, of which one woman is in charge, or occasionally a small part to an intermediary. The same woman of the Atlantic agency provides loans to the farmers while she on her turn receives a loan from the company's head office. The value chain is one link shorter, but the producers are dependent on the trainings given by the Atlantic technicians and are obliged to sell their coffee to the agency once they receive a loan from this party.

Fig. 4.3. Value chain individual farmers



Conclusion

Among the small producers that are part of the IB initiative, poverty is still widespread. They live with a minimum of basic social services and the lack of education of the farmers when they were young still gives difficulties in their adult life. The new generation of rural areas has more opportunity to

attend school. The quality of this educational system is however still questionable. Many farmers also still struggle with food insecurity and water scarcity. Also, the areas in which they live are risk-zones for natural disasters. All 300 farmers of the first IB cohort have indicated that the plot with their coffee plantations is owned by the producers themselves. Many of them do however lack the legal papers of their properties and plot. The income of the producers mostly comes from agricultural production, especially coffee. Other activities are very marginal with respect to income. Due to financial limitations and/or a lack of knowledge, limited investments are made by the producers in the plots. This leads to the low productivity of many of the producers. Also, a huge barrier results to be the lack of renovation of the coffee plantations. When comparing the three different municipalities, it resulted that Esquipulas has the highest productivity. The producers of Esquipulas produced twice as much coffee as the producers in SJRC. These are individual producers, while the producers in the other two areas are member of a cooperative. 86% Of all selected 300 beneficiaries is organized in some cooperative or association. The interviewed producers mostly did perceive they received benefits from their cooperatives, and these benefits usually had to do with the loans they receive from the cooperative. The majority however indicates how a) the loans are (too) small and b) the loans do not arrive at the adequate time. When looking at the physical capitals of the producers, the characteristics are quite similar and very basic. The communities are difficult to access and proper transportation systems and roads are not in place. Also the livelihood strategies are quite similar. The producers are not used to leave their plot, also not in times of no harvest. Coffee is the principal source of income and for some even the only source of income. Others are lucky enough to be able to sell other agricultural products, although these products are generally used for consumption first while the remaining is used to sell. Some have send family members out for migration as one of their livelihood strategies. Most of these family members that do migrate have left the country. One value chain upgrading strategy is to obtain a certificate that gives access to specialty markets. In reality this however still results to be difficult for the smallest producers. When looking at the different value chains of the IB initiative – those of producers that are member of a cooperative and individual producers – it can be concluded that the individual producers of the research are part of a shorter value chain. The result is however they also have less access to services such as those possibly provided by cooperatives.

5. CHALLENGES FACED BY SMALL COFFEE FARMERS

What are the main internal and external challenges the coffee farmers face?

To find out if a certain intervention strategy is working, it is important to find out first what exactly the most pressing problems are for the target group. Consequently it can be assessed whether such an initiative is able to play a role in the solution of these problems. To understand the coffee farmers' situation better, besides looking at their characteristics as is done in chapter four, this chapter will look at some of the challenges farmers face and will then go into the inclusive business initiative and its different aspects.

Within the survey amongst the producers, an important question (in open form) was the following: *Over the past three years, what have been the problems that most affect your coffee production?* In 75.9% of the cases the first answer of the producers would be the lack of a financing, which means the lack of a proper financial credit system.

Table 5.1. Problems that affect coffee production

Most important problem that affects coffee production	Frequency	Percent
Lack of financing	41	75,9
Plagues and plant diseases	8	14,8
Climate	1	1,9
Availability of workers	1	1,9
Not being able to renovate plants	1	1,9
Bad roads	1	1,9
Insecurity / theft	1	1,9
Total	54	100,0

Another important problem for the producers are plagues and plant diseases and not being able to fight these because of a lack of financial resources. 19 Producers that had indicated the lack of financing as the most pressing problem also mentioned a second important problem. 58% Of them pointed out the plagues and plant diseases. 21% Of them mentioned not being able to renovate their plantations as a second major problem. Since a new coffee plant takes up to four years to produce cherries a lack of long term loans makes renovation difficult. All these problems come however down to one crucial aspect: The lack of financial resources.

5.1. Lack of financial resources

The most pressing problem that affects the lives of the coffee producers and their families is the lack of financing. The problems surrounding this issue are that producers do not have access to long term loans, that the loans often do not arrive at the adequate time (very late) and that they only receive very small loans. Also the high interest rates of the market loans form a problem for the producer. Problems related to the lack of financial resources are the fact that many producers are not able to renovate their coffee plantations or fight plant diseases and plagues.

"If I want to renovate my plants I need more time to repay the loan"

as a farmer in Rancho Grande indicates. Another farmer adds that:

"at the moment the economy is difficult and the plants are sick….We give them little assistance because of a lack of resources".

Before Atlantic got involved in the IB initiative, the company already provided financial credits on short and medium term for the production and commercialization of coffee. These loans do however not go directly to small producers, but are being managed through coffee cooperatives or local Atlantic agencies. Generally, the producers that are members of a cooperative receive the loans from their part, which are always short term loans. This means that within one year the producers have to repay their loans with the next harvest. A young producer in SJRC emphasizes this difficulty:

"*We need a broader finance….We will pay it back! This way I cannot invest in my plot. We need loans that will be provided on a longer term".*

If a cooperative receives a loan from Atlantic, the amount will be divided between some of their members. In general, these funds are not enough to provide loans to all members and it also results in lots of tiny loans. The producers apply for a loan with the cooperative and the technicians visit the farmers to perform a so-called "credit-check" and determine the collateral the producer can provide. The amount of credit the producer will receive is based on this system. The individual producers of Esquipulas receive their loans from the local agency of Atlantic. The agency is run by a person that receives a fixed salary from Atlantic, and this same person will apply for funding at the company's head office. He puts the mortgage of his house, the agency and sometimes of other private properties as collateral. This person plays the role of middleman and makes it possible for most producers to obtain a loan. According to the head of the Atlantic agency in Esquipulas they never had any problems with producers not repaying their loans. Also these loans are on short term (one year) and should be repaid with the harvest. It means that as soon as the producer receives a loan from one of these parties it has the compromise of selling its coffee to this same party. According to the coordinator of technicians of Caja Rural, the cooperative has only one financing source (Atlantic) and the principal limit of this source is the fact that the harvest has to come in return.

"*If the financing source says 'well, if you do not give me your harvest I will not provide any loans' we are not able to look for the best buyer, the best market niches, the differentiated markets"*.

The reasons that the producers in general cannot receive a loan directly from Atlantic or other formal institutions is that they are often not in the possession of legal papers of their properties and plots and are not able to provide a solid guarantee.

"*We need legal papers that will give us real rights, almost no one has these papers, they are very expensive to obtain"* (Farmer in Rancho Grande).

Also the head of the Atlantic agency in Esquipulas indicates that it is very expensive for the producers to legalize their papers. Another major problem for the producers is that the loans often arrive very late, at an inadequate time when the money cannot be put to proper use anymore.

"*The loan has to arrive at the appropriate time. The credit calendar has to be in line with the activities in the field"* as one producer in SJRC indicates.

For this reason, and because the received loans are not sufficient to cover the producers needs, the producers sometimes look for loans with other parties – such as the intermediaries – where high interest rates are often being managed.

98.1% Of the producers had applied for a loan in the years of 2011 or 2010. Of them, 90.6% has also actually received a loan, which are almost always (75.9%) used for the maintenance of the plot (Buying input, fertilizers, renovate plants, etc). 11.1% Used (part of) their credit for the hiring of workers during the harvest season. The loan is generally received by the cooperative (37.5%) or in case of the individual producers of Esquipulas from the person working at the Atlantic agency (39.6%). If a loan from the cooperative results not to be enough, some decide to also go to the intermediary for a loan (12.5%). Only 4% of those who had received a loan received one from a bank, while only 2% had turned to their families. The average amount of credit received was US$ 387.82. The majority of producers that received a credit received an amount between US$ 100-200 (26%) although there were also producers who received more than US$ 500. The majority of these producers is situated in Esquipulas. When asked if the received amount had been enough for them 61.1% answered negatively. The cooperatives themselves are however also struggling to find funding to be able to provide loans to the producers. The following paragraph will go more into detail on the problems within cooperatives.

5.2. Problems within cooperatives

Many heard voices in the field are that cooperatives often lack transparency and organizational capacities. The lack of education still remains a problem for the cooperatives and also for the cooperative unions, of which 11 exist in Nicaragua. Internal problems that cooperatives have are reflected on the small farmers. When a cooperative is in financial trouble it will be more difficult for them to support their members. Also, because of the difficulties for small producers to obtain financial loans in formal institutions, many cooperatives have started to transform in small banks. This is however not their core business and it might take the attention away from other supportive services they ought to offer. Another important aspect for producers is to what extent they are informed, for example about coffee prices. 35.2% Of the producers indicates **not** to receive any information on coffee prices. The producers that do receive information on prices generally get this information from those parties with which they work directly: the cooperatives or in the case of the individual producers of Esquipulas from Atlantic. (In this case, the lady that works at the agency where coffee is being delivered represents the whole company). One female producer in SJRC would add:

> *"We still do not discuss prices with the cooperative, instead we discuss other themes less important. It is important we are well informed, actually I think it is the most essential point. I lose out with a low price I receive for my coffee for not being informed. Yes….I have to ask more myself and be more curious….I cannot blame the technicians".*

Another producer of SJRC indicates:

> "*A large part of the farmers is so badly informed, we do not receive information on prices for example…..We should create like a coffee commission within the cooperative for a better information management*"

Many farmers the researcher has spoken to are critical about the cooperative of which they are member. For the research, three different cooperatives have been visited, of which two (Caja Rural and Pedro Sergio Rodriguez) were already part of the first IB cohort (the baseline) and the third (Arca de Noel) is participating in the second half of the IB initiative. This paragraph will take a closer look at these cooperatives and the way they function.

5.2.1. Cooperative Caja Rural

The coffee cooperative Caja Rural in SJRC exists since 1998 and has 228 members of which momentarily 53 producers take part in the IB initiative. It is a cooperative that provides multiple services to its members, such as the provision of loans and trainings that are being given by one of the three technicians that work for the cooperative. Since the year 2011 the cooperative has managed to obtain two certificates with the help of Funica[18] and SNV: Utz Certified and Fair-trade/FLO. The cooperative has always had one buyer of its coffee: Exportadora Atlantic S.A. which has so far also been the only source that provides the cooperative with financing through loans. The cooperative has a female director (her husband is the head of one of Atlantic's regional offices...) Lately, the female director has however had many health issues and is not often seen in the office, but is instead in Estelí four to five hours away from SJRC. The daily tasks of the cooperative are therefore being managed by one senior technician, two junior technicians who usually work in the field and one female administrative assistant. The two junior technicians are the ones who are mostly in touch with the small producers. Sometimes they give group capacity trainings but most of their time is taken by performing the so-called "credit-checks" with the members. If a member applies for a loan, the technician has to visit the producer first, establish his collateral and make an estimation of the harvest he will have. The amount of credit a member receives is established on this visit and is usually not the amount a producer has requested. Also, almost every producer indicates that the loans do not arrive at an adequate time, that they have to wait for a long time before they see any of the money. As one of them says:

> *"When we apply for a loan with the cooperative, the money takes a long time. I applied three months ago and I am still waiting...This is why many producers have to go to other places to look for a loan, such as with the coyotes....It would be better if we could get a loan directly from Atlantic".*

During the visits to the producers it was always asked whether they feel they receive any benefits from the cooperative. As mentioned before in chapter 4, most do acknowledge the loans as a benefit. Others are more critical:

> *"Well yes, we are member of Caja Rural but we are waiting for the benefits...We therefore sometimes sell to the coyotes, because the cooperative doesn't support us....We are struggling, my kids have to study. We want a scholarship for the children, other cooperatives in the area do give scholarships..."* (Female producer). Others indicate: *"The cooperative helps us to save our money, but what we really want is a long-term loan"*; *"Since we do not receive enough credit from the cooperative we have to go to other places. There are no long-term loans.....The prices they pay us for our coffee are the same as the coyotes pay us.....I want to leave the cooperative".*

[18] Fundación para el Desarollo Tecnológico Agropecuario y Forestal de Nicaragua

Some also mention the lack of communication within the cooperative. After showing the researcher around on his plantation another producer starts telling:

> *"There exist a lot of problems in the cooperative and I think what we need is more transparency. With Atlantic for example, we do not really know how this is working…In the end we don't know where our coffee is going….We don't want any more intermediaries, we want to export directly…No..I am not so happy with Atlantic"* . He later on adds: "*A few years ago I started to produce like organic, but this did not give me better results. This year we hope to receive a higher price because of the Fair Trade certification, but that remains to be seen……Funica though…Funica has been supportive in the area".*

Many producers are also afraid they are working with too many intermediaries, which makes the prices they receive for their coffee too low. Some have indicated they would prefer the cooperative to export directly itself and are critical about the cooperation of the cooperative with Atlantic. As Don Natividad, the representative of the small producers of his area towards Caja Rural indicates:

> *"The problem with the loan from Atlantic is the incentive, we have to comply with the contract and pay with the harvest……We need a long term loan to be able to renovate……The majority of the members does not agree that the cooperative works with Atlantic, they want to export directly. But I say, well, we have been working with Atlantic on the loans and they never let us down. But now with this new program we are talking about* (IB intiative)*….We do not really know what is it, what are the benefits for us? We won't be able to buy the products they promote, we need loans first".*

A young ambitious producer explains quite well the frustrations many feel about not being able to move forward:

> *"I wanted to buy another manzana of land, but the management of the cooperative didn't give me enough credit. Don Rommel*[19] *told me it wás possible, I have the documents of my terrain…I need to go to another level and improve, but if the cooperative doesn't support me……..."*

The producers are to sell the coffee to those that provide them with loans. If a producer does not receive enough credit from the cooperative he has to go to other parties, such as the "coyotes". Many indicate that in the end there is little difference in the price they receive for their coffee from the cooperative or the intermediaries. The cooperative however gets into trouble itself when not all producers sell their coffee to them. The senior technician of Caja Rural explains:

> *"Since we cannot satisfy 100% of the needs of the member he goes to another place and compromises his harvest. That is when sometimes they do not comply with the contracts we have with them……..Here the cooperative, according to history, collected 2,000 quintals of coffee and now this last year we collected only 350 quintals…."*

He continues to explain how many members have been unmotivated over the past years because of the low prices they were receiving:

> *"The first thing that gives the cooperative difficulties is the aspect that the members, well, they are a lot of persons that have to be trained to be able to comply with the requirements* (Referring to requirements for certifications). *When there are no trainings, sometimes the members do not know well and make mistakes, involuntary mistakes, but this has been the*

[19] Technician of Atlantic

major obstacle for the cooperative, that is the lack of trainings…….The core business of the cooperative is to sell coffee. And the problem the cooperative has had was the lack of certifications over the past years to sell its coffee at a better price and with added value. Now however, also with the help of Funica who has been supporting with capacity strengthening, the cooperative has two certifications: Utz and FLO for the fair trade market…..We hope this will motivate our members to sell their coffee to the cooperative again. Over the past years the producers were not motivated because their coffee was always being sold at the stock price, a street price…..We hope it will also increase the productivity because it has been so low. Now that hopefully they will receive a better price, they will also start worrying more about quality."

It is however unlikely the price a farmer receives for his coffee will go up before the quality of the products increases. It'll be the other way around.

5.2.2. Cooperative Pedro Sergio Rodriguez

The cooperative Pedro Sergio Rodriguez is situated in the municipality of Rancho Grande and exists since 2009. The cooperative focuses on coffee, but also involves basic grains and cacao. At the moment, 223 producers are member, of which 80 are coffee producers and 60 are involved in the IB initiative. The cooperative has four people working at the office on a daily basis. The cooperative does not have any certifications, although it is hoping to obtain one in the near future. Pedro Sergio Rodriguez has three principal buyers for their coffee: CISA Exportadora S.A., Exportadora Atlantic and some large individual buyers. They have received loans from both Atlantic as well as CISA in the past, but are struggling in this area. When asking the director what the most pressing problems have been that affect the production of the small producers he indicates:

"*The lack of access to a good loan is a problem. Until 1993 there was a credit bank providing long term loans but not anymore. That is why it has been difficult to renovate the coffee and that is a huge problem for the producers. All credits are for one year, and like this the people cannot invest. Another huge problem here are the roads, the infrastructure. The people transport the coffee by horse and the delivering places are quite far. We need support in infrastructure and technical services to wash the coffee, etcetera. So that people can sell more than 50 quintals."*

To establish the loans, the cooperatives does a diagnosis and a collateral study with the producers. Based on these findings, they make a request with the company. The director of the cooperative however indicates how the loans of Atlantic arrive very late and that last year the company send the loans segmented, in different stages, which has been inconvenient. Because of a lack of funding the cooperative has not been able (yet) to hire its own technician to give trainings to the members. A service they do offer involves basic grains: the cooperative gets the seeds for a good price and gives it in a form of credit to the members. This sometimes goes hand in hand with fertilizers. The cooperative faces difficulties when not all members sell their produce to the cooperative. As the director indicates:

*"At least a part (*of the members) *does deliver their coffee to us, to repay the loan. We have had difficulties with Atlantic with the loans and with the prices, for example Cisa gave us a better price for our coffee. That's when producers also look for other places to sell their coffee or sometimes they sell to the intermediaries that are in the field and buy the coffee before the harvest"*.

Some producers did however indicate that – although sometimes they sell out of themselves to intermediaries out of direct necessity of money, last year there was no other option:

> *"Last harvest, the cooperative did not have any money to pay us! We had to go and sell our coffee at another place"*

The cooperative faces financial challenges and is looking all the time for (other) companies to obtain funding. They have had troubles with Atlantic over the loans and these have gotten to a level that the director indicates they will not keep on working with the company in the aspect of financing. He is also not 100% sure therefore if the IB project will continue. Also the producers feel that the cooperative is in financial trouble. Some comments that were made during the visits:

> *"Financing by the cooperative is badly arranged. We all receive a small amount, the money goes everywhere. We lack legal papers and warranty to receive more"; "The small loans that we do receive arrive very, very late. This is a major problem for us" ; "We see little differences between the prices of the intermediary and the prices the cooperative pays us for our coffee"*

Many express their wish to receive one loan that is enough to cover their needs, so that the producer only has to deliver his coffee at one place. They also hope for a delivery centre more close to the community. Some others indicate they'd prefer to receive the loan directly from Atlantic, without the cooperative in between.

5.2.3. Cooperative Arca de Noel

The coffee cooperative Arca de Noel in SJRC already exists since 1994 but has taken a new direction in the year 2010. After having been part of an alliance with a cooperative union for years they have decided to separate themselves and continue individually. Arca de Noel has 102 members and received its first reunion with Atlantic about the IB initiative in March 2011. A year before they received their first certifications of Fair-trade/FLO and the organic label Biolatina. The cooperative has Exportadora Atlantic as its principal buyer but aims and hopes to be able to export directly itself in the future. The cooperative has one technician that works voluntarily but fulltime to give trainings to the farmer members.

The director explains how many cooperatives in Nicaragua are dealing with problems, both internally as well as externally. The reason this cooperative itself got separated from the union was

> "*because of a small problem we have here in Nicaragua: Everyone wants to be a dictator"*.

According to him, in the majority of institutions these kind of problems exist.

> "*The institutions should be more transparent to transmit trust towards the producers".*

The director indicates they want to start working "*in a different way":* transparent, honest, without indebting the producer.

> "*We are not going to raise a high interest rate towards the producers but maintain the rate that our funder provides us. We will look for the cheapest options".*

The cooperative also claims to maintain a strict vigilance at the moment the delivered coffee is being weighted.

> *"I used to refer to a saying that here in Nicaragua, cooperatives do not exist. Maybe four persons prosper, while the producers remain indebted and badly informed."*

The director does not only blame the producers for the debts they have, but also those who allocate the loans and importantly: the external funders.

> "*The funders think they are doing the right thing by providing the money to benefit the small producers but they are not benefiting them. They are making situations worse because of the high interest rates the microfinance institutions or sometimes the cooperatives charge. Therefore, I am saying that the funding agency must also take action on the matter and try to regulate it".*

Also, according to the director, social programs, such as the premiums of the Fair Trade certifications, are being decided by the heads of the cooperatives and the outcomes of this may not always be that positive for the small producers.

5.3. Institutional environment

The contextual character of Nicaragua as discussed in the regional framework also plays a role in the lives of the coffee producers. External aspects such as climate, international coffee prices, the economic and political situation all have an influence on the extent to which a small producer can develop itself. Crucial for the creation of a more inclusive market is also a favourable regulatory framework, together with service deliveries such as trainings and technical assistance, access to technological innovations, insurances and credits. In Nicaragua however, *"Unfortunately all these aspects remain within the private sector and the government is absent in this entire process"* (SNV assessor, 2011). In Nicaragua there are still gaps to close and important challenges in terms of service providing. In this sense, the work of coffee cooperatives and associations has been important, since many of them have integrated financing, trainings and technical assistance into their services. These are however services that are mostly exclusively for those producers that are member of these organisations. Also, due to these organisations' own limitations of funding as well as possible internal challenges they face, quantity and quality of these services are not always sufficient to meet the producers' needs.

After diverse conversations and interviews with SNV assessors, cooperative' technicians and directors, some external restrictions that can limit the success of inclusive business in the Nicaraguan coffee sector have been identified:

1. Remote locations, dispersion and inadequate physical infrastructure

The distant locations and dispersion of the small coffee producers makes the coverage of service provision difficult and expensive, not only for private service providers but also for public service providers.

2. Limited information about the coffee producers of the base of the pyramid

Service providers, especially private ones, have limited knowledge about the segments of the base of the pyramid. There is limited information on the kind of financial and non-financial services the coffee producers demand, the costs they could have and what kind of methodologies should be used to make these services accessible to the producers.

3. The regulatory framework is not conducive to the development of the service market

Besides the mentioned obstacles, services –financial and non-financial ones- that are being offered have a generic profile and are mostly not adjusted to the reality of the small coffee farmer. This has a negative effect on the small producer, since it reduces his opportunities to realize small investments in his plot and to increase his technical knowledge. Also, within Nicaragua there is no public policy framework that encourages the development of for example micro-insurances, which could be highly useful for the small producers to protect themselves from climatic risks.

4. Little incentive for the development of financial products and services

Without credits the small producers cannot finance investments which could permit them to grow and develop as a producer. Without insurances, they cannot protect their little belongings and income against crises such as droughts or extensive rainfall. Formal banking services are often not accessible for small producers or extremely expensive. Providers of these services do not have the necessary fiscal and economical incentives to direct their offer to people within the base of the pyramid. Nicaragua does not have venture capital funds aimed at the direct operators of the coffee value chain. If rural financial services are available they are mostly not directed to the most vulnerable population.

5. Limited technical education in rural communities

Within the communities, access to technical education for the sons of producers is highly limited. All interviewed parties within the cooperatives and the Atlantic agency indicate that a technical institute or so-called 'coffee-school' within or close to the communities is highly necessary for the children of the producers.

The government should play a crucial role in solving these elements, this is however not the reality in Nicaragua. Equally, it should play a fundamental role in the coffee value chain, but in Nicaragua there is still a lack of integration of policies that should stimulate the country's coffee culture. The increasing international demand for sustainable, certified coffee for example make supporting services related to certification and trainings on production for the specialty coffee market highly necessary for the small producers, but are still mostly absent. According to the coordinator of "Stedenband Tilburg-Matagalpa" signals had come from an economic scan of Matagalpa that the coffee sector was still very important to the department, but that the renovation of plantations, the increasing of productivity and investments in technical education is highly necessary. She however also sees little support from the local governments and a lack of policy on economic development. An SNV assessor agrees and indicates how the plans to renovate the coffee plantations are still not efficiently managed. Also according to him, it is highly necessary to increase the productivity which is momentarily the lowest in the Central American region. By law the National Coffee Council exists (Consejo Nacional del Café / CONACAFE) but it is still in a beginners phase of intervention. On paper, The National Coffee Council (CONACAFE) is responsible for the application of the "Coffee Law No. 369", a law that should regulate the relations between producers, beneficiaries and exporters of coffee. CONACAFE should also provide capacity trainings, promote the improvement of the quality of coffee, stimulate the competitive development of coffee in the entire value chain and promote the international image of Nicaraguan coffee (CONACAFE, 2011). It should function as an institution that represents the coffee producers, however it still does not happen this way. That is why this role has

been developed from all different kinds of organizations (such as NGOs) that intervene in the coffee sector. At a local government level some supporting programs exist towards the sector but these are not managed in an effective way, according to an SNV assessor. The Institute of Rural Development (Instituto de Desarollo Rural – IDR) for example receives funds to promote sub projects within the coffee sector, especially to provide processing installations and roasting equipment at the level of small producers.

> "*These are however managed in a very political way".*

The coordinator of "Stedenband Tilburg-Matagalpa" agrees:

> "*The IDR does work on some programs, but politics work as a constraining factor".*

In Nicaragua there are no incentives for the export of coffee, even though it is one of the most important sectors contributing to the gross domestic product GDP. Also the fiscal policies are sometimes in disadvantage for the small producers, especially with all the paperwork and payments they have to realize. Not many people have been found during the research who feel they are being supported by their (local) government. The farmers in Rancho Grande for example complain a lot on the lack of support from their local municipality office. As one indicates:

> *"As you can see, the roads here are in extremely bad conditions, but the municipality doesn't do anything. The focus is more on urban zones".*

Also many feel the municipality only resolves things according to political preference. If a zone is known for supporting the opposition that area will not be attended, according to the farmers spoken to in Rancho Grande. The interviewed parties within the cooperatives and the Atlantic agency do also not consider that the small producers receive a lot of support from the local government. Nobody really knows if any programs are offered or what happens with the taxes that are being paid.

Box 5.1. An interview with a local municipality officer of San Juan del Río Coco

The department of Madriz is made up of nine municipalities. Every municipality has its own local municipal office. The central government transfers money to every municipality and these municipalities manage their own budgets. Maria* has been working at the local municipality of San Juan del Río Coco for two years. She explains her work is very diverse. "*We do things like approving projects on areas of water and sanitation, housing, road construction, reparations of schools. There are many social aspects like supporting people with medication for example*". The municipality also works on environmental projects since SJRC is a high-risk zone for environmental disasters. Maria explains that the municipality of SJRC is quite large with 53 communities to attend. The money they receive from the central government therefore is sometimes not enough to attend all communities. This year, the municipality has not had any projects directed to the local coffee sector. Maria explains that among the coffee producers the demand for loans to renovate their plots is high, but that the municipality does not work with a financing system to cover these needs. It is being left to the cooperatives. Maria indicates how some of the projects of the municipality have had a positive impact on the communities, such as the provision of latrines, community wells and the constructions of roofs on houses as alternative for plastic. Her own pride is a project for women that started out last year, called '*el bono productivo alimentario'*. It is a project in cooperation with the Ministry of Agriculture where small livestock is being directed to women through a recuperative fund. Once a family is able to recuperate the costs, a new family can be supported.

Interview local municipality San Juan del Río Coco – May 5, 2011

**Out of privacy reasons the real name is left out*

Conclusion

The most important challenge that the small coffee farmers face is the lack of financial resources. Producers do not have access to long term loans; loans often do not arrive at the adequate time; and they only receive very small loans. Also the high interest rates of the market loans form a problem. Challenges related to the lack of financial resources are the fact that many producers are not able to renovate their coffee plantations or fight plant diseases and plagues. In theory, Atlantic offers loans to producers. In practice, for the majority of producers it is impossible to receive loans directly because of a lack of legal papers of their properties and plot and a lack of collateral. Coffee cooperatives or intermediates jump in, provide the collateral and divide the amount they receive from Atlantic between producers. The producers in their turn apply for loans with the cooperatives or intermediaries, but often do not receive the requested amount. Therefore they sometimes have to turn to other parties for financing (*coyotes*, for example). The loans are always for one year and have to be re-paid with the harvest, which does not give the producers enough time to invest. They also have the compromise of selling their coffee to the lending party. At the same time, many heard voices in the field are that cooperatives often lack transparency and organizational capacities. Internal problems that cooperatives have are reflected on the small farmers. All three cooperatives involved in the research have difficulties in finding funding. Another challenge for the farmers is the aspect of not being properly informed. A substantial amount of producers indicates not to receive any information on coffee prices. Some external challenges that have been emphasized are a) remote locations, dispersion and inadequate physical infrastructure; b) limited information about the coffee producers of the base of the pyramid; c) the regulatory framework is not conducive to the

development of the service market; d) little incentive for the development of financial products and services and e) limited technical education in rural communities. In Nicaragua there is still a lack of integration of policies that should stimulate the country's coffee culture and not many people have been found during the research who feel they are being supported by their (local) government.

6. THE INCLUSIVE BUSINESS INITIATIVE

- *How do the different aspects of the IB initiative function and is the initiative able to play a role in offering a sustainable solution to the challenges the coffee farmers face?*
- *What will be the direct and indirect expected results of the IB initiative for the anchor company?*

Don Natividad does not have much knowledge on how exactly the inclusive business initiative works. He became part of the initiative through the invitation of the anchor company and the cooperative. He indicates he would like to have a better clarification on the project to better understand what the benefits are to the small producers. The biggest difficulty with the IB initiative to him is the limitation on the amount of credit he can receive. Therefore it has not been possible for him to renovate his coffee plantation. He sees the same limit with the technological innovations the company promotes: "The products are good and they can help us to move forward, but we need a better credit to be able to buy them". Don Natividad does however hope that with the help of the capacity trainings given through the IB initiative he will be able to increase his productivity and that he can take advantage of the good prices that apparently prevail in the market. Consequently, the biggest change he has experienced with the IB initiative is the hope of improving, since he is very worried about the age of his plantation and the low productivity he has had. Although he has good hopes, don Natividad also indicates that the cooperative has been working for a long time already with Atlantic, and that people are still waiting for benefits and not entirely sure that something will really change in their benefit.

As mentioned before, the IB initiative to include some of the smallest coffee producers in the value chain of the coffee exporting company Atlantic is based on three aspects:

- Access to trainings
- Access to technological innovations
- Access to finance

The company Atlantic does however not necessarily trade directly with the small producers. When they are member of a cooperative this cooperative will generally act as an intermediary and will be the one negotiating with Atlantic. When starting out with the research, many of the 300 included farmers had only been visited once yet by the Atlantic technicians – to receive the introduction to the project. These farmers had signed a form on which they stated they were interested in participating within the IB project. And although they had not received the benefits of the project yet, they would already be stated as "beneficiaries" within the papers of SNV Nicaragua and Atlantic. During the visits to the farmers it became clear that most of them did not have a clue yet that they were "beneficiaries" of the IB initiative. It would therefore be hard to measure any impact, however it would be all the more important to look at farmers' expectations and opinions on the use of the project. Within the survey, before arriving at the part of questions surrounding the different aspects of the IB initiative it would always be asked first what the producer knows about the project. Some of the most common answers given were as follows:

- *"We still don't know much / anything" (27%)*
- *"Technical assistance is good, but the problem is the lack of money"*
- *"The introductory talk was nice, but we don't have a way of buying the products"*
- *"We hope they can give us better conditions regarding the loans"*
- *"We hope they will give us a better price for our coffee"*

Although the producers still do not know well what the IB project actually entails, the majority (53.1%) of producers that are member of a cooperative do agree that the cooperative works together with Atlantic. A few do not know whether they agree and those who do not agree (31.3%) are situated in SJRC and indicate that they would prefer the cooperative to export directly itself,

> "*we do not want more intermediaries".*

The fact that many producers still do not know the IB initiative very well is also because it is mainly the cooperative who does the negotiations with Atlantic. As the program coordinator of Atlantic indicates:

> "*When we work together with the cooperatives we do not have a lot of contact with the individual farmer, he will most likely not know where his coffee is going, he just sells to the cooperative".*

6.1. Access to trainings

All producers indicate it is important and necessary for them to receive trainings on coffee production. They indicate to be very willing to receive the free trainings given by Atlantic.

Atlantic technician giving an introduction to 'technological innovations'

The majority of the producers (85.2%) had also received one or more capacity trainings before the IB initiative. These are in general given by technicians of the cooperatives. With respect to the IB initiative, many producers have until the time of research only received the introductory talk and are waiting for the technicians to come back with more trainings. The trainings given by Atlantic are aimed to be given at the adequate time of the year. Because of the delay of the project, the company started to really begin giving trainings when the research had already finished. The primary objective was to give two trainings per year to each group of producers, however Atlantic has indicated their wish to increase this amount to three trainings a year. Also, when talking to the producers about trainings in general, 77.8% of the producers indicated that the amount of trainings they receive is not sufficient and that they would like to receive more trainings. The producers that did already receive a training from Atlantic are enthusiastic, 67% perceive the quality of the training to be 'good', while 14% even think it is 'really good' and 11% thinks it was excellent. Only 8% gave the mark of 'regular'. Besides receiving a training, it is equally important that the producers do something with the newly learned techniques or follow the recommendations that are being given. Although it is sometimes difficult to follow recommendations that bring costs with them, 78% of the producers that had ever received a training did indicate to have followed the recommendations. Asking about the experiences of the producers regarding the trainings given by the cooperatives and/or Atlantic, the producers proudly responded they had learned about:

- Managing shade trees
- Managing pruning

- Wet mill
- Improve the planting of new trees and depulping
- Managing plant diseases
- Maintaining soil
- Terraces
- Waste management
- Technological innovations
- Certifications

On the time of research, the producers in Rancho Grande had just received a training from one of the Atlantic technicians at which the researcher also participated. The subjects discussed were management of pruning, management of diseases in coffee in the summer, and the management of productive registers. One aspect that immediately stood out to the researcher was that nobody was in possession of pen and paper to be able to make notes. The largest part of the training was however the introduction to the different technological innovations, and a demonstration was given. Afterwards, a group exercise was being held on "administration of your plot". This was thought to be highly useful by the farmers:

> *"Most of us do not know at the end of the year whether we are making money or losing money".*

Learning how to administer costs and income is important to them. The trainer made the promise in the end to bring notebooks next time for the producers, for them to be able to start with the administration. After this group exercise the training moved to the coffee plantation, where for about ten minutes a common plant disease in the area was being discussed. The farmers have a good relationship with this particular trainer of Atlantic and are extremely thankful for every bit of guidance they are able to receive.

Farmers paying attention

6.2. Access to technological innovations

The trainings that are being given by Atlantic are being accompanied by technical assistance. Some technical products are being introduced to the farmers, in the hope they will acquire them and use them for the improvement of their production. These products include a "brocap tramp", which is being developed to fight a particular bug that destroys the coffee bean; the "Ecoweeder" which

makes it easier and safer to apply fertilizer to the plants; "hybrids" which is a new type of coffee plant that is being promoted to be more resistant to diseases and the "tubes" that can be used to plant new coffee plants instead of using plastic bags. These products take quite some time to show results for the small coffee farmer (for example: three years for the hybrids to show the impact) and the problem is that the farmer first and foremost has to invest. The products are not always useful to all producers. For the products it is necessary to consider the productive diagnosis of the plots which should contain a high amount of information. Just to use the selection criteria that were used to establish the beneficiaries, such as plot size, income, etc. are not considered to be enough by the Atlantic technicians to establish the real necessity of a technological innovation at a particular plot. The productive diagnosis should for example give information about the shade conditions at the plot, which could or could not be appropriate for hybrids. Also, if there is only a small percentage of "brocap" infection at the plot, installing the brocap tramp would not be necessary. According to an Atlantic technician the brocap tramp decreases the problem of the plague at the plantations, but it is only minimum. It could be that per year one or two quintals per *manzana*[20] is being rescued. The Ecoweeder would for example not be appropriate for organic producers. An often heard complaint is that the offered products are more useful for bigger coffee plantations. Also, according to an Atlantic technician the so-called hybrids need lots of fertilization, even more than plants people manage now. This would add to the costs of the producers, although in the long-term the profits should be higher. Another issue that makes the hybrids very costly is that producers normally use seeds from their own coffee plants to plant new trees. This is however not possible with the hybrids.


Atlantic technician introducing the "Brocap Tramp"; Atlantic technician introducing the "Ecoweeder"

88.9% Of the producers could remember to have been offered the option of acquiring technological innovations from Atlantic, with the four above mentioned options. 91.7% Of those that have heard of the technological innovations indicate they would be useful for their plot, however 63.04% comments at the same time that there is "*a lack of resources"* to buy them. Other comments that were given with respect to the technological innovations were that "*we work on our own traditional way"* and that "*the products get stolen anyways"* (especially with respect to the Brocap Tramp which is being placed out in the field and catches attention). The producers of SJRC still had not seen any of the products by the time the researcher was performing the surveys.

[20] 1 manzana (mz) = 0.70 hectares (ha)

Table 6.2. Utility of technological innovations – Comments given by some of those producers who had heard of these products

Comments on utility	Frequency	%
Lack of resources	29	63.04
We work traditionally	5	10.87
Brocap affects us highly	4	8.7
We have not seen the products	4	8.7
The products get stolen	3	6.52
We are organic producers	1	2.17
Total	46	100.0

Until the moment of investigation only two out of 54 producers had acquired one technological innovation. In both cases it concerned the "brocap tramp" which were already in use before the IB initiative. 55.6% Of the producers is thinking about buying one or more of the technological innovations in the future, but "*only if accompanied by an adequate loan*".

6.3. Access to finance

As explained in chapter five, an additional service that the anchor company formally offers is the providing of financial credits on a short and medium term for the production and commercialization of coffee. The medium term is only applicable if the technological innovation "hybrids" is being purchased. The provision of loans is not exclusive to the IB initiative; the company has been used to work with this system for quite some time. For the small producers to be able to improve their production, access to finance would be a crucial element. As mentioned however the principal problem for producers is the lack of a proper financial credit system to allow them to invest in their plots and therefore improve their standards of living. So far, the IB initiative has not been able to break this cycle. The majority of producers does not have access to finance directly with the anchor company. No differences are being made between loans directed to large producers and those directed to small producers. It means the product is not adjusted to the reality of the small producers and this has been quite visible in the field. Every single farmer that has been spoken to is struggling with the same problems.

The cooperatives themselves are also struggling to find funding to be able to provide loans to the producers. Meanwhile, once Atlantic has given out a loan to a coffee cooperative, it does not follow up on what happens with the money and which conditions are being applied by the cooperative. It can also happen that these loans arrive with members that are not necessarily part of the IB initiative. Another important element is that within the IB initiative, Atlantic provides its loans with an annual interest rate of 12%. It is however possible for the cooperatives to charge their own

interest rates which can make the outcome less "inclusive" then envisioned by SNV for example. Cooperative Caja Rural charges a 20% interest over the provided loan, while Pedro Sergio Rodriguez charges 15%.

Table 6.3. Cooperatives, agencies and the interest rates applied to loans

Actor	Interest rate
Coop' Caja Rural	**20%**
Coop' Pedro Sergio Rodriguez	**15%**
Coop' Arca de Noel	**12%**
Doña Miriam Atlantic agency	**12%**

On the aspect of access to finance, with the IB initiative nothing has changed for the better yet for the small producers. When asking the producers – in an open way- what would be the best way for them to improve their coffee production 87.1% of all producers at the first place gave an answer that surrounds the aspect of financing. It makes clear how pressing the problem is.

Table 6.4: Opinion of producers on what would be the best way to improve coffee production

		Frequency	Percent
Valid	Long term financing	23	42.6
	Being able to control plagues and plant diseases	1	1.9
	Financing that arrives in time	3	5.6
	Renovating with long term financing	21	38.9
	Training	3	5.6
	Technical assistance	1	1.9
	Receiving a better price for the coffee	2	3.7
	Total	54	100.0

6.4. Intermediating parties on IB initiative

For the small producers that have been part of this research, the IB initiative basically goes through the cooperatives of which they are member and the local Atlantic agency in Esquipulas. All three parties have been asked for their view on the initiative.

According to the female director of Caja Rural, the idea behind the IB initiative is good, since it is about strengthening the organisation and the producers. She also feels it is necessary for the cooperative to start an alliance with a company, because '*alone….we cannot do it".* She hopes the alliance will make it possible to enter the market for specialty coffee, although she thinks that the cooperative still reaches too little volume for it. Again here, the difficulty mentioned is the aspect of

finance that is needed for the renovation of the coffee plantations. According to the senior technician of Caja Rural it would also be better to have another financing source that does not make it obligatory to sell the coffee to that same party. He is also a bit critical about the capacity trainings that Atlantic provides.

> *"Ourselves we also guarantee every month and a half a visit of one of our technicians to the members. We adapt our trainings to the economic conditions of the members and recommend for example the 'good agricultural practices'. Principally we focus on pruning, fertilization, soil conservation and the regulation of shade trees. The technological innovations around which Atlantic focuses its trainings are good, but without a proper financing that goes hand in hand they cannot do anything".*

He also mentions how they have been working for years with Atlantic, but that still no change is visible. A junior technician agrees but indicates that

> "*it looks like now the company wants to change and work on their relations"*.

The senior technician hopes that in the future the cooperative can obtain its own exporting license and export directly itself.

When asking the female representative of the Atlantic agency in Esquipulas about her opinion on the IB initiative she immediately indicates as well that the problem lies in the credits.

> *"The people have no legal papers to apply for a loan that is why I am the collateral. I put my house, mortgage of the company and the farm to have collateral. I do it for the people, there is no benefit for me….The interest rate is the one of the company, 12% a year, I don't ask for more. In harvest times the people pay with their coffee and what is left I will give them cash. The interest stays within the company".*

She does however not receive enough to provide all the producers with loans, in general she reaches 50 producers, and the loans always arrive late. She explains that therefore people have to look for loans at other places, according to her with interest rates that sometimes reach 50% a year (or more). For the IB initiative to work out she therefore thinks the company should be more flexible with the provision of loans. The trainings that are being given are a good help, but it is not enough.

The director of the cooperative Pedro Sergio Rodriguez also thinks that the part of free trainings is very interesting. He thinks it is a good way for the producers to improve their work and give more attention to the plantations. He however also indicates at the same time that the financial part is a bit more difficult, for the same reasons that the other two parties are struggling. Besides, he thinks that Atlantic should also focus on paying a better price for the coffee in harvest time.

6.5. Inclusive business from the anchor company's perspective

SNV Nicaragua has brought the inclusive business model to Central America after receiving some positive results from SNV Ecuador and started selecting anchor companies. These anchor companies did have to comply with some criteria: (i) being incorporated or registered in one of the three countries El Salvador, Honduras or Nicaragua, (ii) demonstrate commitment and the ability to implement inclusive business, (iii) be willing to cover at least 40% of the costs of implementation of the inclusive business plan, (iv) be leading and innovating companies in the sector, (v) share the view that the inclusion of low-income populations in the value chain is an appropriate way of doing

business for both the company and society, and (vi) be willing to share experiences and lessons learned from the implementation of inclusive business in the business environment (SNV, 2010). According to Atlantic's programme coordinator, the company was already working with the smallest farmers before the IB alliance with SNV and the Inter-american Development Bank (IADB) started. New are the technological innovations that are being promoted amongst the small producers as well as a more extensive capacity training program. Because of the additional funding of IADB, the trainings can now be better adapted to the small producers, as the program coordinator of Atlantic indicates:

> *"We now try as much as possible to give the trainings on the farms. Before we used to go to restaurants or cities, using the laptop and technology we know. This did not work, and we now start working more on a 'local' level and on a 'local context'"*.

The IB initiative should permit the company to strengthen its value chain and add more providers of coffee in a sustainable manner, in order to meet the demands of the market. These are to be providers with good knowledge and techniques that improve their productivity and the quality of the products. It should also help the company to add a potential market for certified coffee. The company aims to provide the producers with the ability to add value to their produce by linking to backup processes and certifications like Fair Trade, Utz Certified or organic products. It is usually the larger producers or bigger cooperatives that can access these kind of specialty markets. By linking the small producers to a big company such as Atlantic it is hoped that it will be easier for them to obtain certifications. If more small producers are able to obtain these certificates, the company will eventually also receive a higher price for the coffee and have a better reputation in the market. Another motivation for the company to participate in the inclusive business initiative is off course the partly funding of the Inter-American Development Bank. The company has more resources available this way to do business with the smallest producers. For example, according to the IB program coordinator of Atlantic, the technical team to give capacity trainings to the small producers is paid by the IB initiative, although in the future it will be Atlantic paying these costs. This technical team is highly necessary to strengthen the capacities of beneficiaries. The funding does however also mean that the company has to comply with some standards and wishes that come from the IADB. According to the Atlantic technicians, the IADB does not always have a clear view of the realities of doing business. For example, the IADB wants to have the capacity trainings done all at once, but this is not in perspective with the life of the farmer. The trainings have to be given at the proper moment (before harvest, etc.). It is also thought that some of the goals are overtly positive, for example the goal of reaching an increase of income at producer level of 37.5% in three years. Also the goal of reaching 2,000 farmers in three years is thought to be quite radical, especially when thinking that there are only two technicians available to complete the task[21]. There is little time and manpower to visit all producers and provide them with capacity trainings, but the project coordinator still remains positive they will be able to fulfil the task. There is a risk however that the program this way focuses more on quantity than quality. An indirect result of the IB initiative, according to the Atlantic program coordinator, has been that the coffee sector has started to hear about the IB initiative and that it generates trust towards the company. This way producers that are not directly beneficiaries of the initiative might also think of working with Atlantic. Another indirect expected result according to

[21] Since August 2011 however a third technician has been hired to join the IB team

him is the capacity strengthening of other non-beneficiary producers that obtain knowledge from those who do participate in the initiative.

The manager of Atlantic Matagalpa is pleased the development sector is now focusing more on the private sector. As he indicates:

> "*We try to convince parties that it is better to cooperate with the private sector than with other institutions such as NGOs. We do things cheaper, faster and more efficient. We know the sector and the producers"*.

The main idea for the company behind the inclusive business model is to build long-term relationships with the producers and to be able to buy larger amounts of coffee of higher quality. The long-term relationship should result in a win-win situation. It is however acknowledged that this will be benefits in the long run. In the upcoming three years, no tangible results are expected to be visible yet. It must also be taken into account that the various technological innovations take time before a change becomes visible, some up to three years. For Atlantic it is however important to think about the future of the company:

> "*We have to make sure we have suppliers also"* (Program coordinator, Atlantic).

The IB initiative is also thought to give the company a greater recognition at a sector level. The company is now also involved in other processes such as getting the producers into courses of "coffee schools". When asking the program coordinator of Atlantic if the company will continue to work with the smallest producers if the funding of IADB stops he answers:

> "*The company will always continue. The IB initiative is a complementation to the activities of technical assistance, the most important thing for the company is that the amount of providers shall increase. With or without external funding the company will continue, although obviously it will not be that direct or with the same coverage".*

Conclusion

The IB initiative to include some of the smallest coffee producers in the value chain of the anchor company is based on a) access to trainings; b) access to technological innovations; and c) access to finance. The company does however not necessarily trade directly with the small producers; usually a cooperative works as intermediary. Many of the visited producers still did not know well what the IB initiative entails, but most do agree that the cooperative works together with the company. Some however indicate they'd prefer the cooperative to export directly itself and have less intermediaries. Up until the time of research many producers had only received the introductory talk to the initiative and are waiting for the technicians to come back with a training, of which two or three a year are given. Those who did receive a training of the company already are positive about the quality. The trainings go hand in hand with the technological innovations that are promoted in the hope the producers will acquire them and use them for the improvement of their production. These products take quite some time to show results for the small coffee farmer and the problem is that the farmer first and foremost has to invest. The products are not always useful to all producers. The problem with the innovations is the lack of financial resources to buy them. This is where the access to finance should formally come in. It has however resulted to be impossible for the majority of producers to

receive a loan directly from the company. No differences are being made between loans directed to large producers and those directed to small producers. The product is not adjusted to the reality of the small producers. Instead, the loans are being managed through the cooperatives or local Atlantic agencies. The anchor company does not follow up on what happens with the loan they provide to a cooperative. It can happen the loans arrive with members that are not necessarily part of the IB initiative. Also, a cooperative is free to charge the interest rate she wishes which can make the outcome less "inclusive" then envisioned by the funding institution and NGO involved. The problems surrounding this aspect of financing are very pressing, also the intermediating parties involved indicate the lack of financial resources and proper loans as the main barrier for producers. It means that so far, the IB initiative is not yet able to play a role in offering a sustainable solution to the challenges the coffee farmers face.

The expected result of the IB initiative for the company is the strengthening of the value chain by adding more providers of coffee in a sustainable manner, in order to meet the demands of the market. These are to be providers with good knowledge and techniques that improve their productivity and increase the quality of the products. It should also help the company to add a potential market for certified coffee. The partial funding gives the company more resources to do business with the smallest producers. An indirect result of the IB initiative has been that the sector started to hear about it and that it generates trust towards the company. Also, other non-beneficiary producers are expected to obtain knowledge from those who do participate in the initiative. The main idea for the company behind the inclusive business model is to build long-term relationships with the producers and to be able to buy larger amounts of coffee of higher quality. The long-term relationship should result in a win-win situation. It is however acknowledged that this will be benefits in the long run. In the upcoming three years, no tangible results are expected to be visible yet.

Discussion & Conclusion

The inclusive business initiative between SNV Netherlands Development Cooperation, Exportadora Atlantic S.A. and the Inter-American Development Bank aims to sustainably include 2,000 small coffee producers in the value chain of the anchor company by giving these producers access to capacity trainings, technical assistance and finance. The model is based on two principles: improving the productivity and coffee quality of small producers and the strengthening of the company's value chain. The main focus of this research has been on the small coffee producers and the coffee cooperatives and the possible impact the inclusive business initiative may have on their lives and organizations. The central question guiding this research was therefore as follows:

Does the inclusive business initiative (potentially) create added value for the low-income coffee farmers and cooperatives in Nicaragua?

With the help of theories on sustainable livelihoods approaches, value chain development and base of the pyramid strategies, this question has been answered through four different research questions, giving the outcome at the end of this discussion.

1. **What are the characteristics and livelihood activities of the farmer communities involved in the IB initiative?**

One of the difficulties that has been seen during the research is that the anchor company as well as SNV do not have a particularly great knowledge on the daily reality of the coffee producers that are included in the project proposals. SNV staff that is managing the inclusive business initiative had never set a foot in the communities, some had only been present at one of the introductory sessions of only a few hours, at which there would barely be spoken to the producers. In order for an intervention strategy to be successful, it is important to know and to keep in mind the actual situation in which the target group finds itself. It will show that poverty is not just a question of low income, but also includes other dimensions such as illiteracy, lack of social services, bad health, etc., as well as a state of vulnerability and feelings of powerlessness in general (Krantz, 2001). Also among the small producers that are part of the IB initiative, poverty is still widespread. They live with a minimum of basic social services and the lack of education of the farmers when they were young still gives difficulties in their adult life. The new generation of rural areas has more opportunity to attend school. The quality of this educational system is however still questionable. Many farmers also still struggle with food insecurity and water scarcity. When looking at the physical capitals of the producers, the characteristics are quite similar and very basic. The communities are difficult to access and proper transportation systems and roads are not in place. Also, the areas in which they live are risk-zones for natural disasters. Information by FAS (2008) on how the agricultural sector in Nicaragua suffers from drought and poor irrigation systems, limited infrastructure, and inadequate credit at high interest rates can be confirmed for the coffee producers that were part of the research. Due to financial limitations and/or a lack of knowledge, limited investments are made by the producers in the plots. This leads to the low productivity of many of the producers. Also, a huge barrier results to be the lack of renovation of the coffee plantations, which is in confirmation of a study by '*Cafenica*' and the '*Centro Internacional de Agricultural Tropical'* that had already been performed in Nicaragua in 2010. *"Another barrier that makes the production of specialty coffee difficult is the fact that the majority of coffee plants is not being renovated, which makes the majority*

of the plants produce at half". The need is extremely pressing, but no proper solution is given to it yet. For farmers themselves it is difficult to invest, since their return on these new plantations would only come after three to four years. One of the technological innovations of Atlantic is ought to tap into this need for renovation: the hybrids. In reality, it appears that not many producers are eligible for this product and besides the costs to the producer are very high. Another difficulty for the producers is the lack of legal papers of their properties and plot. Being in possession of these papers would by highly important for the inclusive business initiative to work more sustainably, but also obtaining these papers comes with high costs. The research has also made clear that the producers lean too much on coffee production as their source of income, an aspect that makes them quite vulnerable. Other activities are very marginal with respect to income and it would be important for the producers to think of diversification, even in a whole different area such as rural tourism for example. This could be organized together with the cooperatives, of which 86% of all selected 300 beneficiaries is member. At the moment, the interviewed producers especially think they receive benefits from their cooperatives in terms of loans they receive from them. The majority however indicates how a) the loans are (too) small and b) the loans do not arrive at the adequate time. When looking at the different value chains of the IB initiative – those of producers that are member of a cooperative and individual producers – it can be concluded that the individual producers of the research are part of a shorter value chain. The result is however they also have less access to services such as those possibly provided by cooperatives.

2. What are the main internal and external challenges the coffee farmers face?

The most important challenges that the small coffee farmers face is the lack of financial resources. Producers do not have access to long term loans; loans often do not arrive at the adequate time; and they only receive very small loans. Also the high interest rates of the market loans form a problem. Challenges related to the lack of financial resources are the fact that many producers are not able to renovate their coffee plantations or fight plant diseases and plagues. In theory, Atlantic offers loans to producers. In practice, for the majority of producers it is impossible to receive loans directly because of a lack of legal papers of their properties and plot and a lack of collateral. Coffee cooperatives or intermediates jump in, provide collateral and divide the amount they receive from Atlantic between producers. The producers in their turn apply for loans with the cooperatives or intermediaries, but often do not receive the requested amount. Therefore they sometimes have to turn to other parties for financing (*coyotes*, for example). The loans are always for one year and have to be re-paid with the harvest, which does not give the producers enough time to invest. They also have the compromise of selling their coffee to the lending party. At the same time, many heard voices in the field are that cooperatives often lack transparency and organizational capacities. Internal problems that cooperatives have are reflected on the small farmers. All three cooperatives involved in the research have difficulties in finding funding. This confirms O'Connel (2010) who also indicated that in Nicaragua the cooperatives carry weaknesses. "*A lack of transparency and corruption is threatening the future of the cooperatives*". The United Nations has declared 2012 to be the International Year of Cooperatives. The slogan is "*cooperative enterprises build a better world"*. Cooperatives are being seen as solidarity-based and organisations in which the members equally own a share, equally make democratic decisions and a solution to be implemented to improve people's lives. We should however be careful with this. Many Western institutions and NGOs indeed view cooperatives as such, but it is important to realize there are exceptions and that in reality these institutions might not be as democratic and full of solidarity as we'd like to believe. Especially when

there is foreign funding involved with a lack of monitoring it can be easy for the direction to take advantage and small producers might not see any benefits at all. This might especially be a risk since so many farmers are badly informed about the coffee value chain and coffee prices for example.

Besides these challenges, the environment of structures and processes also plays a critical role in the lives of farmers (Dfid, 1999). Some external challenges that have been emphasized in the report are a) remote locations, dispersion and inadequate physical infrastructure of small producers; b) service providers have limited information on the coffee producers of the base of the pyramid; c) the regulatory framework is not conducive to the development of the service market; d) little incentive for the development of financial products and services and e) limited technical education in rural communities. In Nicaragua there is still a lack of integration of policies that should stimulate the country's coffee culture and not many people have been found during the research who feel they are being supported by their (local) government. Some of these internal and external challenges that farmers face are not being envisioned properly by those who write the inclusive business project proposals. The BoP Protocol (2011) challenges MNC teams to live within the targeted BoP communities for weeks or months, at local wages, to fully appreciate the local way of life. The SNV team should also be challenged to visit one or two producer families for at least two days and spent two days within the community. If they would get a program coordinator from Atlantic to join them the outcome could be very positive. The producers get the feeling they are being taken seriously and those who write the project proposals will finally get a good understanding of the daily reality of the producers; un understanding that they can take with them to improve the IB initiative.

3. **How do the different aspects of the IB initiative function and is the initiative able to play a role in offering a sustainable solution to the challenges the coffee farmers face?**

The "five triggers" according to ILO (2007) and Mitchel *et al* (2009) are definitely needed to achieve local value chain development: the need to improve system efficiency; product quality and specifications; product differentiation; social and environmental standards; and an enabling business environment. The inclusive business initiative is especially focusing on improving efficiency and product quality, while social and environmental standards are being included when the farmers get access to certifications. As we have seen with the characteristics and challenges of the farmers, (product) differentiation is highly needed to decrease the vulnerability of the coffee farmer. Rural tourism has been mentioned, but also a strategy of the cooperative PAC in Estelí (also part of the IB initiative, but did not give permission for a visit of the researcher) the taro (*malanga*) dissemination is part of the cooperative's efforts for diversifying the use of the land on coffee farms. Taro grows all year long, while the coffee only produces an income a few months of the year (Gomez, 2010). Also, the IB initiative definitely has more chance to be successful with an enabling business environment, which will be referred to later on. When we look at the type of upgrading strategies proposed by Mitchell *et al* (2009) so far two intentional types of upgrading strategies can be applied to the IB initiative: a) process upgrading; and b) product upgrading. With process upgrading the IB initiative aims to improve chain efficiency by introducing technological innovations to the farmers. The hope is that by introducing these products both the productivity as well as the quality of the products will increase, which leads us to product upgrading. These two upgrading strategies of the IB initiative to increase productivity and product quality is based on a) access to trainings; b) access to technological innovations; and c) access to finance. The company does however not necessarily trade directly with the small producers; usually a cooperative works as intermediary. Many of the visited producers still

did not know well what the IB initiative entails, but most do agree that the cooperative works together with the company. Some however indicate they'd prefer the cooperative to export directly itself and have less intermediaries. Up until the time of research many producers had only received the introductory talk to the initiative and are waiting for the technicians to come back with a training, of which two or three a year are given. It would be better if the IB initiative would first focus on the quality of the program – make sure that all 300 included farmers are happy and fully integrated – and then work on including the rest of the producers – goal: 2,000 producers – and make use of lessons learned.

Those who did already receive a training of the company were positive about the quality. It would be good however if the trainers would bring pencils and notebooks to the trainings for farmers to be better able to remember what has been told. This has been discussed already among producers as well who indicated how useful it would be and that they could help those who do not know how to read and write. It has also been discussed within SNV who recognized the point: they actually already have pencils ready as promotion material but never thought of bringing them. Among the farmers, there is definitely will to learn and they are eager to receive more trainings from the anchor company. The trainings go hand in hand with the technological innovations that are promoted in the hope the producers will acquire them and use them for the improvement of their production. These products take quite some time to show results for the small coffee farmer and the problem is that the farmer first and foremost has to invest. The products are also not always useful to all producers. The main problem with the innovations is the lack of financial resources to buy them. This is where the access to finance should formally come in.

The research has shown that a limited access to finance acts as a key barrier preventing the smallholders from moving forward. On the one hand, it is a problem of limited supply of finance while on the other it is a structural problem since the smallholders are generally not considered creditworthy because they lack collateral and legal papers and have uncertain incomes. Also, credit providers still fear for non compliance of the contract. If the small producers have access to credit, particularly at high interest rates, it becomes vital to them to increase their annual productivity in order to repay their loans and make profits. Often their subsistence depends on the outcome of production and market dynamics largely out of their control. They are vulnerable to weather changes, plagues and plant diseases, externally determined prices, and seasonal labour among others, which can independently or collectively limit the farmer's productivity and margins of profitability. Farmers are at greater risk to default on loans if productivity falters. Prahalad (2004) however also emphasized access to credit as a crucial intervention that is needed when doing business with the base of the pyramid. The IB partnership tries to address the institutional constraint of a lack of access to credit for small producers, since Atlantic formally offers access to finance to the producers. This has however turned out not to function properly yet. For the majority of producers it is impossible to receive a loan directly from the company. No differences are being made between loans directed to large producers and those directed to small producers. The product is not adjusted to the reality of the small producers. Instead, the loans are being managed through the cooperatives or local Atlantic agencies. These are always short-term loans, however as also acknowledged by KIT and IIRR (2010) these are allright for activities where an investment pays off immediately, but less suited to activities where turnover capital is slower, as in farming. Also KIT and IIRR (2010) confirm that co-ops *"suffer from flawed administrative controls, lack of independent decision making, inflexibility and high administrative costs."* . The cooperatives also face various other financial needs.

They need to cover their administrative costs. Those that market their members' produce need cash to pay their members promptly (remember the cooperative in Rancho Grande that did not have cash to pay their members when they arrived with their harvest?) which requires working capital; if farmers do not get paid quickly, they may sell to a private trader who might pay less but who can provide fast cash. Despite these issues, the anchor company does not follow up on what happens with the loan they provide to a cooperative. It can happen the loans arrive with members that are not necessarily part of the IB initiative. Also, a cooperative is free to charge the interest rate she wishes which can make the outcome less "inclusive" then envisioned by the funding institution and NGO involved. Many farmers did not know the interest rate the cooperative was charging them. The problems surrounding this aspect of financing are very pressing, also the intermediating parties involved indicate the lack of financial resources and proper loans as the main barrier for producers. To make the IB initiative more sustainable, it would be worth considering for Atlantic to better coordinate with the cooperatives how the loans are being managed and to put a limit to interest rates. However, another option would be for Atlantic itself to adjust their financial products to the producers' reality. It could mean being more flexible and giving borrowers more options as to how and when they repay their loans, as to the example of the Grameen Bank. Instead of asking for collateral, the company could organize solidarity-groups of 3-7 farmers: if one member defaults, the other members of the group have to pay the balance of the loan. Also, farmers can be trained in financial and contract discipline. Risks will always be involved, but when looking at the example of Esquipulas where farmers have never nót repaid their loans possibilities are certainly there. They are people that live in the same community and trust and proximity relationships are very important. Also in the research of Gomez (2010) it has been indicated that although after the war, everything was being given for free to farmers which afterwards gave farmers a hard time to pay an interest for the loan, little by little people understood that if they received something, they had to return it. "*The non-payment culture of the farmers has slowly been changed into a commitment that farmers gave to pay back their loans"*. When the anchor company however provides a loan the borrower has the compromise of selling the harvest to the company. About this financing mechanism that is included in the IB initiative one can question whether this mechanism will contribute to the desired empowerment of small rural producers, or rather increase their dependency on larger chain actors such as Atlantic. Since these risks are involved and Atlantic's core business is not being a bank, possibilities should maybe be considered to involve microfinance institutions into the alliance and pursue them to follow the course of inclusive finance. If vertical linkages can be built between microfinance institutions and cooperatives it will enable the cooperatives to focus on their core business: technical assistance to the farmers and the buying and selling of coffee. It has to be prevented that the farmer has to turn to moneylenders that lend money at excessive interest rates (perhaps 100%), putting farmers in a vicious debt-cycle.

Another aspect of process and product upgrading would be the introduction of sustainable or organic certifications. This is one of the aims of the IB initiative as well, but for many farmers there is still a long road ahead towards accessing these certificates. It could also be argued that it would be highly useful for the farmers to look at functional upgrading. If the coffee farmers add more value by processing their cherries and shortening the chain by removing intermediaries the price they receive will definitely increase. It would however involve many investments first (as also seen by Laven (2011): "*adding value can entail costs that outweigh benefits"*) and it is difficult to see functional upgrading with the smallest farmers without support. Some farmers themselves already argued how

they'd prefer to either work directly with the anchor company (without the cooperative in between) or for their cooperative to export directly. For the latter it would require a very well organized cooperative (it usually happens with second-level cooperatives, like the cooperative unions) and for the first it would require more investments from the anchor company. Both are not very realistic in the nearby future. Therefore, it would be interesting if the anchor company would focus more on horizontal coordination and making efforts to strengthen the cooperatives, especially since we have seen that many problems cooperatives face are being reflected on the producers. It is already in the vision of the IB initiative to strengthen the capacities of the cooperatives' technicians in order to pass the knowledge to the producers. It would however be good if the trainings would also focus on the internal organization. It can be thought of strengthening their strategic capacities, offering programs to boost leadership and enhance their business acumen, and strengthening management and financial administration skills. The question however is how likely it will be for the company to focus on strengthening the cooperative itself: if in the end a cooperative starts exporting directly the anchor company will lose its supplier.

Another important aspect in order for process and product upgrading to be more successful is 'upgrading' of the enabling environment. Hart & Prahalad (2002) in their analyses especially focus on MNCs but their warning that when involving as a company with the BoP '*no firm can go on this quest alone'* is also applicable for the anchor company Atlantic. Multiple players are involved and momentarily it is a cooperation between the company, the NGO SNV, a large funding agency such as the IADB, the cooperatives and the communities, however governmental authorities and financial institutions are not involved. If Atlantic is not willing to take the risk and adjust their financial products to the small producers and be more flexible, it might be worth considering to start an alliance with a local financial institution. The public sector is also needed for the promotion of micro-insurances as well as supporting those farmers that need to renovate their plantations and the development of 'coffee-schools'. It might be a consideration to strengthen relationships with the Instituto de Desarollo Rural (IDR). National policies and programmes that can be put in place to promote and support more inclusive business models and aimed to tackle power asymmetries that affect smallholders' dealings with agribusiness can make a real difference to the process and outcomes of agricultural investment.

Finally, the IB initiative brings a risk of non-inclusion of many individual farmers. It has been emphasized by the anchor firm that it is more difficult to work with individual producers and in their search for new producers for the IB initiative negotiations often go through cooperatives. Humphrey (2005) and Fomm (2007) argue that although firms often have the capabilities to coordinate complex relationships with suppliers and customers, it is easier to deal with a few large suppliers (cooperatives in this case) than to deal with many small ones (individual coffee producers). It means that often, individual farmers will still be excluded.

It can be concluded that so far, the IB initiative is not yet able to play a role in offering a sustainable solution to the challenges the coffee farmers face. The effects of the trainings and technological innovations can only become really visible if they are being accompanied by proper access to finance; the key to the IB initiative. Value chain development means the insertion of the 'poor' in value chains, but so far nothing has really changed yet for the farmers. The cooperatives involved in the research already sold their coffee to the anchor company before the IB initiative and

regarding access to finance also nothing has changed. The same counts for the individual farmers of Esquipulas who already sold their coffee to the local Atlantic agency.

4. **What will be the direct and indirect expected results of the IB initiative for the anchor company?**

The expected result of the IB initiative for the company is the strengthening of the value chain by adding more providers of coffee in a sustainable manner, in order to meet the demands of the market. These are to be providers with good knowledge and techniques that improve their productivity and increase the quality of the products. It should also help the company to add a potential market for certified coffee. The partial funding gives the company more resources to do business with the smallest producers. An indirect result of the IB initiative has been that the sector started to hear about it and that it generates more trust towards the company. Also, other non-beneficiary producers are expected to obtain knowledge from those who do participate in the initiative. The main idea for the company behind the inclusive business model is to build long-term relationships with the producers and to be able to buy larger amounts of coffee of higher quality. The long-term relationship should result in a win-win situation. It is however acknowledged that this will be benefits in the long run. In the upcoming three years, no tangible results are expected to be visible yet. Also, if the part of access to finance is not being adjusted it is questionable whether any result will be visible. For both the company as well as the small producers.

Conclusion

According to (SNV) IB provides "*Profitable ways to integrate low-income segments into business operations of large companies in a way that benefits these communities and creates sustainable livelihoods"* . These outcomes are definitely not visible yet and if the above mentioned aspects are not being taken into consideration it is unlikely things will really change for the better: for both the small producers as well as the company. One goal of the IB initiative is for the producers to increase their income by 37% in three years time. This goal is however a utopia; it would be useful to become more realistic about the inclusive business initiative(s) and make an effort to take provided lessons into account. The inclusive business initiative does have the *potential* to create value for the low-income farmers and cooperatives in Nicaragua, especially now with international coffee prices going up. In theory, the IB initiative could offer a solution to many of the challenges the farmers and cooperatives face, however in practice it still does not function this way. Access to finance is the key towards the sustainable functioning of the IB initiative, as are properly managed cooperatives for the small producers. If in the end the company works in an 'inclusive' manner, but the cooperative does not, the small producer will still lose out. Also, a cooperative is able to benefit if it receives more funding to support its members. However, if it chooses to only support its best members the cooperative can eventually benefit, while the smallest producers still do not. Inclusive business is certainly not a "magic bullet" to facilitate sustainable development in small farmer communities and weaknesses still have to be overcome. The IB partnership has taken a first step towards creating an inclusive market, but more efforts are needed to take these steps to a further level. It would be highly useful to try and involve the public sector more in the initiative as well.

The following page provides a summary of the conditions under which small coffee farmers have to produce. Eventually all of these factors play a role in the lives of coffee farmers and it must not be forgotten that these external factors can hamper the success of the inclusive business

initiative, without the will of the stakeholders involved. Table 7 consequently provides an analysis of the strengths, weaknesses, opportunities and threats for the inclusive business initiative in particular.

Conditions under which small coffee farmers have to produce

Natural	Financial
Natural disasters	Inadequate credits in market at high interest rates
Drought	Only 15-20% of coffee sold under premium conditions
Deforestation and soil erosion	High dependency on coffee as source of income
Plagues and coffee plant diseases	High food prices and financial crisis
Plantations not being renovated	No or limited access to insurances and formal banking services
Insecure land rights	Coffee value chain: long / many intermediaries
Food insecurity and water scarcity	
Social	**Institutional**
Lack of transparency and corruption in cooperatives	Political concerns regarding a) respect human rights; b) rule of law; c) democratic processes
Limited coverage of social services, such as water, sanitation, electricity, telecommunication	Little support from local governments
Technological	
Poor irrigation systems	
Farmers lack access to technology	
Limited technological education available in communities	

Table 7. SWOT analysis inclusive business

Strengths	**Weaknesses**
-Anchor company has more contact with BoP producers - Quality of trainings anchor company perceived as high -Certifications that some cooperatives have managed to obtain	-Loans provided by cooperatives or anchor firm towards producers: a) short term; b) do not arrive at adequate time; c) small loans -Producers not (yet) properly informed on IB initiative -Takes long for technicians to return to producers -Limit of 2/3 trainings a year -In trainings: too much emphasis on technological innovations (TI) -Limitations of TI: not useful for everyone; high costs, especially for mostly needed 'hybrids' -Cooperatives managing their own interest rates on loans provided by anchor company -Farmers still have little knowledge on coffee prices and value chain
Opportunities	**Threats**
-Farmers are willing to learn -80% of Nicaraguan coffee classified as 'strictly high grown' -Education of youngsters; coffee school Esquipulas -Momentarily increase of international coffee prices -Access to specialty markets with certifications -Strengthening ties with CONACAFE, IDR and microfinance institutions (though institutions not functioning properly yet)	-Farmers lack financial resources to invest -Low education and illiteracy among farmers and their partners -Financial limitations of cooperatives -Cooperatives that lack technicians and certifications -Remote locations, dispersion and inadequate physical infrastructure farmer communities -High quality losses coffee farm → factory - Farmers lack legal papers of properties and plot

Finalizing this research it has become clear there are more aspects for future research that could keep advising on the improvement of this particular inclusive business case, as well as other inclusive business initiatives. Two issues that stand out are access to finance and the functioning of cooperatives. It would be interesting to investigate possible alliances with microfinance institutions, or investigate cases where these alliances have already been built and whether these are functioning. Also, it is highly important to shed more light on cooperatives, that are often key in the lives of small farmers and their connection to the outside world. Do cooperatives really work in the benefit of the small producer or do these institutions merely form another link and intermediary in an already long value chain? Questions still remain and answers can be provided by future investigators who want to contribute their bit towards a more inclusive market.

Epilogue

"We Create What We Want"

"We create what we want, or what we don't refuse. We accept the fact that we will always have poor people around us, and that poverty is part of human destiny. This is precisely why we continue to have poor people around us. If we firmly believe that poverty is unacceptable to us, and that it should not belong to a civilized society, we would have built appropriate institutions and policies to create a poverty-free world. We wanted to go to the moon, so we went there. We achieve what we want to achieve. If we are not achieving something, it is because we have not put our minds to it. We create what we want. What we want and how we get it depends on our mindsets. It is extremely difficult to change mindsets once they are formed. We create the world in accordance with our mindset. We need to invent ways to change our perspective continually and reconfigure our mindset quickly as new knowledge emerges. We can reconfigure our world if we can reconfigure our mindset."

Muhammad Yunus – Banker to the poor – The Nobel Prize Lecture December 2006

I came back from Nicaragua somewhat confused, somewhat disappointed. Once again a beautiful project in the fight against poverty had been written on paper, but the outcomes turned out not to be as pretty as these papers wanted to make you believe. I also left Nicaragua hopeful however; hope had been given to me by the small coffee producers I had visited. People that were so proud of the little land they owned, so happy if they could see new coffee cherries growing on their plantations, so determined to give their children a better future than they had had themselves. I have seen people who are willing to learn, eager to move forward, but desperate for a change. People who find themselves stuck in their situation and who are not being given the right tools to break out of it. I am however still convinced, just as Muhammad Yunus, that a change is possible. By changing some of the rules of the game, so many people can be given the chance to change their own lives. Call me optimistic or idealistic, but I have seen the hope in "poor" people's eyes, so than who am I to give up? We create what we want, let us not stop in our efforts to create a better world.

Afterword: Update

After completing the research a few months later (August, 2011) I looked back with the program coordinator of Atlantic at the most important lessons they have learned from the IB initiative so far. He indicates that there are many lessons learned, but he mentions that the IB initiative is not very inclusive from the point of view of the characteristics of the beneficiary. "*We have learned that in reality the IB initiative is for all those producers who want to improve their plantations, it does not matter whether he is a small, medium or large producer".* (To my ears: it is more suited for larger producers who already have the capacity to grow). He also indicates that the access to technological innovations has been a component that did not work very well, and that goals have not been reached, since the small producer does not have the capacity to buy these products. He also acknowledges that the part of financing and provision of loans does not work in an adequate way for the IB initiative, and that a new strategy of credits should be created for the beneficiaries. I sincerely hope both organisations will start working seriously on this aspect.

Also one of the SNV assessors on the IB initiative gives his perspective. "*We are now in August (2011) and we always have delays with the activities because of situations that are out of our control (climate, activities of the companies that conflict with our own, etc).* He does indicate the organisation has advanced with respect to the inclusive business project with Atlantic. Some changes have been made, for example they will now aim to include 1,100 small farmers instead of 2,000 to be able to concentrate more on the services that the initiative provides. Also, there is no strong emphasis anymore on the technological innovations as initially, but more emphasis on "*integrated management (technical aspects) of the grain to increase productivity and grain quality".* (Although I am not entirely sure what this is supposed to mean....). This choice has been made since the producer cannot afford to buy the products. This however should have already been known from the start, this is why access to finance is such a crucial aspect. They have advanced however with the capacity trainings: five out of seven modules have been imparted to the first 300 beneficiaries of the initiative and three more modules to 600 new beneficiaries. Almost 1,000 producers are now part of the IB initiative. They have also started in August with the process of the first monitoring event with the first group of beneficiaries.

Also the head of the local Atlantic agency in Esquipulas has been contacted. She indicates how in the first week of august the Atlantic technicians arrived and how they went to the communities to give trainings. *"The producers are very thankful because for example they learned how and with what to fertilize so that the producers do not lose money using products that their coffee doesn't need, the trainings were very good".* Many producers participated in the trainings.

The capacity trainings together with the "technological innovations" were meant to help increasing the producers' productivity and the quality of the coffee. I have the fear however both organisations are giving up on the innovations, because of the difficulties with finances. The trainings will however not be sufficient to reach these goals of increasing productivity and quality and eventually increasing the income of the producers. I hope that instead of giving up, they will make efforts to try and overcome the difficulties surrounding the access to finance.

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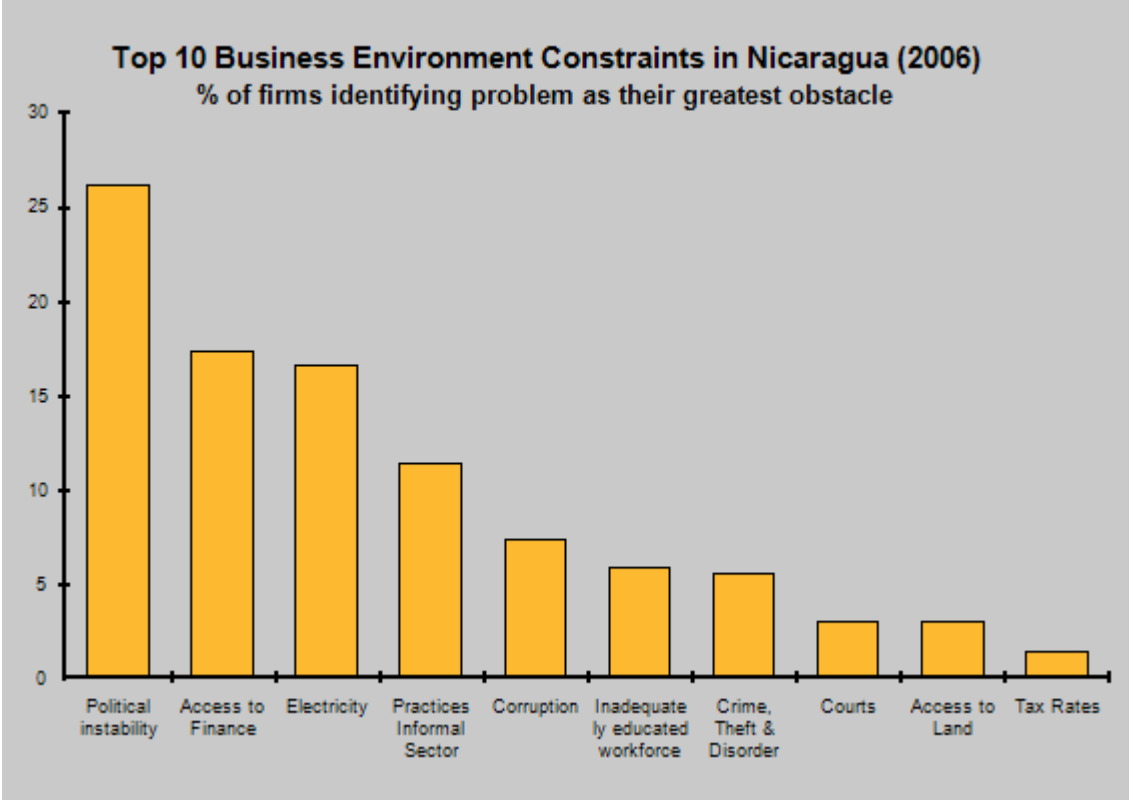
Appendices

Appendix 1: Top 10 Business Environment Constraints in Nicaragua (2006)



Source: Enterprise Surveys

Appendix 2: Objectives Matrix *Specific* IB case

Name of Project: BID Fomin, Nicaragua
Subproject: ATLANTIC
Measuring of results: Yearly survey among producers compared with base line results (first survey will be held May 2011); Administration of cooperatives; Administration of Atlantic

Results	**Objectives**
Impact 1: Beneficiary producers increase their net income through the production of coffee	*Impact Goal:* 300 beneficiaries at the year 2014 have increased their net income related to coffee sales with 37.8% compared with the year 2009.
Key Goal 1: Beneficiary producers increase their productivity	*General Objective 1:* At the year 2012, 2000 beneficiaries have increased their coffee productivity with 11% compared to the year 2009.
Key Goal 2: Beneficiary producers increase the total volume of coffee sold	*General Objective 2:* At the year 2012, 2000 beneficiaries sell 8,000 additional quintals of green coffee compared with the harvest of 2008-2009
Result 1: Beneficiary producers access financing	*Objective 2:* At the year 2012, 650 beneficiary producers have been financed to commercialize coffee with the company
Result 2: Technical teams of the anchor firm offer services of technical assistance and trainings to small producers and cooperatives	<u>At the end of the subproject, trained:</u> 2000 producers in " brocap traps" 300 producers in the use of "micro irrigation" 650 producers in "coffee hybrids" 2000 producers in sustainable certification, quality control and wet processing, administrative records and traceability <u>At the end of the subproject:</u> 2000 small producers have been assisted, of which: -2000 have been assisted in the integrated management of "brocap" -300 have been assisted in micro irrigation -650 have been assisted in the control of hybrids
Result 3: Beneficiary producers adopt one or more of the three technological innovations offered (brocap traps, micro irrigation, hybrids)	*Objective 1:* At the year 2012, 650 beneficiaries have applied one of the technological innovations offered by the project.
Result 4: The company maintains commercial relation with beneficiary producers that participate in IB	*Objective 5:* At the year 2012 Atlantic maintains a commercial relationship with at least 80% of the beneficiaries that have participated in the first two years of the IB project
Indirect result: Beneficiary producers contract	*Indirect Objective:*

temporal labour (farm workers, principally collectors)	At the year 2012, at least 800 new opportunities of temporal labour have been created compared with the base year. (Equivale 4,000 jornales (dias hombre) empleados en el cultivo)

Appendix 3: Questionnaires

Fecha	Numero del cuestionario… ☐ ☐
Departamento:	Municipio:

Comentarios sobre la entrevista (cuando necesario):

Introducción: Mi nombre es Elja de Jong. Soy una estudiante de la Universidad Utrecht, Holanda. Estoy haciendo un estudio para mi tésis final, investigando el caso de los "negocios inclusivos" de Atlantic y SNV en el sector del café. El objetivo es entender la realidad del cultivo de café en la región y su potencial de mejora.
Estoy realizando una encuesta a los agricultores de toda la comunidad de…..Este trabajo tomará aproximadamente 45 minutos contestar las preguntas. Toda la información que Usted provea será manejada con completa confidencialidad y solamente para los fines de este estudio. Agradezco su colaboración.

Sección I. Información Económica

Vamos a iniciar con algunas preguntas sobre su vida como productor de café

01	Cuantas fincas y de qué tamaño maneja usted directamente? Su(s) finca(s) es……: *Se puede seleccionar varias opciones. Cantidad se refiere a fincas diferentes.*

	Cantidad	Área Total Mz	Area Total Mz Café
a.Propia			
b.Alquilada			
c.Prestado			
e.Otro:			

02	¿Cuánto tiempo tiene de ser productor de café?	Años…… ☐ ☐
03	¿Que tipo de café maneja usted?	Orgánico ☐ Convencional ☐
04	¿Cual es la edad de su cafetal?	Años…… ☐ ☐
05	¿Es el café su principal fuente de ingresos?	Si……01 No……02
06	¿Cuántos meses al año dedica usted a las plantaciones de café?	Numero…… ☐ ☐

07	¿Qué otras fuentes de ingresos, además de café, tiene usted?-En forma de importancia	Ninguna……	01
		Otros cultivos agrícolas……	02
		Ganadería Bovina…	03
		Ganadería Porcina……	04
		Avicultura……..	05
		Remesas	06
		Comercio	07

		Industria 08 Artesanía 09 Turismo 10 Construcción 11 Otro: …….15 ……
08	¿A veces se aleja de su casa para tratar de ganar dinero en otra parte?	Si……01 No……02 (continua con pregunta 12)

09	¿La última vez que se fue a vivir en otra parte para buscar trabajo, a dónde fue?	En una finca de otro lugar rural ☐ En una ciudad ☐ A la capital (Managua) ☐ Fuera del país ☐

10	Ha podido encontrar una fuente de ingresos ahí?	Si……01 No……02 (pregunta 12)
11	¿Qué tipo de trabajo hizo usted ahí?	…… …… ……

12	¿Alguien más de su familia se mudó fuera de casa para encontrar un trabajo?	Si……01 No……02 Especifique..... ....
13	¿Es posible para usted dar tres comidad diarías a toda la familia que esta en su hogar?	Siempre ☐ Casi siempre ☐ Mital del tiempo ☐ Casi nunca ☐ Nunca ☐
14	¿Por los últimos tres años, ha usted participado en programas de alimentación?	Si……01 No……02

Sección 2: Marketing del café

15	¿Ha sido, o es Usted miembro de alguna cooperativa o asociación?	Fui miembro(pregunta 19) 01 Soy miembro(Nombre.....02 No he sido miembro(pregunta 19).. 03

16	¿Considera usted que ha recibido algun beneficio de la cooperativa?	Si…….01 No (comentarios……)…….02 ……
17	¿Cuántas veces por año se reúnen los miembros de la cooperativa?	☐☐
18	¿Porque razón no es, o ya no es, miembro de una cooperativa?	

19	¿Usted recibe información sobre los precios del café?	Si……01 No……02 (pregunta 21)

20	¿De qué manera usted recibe información sobre los precios del café?	Por teléfono.....01 Radio..... 02 Cooperativa.....03 Atlantic.....04 Intermediarios..... 05 Otro.....15

21	¿Cuantos quintales de café y a quién vendió usted en:	

	2009/2010	2010/2011
Cooperativa		
Atlantic		
Intermediario		
Otra empr. Exp.		
Total vendido		

22	¿Qué le pareció a usted al precio de venta que le pagaron por su café?	

	Malo	Regular	Bueno	Excelente
Cooperativa				
Atlantic				
Intermediario				
Otra empr. Exp.				

23	¿Hay espacio de negociar sobre el precio de venta o siempre es un precio fijo?	Espacio de negociar ☐ Precio fijo ☐
24	En su opinión, ¿durante los últimos tres años, cuales han sido los problemas que más afectan su producción de café?	
25	¿Usted se reune con otros productores para discutir los problemas?	Nunca ☐ A veces ☐ Mucho ☐

Sección 3: Negocios Inclusivos

Vamos a continuar con algunas preguntas sobre el programa de los Negocios Inclusivos de Atlantic y SNV.

26	¿Qué sabe usted del programa de los NI?	
27	En caso de ser miembro de cooperativa: ¿Esta de acuerdo que la cooperativa trabaja con Atlantic?	Si.....1 No.....2 No lo sé.....3 Comentarios
28	¿Tiene confianza en la empresa Atlantic?	Si.....1 No.....2

		Mas o menos.....3 No lo sé.....4 Comentarios

3.1. Capacitación - Cambios potenciales en capacidades

29	¿Es necesario para usted recibir asistencia en la forma de producir café?	Si……01 No……02

30	¿Usted ha recibido capacitaciones hasta ahora?	Si……01 No……02(pregunta 38)
31	¿De quién ha recibido capacitación? Cooperativa ☐ Atlantic ☐ Otro organismo ☐	

32	¿Cuántas veces ha recibido capacitación? Cooperativa ☐☐ Atlantic ☐☐ Otro organismo ☐☐	

33	¿Este número es suficiente para usted?	Si……01 No……02
34	¿Ha seguido las recomendaciones que le presentaron?	Si……01 No……02 Todavía no, pero voy a hacerlo.....3
35	¿Ha seguido las recomendaciones que le presentaron de forma adecuada?	Si……01 No……02
36	¿Que es lo que usted ha aprendido de la(s) capacitacion(es)?	
37	¿Cómo califica la calidad de la capacitación recibida? Cooperativa Atlantic Otro Mala ☐ ☐ ☐ Regular ☐ ☐ ☐ Buena ☐ ☐ ☐ Muy buena ☐ ☐ ☐ Excelente ☐ ☐ ☐ No lo se ☐ ☐ ☐	

3.2. Asistencia Tecnica

38	¿Atlantic ha ofrecido la opción de adquirir inovaciones tecnológicas?	Si……01 No……02 (pregunta 45)

39	¿Qué opciones de inovaciones tecnológicas le han ofrecido?	Trampas Brocap……. 01 Hibridos…… 02 Ecoweerder……. 03 Tubetes.....04 Otro…… 15
40	Cree que esas opciones son útiles para su finca?	Si……01 No……02 Motivar…… ……

41	¿Usted ha comprado uno a más de los productos técnicos ofrecido por Atlantic?	Si……01 No……02(pregunta 43)

42	Esta satisfecho con el producto adquirido?	Si……. 01 No……02

43	¿Cuál es el motivo principal para no haber comprado los productos técnicos?	Falta de dinero……01 No sabe utilizarlos……02 No las necesito…….03 Otro…… 15

44	¿Está pensando en comprar cualquiera de los productos en el futuro?	Si……01 No……02

3.5. Acceso a crédito

45	¿Usted pidió crédito en los años 2010/2011?	Si……01 No……02(pregunta 51)
46	¿Recibió usted crédito(s)?	Si……01 No……02
B	Si la respuesta fue no: Cuál fue la razon para no haber recibido crédito?	

47	¿Cuál fue el objetivo del crédito?	Compra de fertilizantes……01 Contratar mano de obra……02 Compra de las nuevas tecnologías ...03 Para renta de la tierra……..04 Pagar los préstamos, los impuestos……05 Compra de animales……. 06 Otro……. 15
48	¿De quién recibió usted el crédito?	Familia…… 01 Atlantic…….. 02 Banco…….. 03

		ONG…….. 04 Institución de Micro finanzas……05 Cooperativa…… 06 Amigo……. 07 Intermediario.....……08 Otro,especificar..... 15
49	¿Cuál era el plazo de que usted recibió el crédito?	Corto plazo ☐ Mediano plazo ☐ Largo plazo ☐
50	¿El crédito que le dieron fue suficiente para usted?	Si.....1 No.....2 Comentarios

3.6. Evaluación

51	¿En su opinión, cuál sería la mejor forma de mejorar su cafetal?	
52	¿Usted considera que continuará con la producción de café en el futuro?	Si……01 No……02
53	¿Usted cree que sus hijos continuarían con la producción de café?	Si……01 No……02 No tiene hijos……

Sección 4: Composición familiar y educación

Vamos a terminar con algunas preguntas sobre Usted y su hogar.

54	¿Cuántos años tiene usted?	Edad…… ☐☐
55	Sexo del informante:	Masc……01 Fem……02
56	¿Cuál es su estado civil?	Soltero/a……01 Casado/a……02 Conviviente……03 Viudo/a……04
57	Si tiene partner, cuantos años tiene?	Edad…… ☐☐
58	¿Cuántos hijos tiene que actualmente viven en su hogar?	Número…… ☐☐
59	¿Cuántos de esos hijos le ayudan en su finca?	Número…… ☐☐
60	¿Cuántas personas en total viven en la casa?	Número…… ☐☐
61	¿Cuál es el nivel de educación más alto que usted ha cumplido?	Ninguno……00 Primario……01 Secundario……02 Técnico Superior……03 Universidad……04

62	¿Cuántos miembros del hogar de edades 7 a 12 se matricularon en el presente año escolar en el sistema de educación formal?	No todos ☐ Todos, y todos en una escuela público no autónoma, centro educativo, comunitario u otro ☐ Todos, y uno en una escuela autónoma o privada ☐ No hay miembros de las edades 7 a 12 ☐ Todos, y dos o más en una escuela autónoma o privada ☐
63	¿Sabe la jefa/esposa del hogar leer y escribir?	Si, o no hay.....1 No.....2
64	¿Qué material predomina en el piso de la vivienda?	Tierra u otro ☐ Madera (tambo), embaldosado o concreto, ladrillo de barro, o ladrillo de cemento, mosaico, terraza o cerámica ☐
65	¿Con qué tipo de servicio higiénico cuenta este hogar?	No tiene ☐ Letrina ☐ Inodoro conectado a tubería de aguas negras ☐
66	¿Qué combustible utilizan usualmente para cocinar?	Leña no comprado ☐ Leña comprado ☐ Carbón, gas, electricidad, otro, no cosina ☐
67	¿Cuál es la principal fuente de agua para beber y cocinar?	Pozo ☐ Agua de lluvia ☐ Agua embotellada ☐ Agua del río/lago ☐ Agua por tubería que llega a finca ☐ Otro ☐
68	¿Tiene electricidad?	Si.....1 No.....2
69	¿Su hogar tiene acceso a:	Si / No Teléfono linea fija ☐ ☐ Celular ☐ ☐ Tel. Público entre 1 km ☐ ☐

¿Hay algún otro comentario que quisiera agregar?
Nombre de la persona entrevistada:

Appendix 4: ANOVA averages total coffee area in *manzana*

Report

Municipio	Mean	N	Std. Deviation
SJRC	3.91	23	2.151
Esquipulas	4.18	22	2.557
Rancho Grande	2.67	9	1.414
Total	3.81	54	2.258

ANOVA Table

		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	15.049	2	7.525	1.504	.232
Within Groups		255.099	51	5.002		
Total		270.148	53			

Appendix 5: Relation between education and productivity

How many quintals of coffee did you sell in total in 2009/2010?

Highest educational level	Mean	N	Std. Deviation
None	40.19	21	30.485
Primary	31.90	29	35.037
Secondary	50.00	3	45.826
Total	36.21	53	33.570

ANOVA Table

		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	1442.789	2	721.395	.631	.536
Within Groups		57159.928	50	1143.199		
Total		58602.717	52			

Appendix 6: List of interviews held

Miriam – Representative local Atlantic agency Esquipulas
06-04-2011

Humberto Antonio Sanchez – Management Cooperative Pedro Sergio Rodriguez – Rancho Grande
28-04-2011

Anabel – Management of cooperative Caja Rural – San Juan de Río Coco
03-05-2011

Manuel Rugama Rey – Management Cooperative Arca de Noel – San Juan de Río Coco
04-05-2011

Kathya Gurdian Payan – Employee local municipality office San Juan de Río Coco
05-05-2011

Wilbert – Senior technician cooperative Caja Rural – San Juan de Río Coco
05-05-2011

Miranda van der Klaauw – Coordinator Stedenband Tilburg-Matagalpa
06-09-2011 (Telephone interview)

Various conversations with:

- Mario Barboza – Program coordinator Exportadora Atlantic S.A.
- Technicians of IB initiative Exportadora Atlantic S.A.
- Technicians of Cooperative Caja Rural
- SNV staff Nicaragua