



In search of *tranquilidad*

***A research on household livelihood security in the
Northern Bolivian Amazon***

**Simone Weert
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1st supervisor: Annelies Heijmans

2nd reader: Jeroen Warner

Wageningen University

Master International Development Studies, Disaster Studies

Photo: Simone Weert

Summary in English

Household livelihoods in the Northern Bolivian Amazon have been characterized by changing environments. Small communities and in particular those which are characterized by their isolated location, face problems related to poverty and natural hazards. This study aims to identify how households secure their livelihoods in a contemporary unstable environment in two communities in the Northern Bolivian Amazon, Palacio and Molienda. The focus will be on livelihood construction, forest dweller identity, the unstable environment the household members live in and decision-making and strategies of the different households. The main conceptual framework for the study is the Livelihood Model. The five capitals (natural, human, social, physical and economic/financial) show how people construct their livelihoods making use of different strategies and resources. In this study the concepts of risk and vulnerability are added to the Model as both focus on how people are influenced by their (unstable) environment.

For over hundred years the main economic activity in the Northern Bolivian Amazon was the extraction of rubber. This activity attracted many migrants from Bolivia's eastern lowlands. During the rubber era, tappers who worked for a patron, lived on isolated locations in the forest with hardly any contact to other rubber tappers. Initially the rubber tappers were forbidden to cultivate products, food was provided by the patron in exchange for rubber. Later on, rubber tappers were able to cultivate their own products, which became the main source of food for the tappers. With the collapse of the rubber market in 1992, many former rubber tappers migrated from the numerous rubber centers and independent communities to urban areas. The households which stayed behind had to change their livelihoods and put more importance to their small agricultural fields, their *chacos*.

Subsistence agriculture is however not sufficient for the households residing nowadays in small isolated communities. Other activities such as Brazil Nut collection or engagement in wage labour prove to be important as well. Contemporary households are constantly searching for new ways to sustain their livelihoods in the forest. Here, external institutions and organizations play an important role. The different households often have the opportunity to engage in different projects ranging from income-generating activities to the construction of latrines in the community itself. External support is also provided in the form of medicine and food when households are in need/ask for help. In the research the main hazard which constitutes a problem to at least one of the communities is flooding. Other problems identified by the different households are the lack of good transportation which constrains household members to secure their livelihoods and organizational problems. A weak social cohesion is the result of the rubber tap history in which people were not used to organize themselves. Also households' lack of knowledge on different agricultural practices and products can be dedicated to the region's history in which agricultural practices have always been a secondary activity next to rubber tapping.

Households in isolated communities have found ways to secure their livelihoods. Livelihood diversification proved to be a major strategy in which households diversify income-generating activities and crops. Through these different ways, people are not only surviving in the harsh forest environment but also improving their livelihoods. Household members who now live in the forest choose to live in the forest. Otherwise they would have left just after the collapse of the rubber market. Nowadays, new households are coming into the communities and choose rural life above living in an urban area. Living in the community is more *tranquilo* for these 'new' households. This life adds to a forest dweller identity in which independency and entitlement to natural capital is important. Also household members who have lived their whole life in the communities find life in a rural area *tranquilo*, as one is able to grow its own food, has disposal of the forest with numerous trees and animals, rivers to fish, wash and swim. This all is within reach without having to pay for it, where as in the urban area one has to pay for everything, according to household members in Palacio and Molienda.

Resumen en Español

Los modos de vida de los campesinos en el norte de la Amazonía Boliviana han quedado marcando por cambios en el medio ambiente. Pequeñas comunidades aisladas, afrontan problemas relacionando con pobreza y desastres naturales. Este estudio investiga la pregunta como las familias campesinas en dos comunidades en el norte de la Amazonía Boliviana, Palacio y Molienda, aseguran sus modos de vida en el presente medio ambiente inestable. El enfoque será en la construcción del modo de vida, la identidad de la gente en el bosque, el medio ambiente inestable en que las familias campesinas viven y las diferentes decisiones y estrategias de las diferentes familias. El concepto 'modo de vida' constituye el marco para análisis. Los cinco capitales (natural, humano, social, físico y económico/financiero) muestran como la gente construir sus modos de vida usando diferentes estrategias y recursos. En este estudio son añadido al modelo del 'modos de vida' los conceptos riesgo y vulnerabilidad. Ambos conceptos enfocar en la manera la gente están influyendo por su medio ambiente (inestable).

Más que cien años la actividad principal en el norte de la Amazonía Boliviana era la extracción de la goma. Esta actividad atraía muchos migrantes de las tierras bajas en el este de la Bolivia. Durante la época de la goma, sirigueros quien trabajaban por un patrón, vivían en ubicaciones aislamientos en el bosque, por poco contacto con otros sirigueros. En inicio los sirigueros estaban prohibido para cultivar productos, la alimentación estaba dado por el patrón en cambio por la goma. Más tarde, los sirigueros podían cultivar sus propios productos, el fuente principal de su alimentación. Después el derrumbe del mercado goma en 1992, muchos antiguos sirigueros migraban de sus 'centros gomeros' y comunidades independientes a las áreas urbanas. Las familias que quedaban en la región rural tenían que cambiar su modo de vida y daban más importancia a su pequeño terreno, su chaco.

Agricultura para el autoabastecimiento no es suficiente para las familias campesinas que viven hoy en día en pequeñas comunidades en un ubicación aislamiento. Otras actividades, como la extracción de castaña o trabajo por jornal también son importantes. Las familias hoy en día están buscando nuevas maneras para sostener sus modos de vida en el bosque. Instituciones y organizaciones externos juegan un papel importante. Las diferentes familias tienen frecuentemente la oportunidad en participar en diferentes proyectos, por ejemplo en ganar ingresos o en la construcción de las letrinas en su propio comunidad. También medicina y alimentos es parte del apoyo externo cuando las familias necesitan estas cosas/piden estas cosas. En el estudio, el desastre principal es inundación, que es un problema para por lo menos uno de las comunidades. Otro problema identificado por las diferentes familias es la falta del transporte adecuado que limita los miembros de las familias para asegurar sus modos de vida. También la falta de organización en las comunidades en un problema. Un cohesión social débil es el resultado de la historia en que los sirigueros no eran acostumbrado a organizar sí mismos. Además la falta de conocimiento de las diferentes familias en la área de agricultura se puede dedicar a la historia del norte de la Amazonía Boliviana en que las prácticas agrícolas eran siempre una actividad secundaria después la extracción de la goma.

La familias campesinas en comunidades aisladas han encontrado diferentes maneras para asegurar su modo de vida. La diversificación del modo de vida es la estrategia principal en que las familias diversifican diferentes cultivos y actividades para ganar un ingreso. A través estas diferentes maneras, la gente no solo están sobreviviendo en un ambiente forestal duro, pero también están mejorando su modo de vida. Miembros de las diferentes familias que viven hoy en día en el bosque, eligen para vivir en el bosque. Si no, estas familias ya salieron después el derrumbe del mercado goma. Hoy en día, nuevas familias están entrando en las comunidades y les eligen una vida rural sobre vivir en una área urbano. Vivir en la comunidad es más tranquilo para estas 'nuevas familias'. Esta vida añade a la identidad de la gente en el bosque en que independencia y disposición de recursos naturales es importante. También miembros de las familias que vivían todo su vida en las comunidades piensan que la vida en la área rural es más tranquila, porque se puede cultivar sus propios productos, se puede usar el bosque con una variedad de arboles y animales, hay ríos para pescar, lavar(se) y bañarse. Todo esto es en el alcance de las familias, sin que les tienen que pagar.

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Simone Weert, Utrecht, February 2009

Glossary¹

<i>almendra</i>	Seeds of the <i>almendro</i> or Brazil nut tree (<i>Bertholletia excelsa</i>); synonymous with <i>castaña</i>
<i>barraca</i>	Former rubber estate that today forms a unit for forest extraction under the control of a <i>patrón</i>
<i>barraquero</i>	Someone who has control over the <i>barraca</i> , also <i>patrón</i>
<i>bajío</i>	Floodplain along river banks that becomes inundated during the rainy season
<i>barrio</i>	Neighbourhood in an urban center
<i>beneficiadora</i>	Processing plant for Brazil nuts and, to a lesser extent, palm heart
<i>Camba</i>	Designation for an inhabitant of the Bolivian lowlands, as opposed to <i>Kolla</i>
<i>campesino</i>	Self-designation of the inhabitant of an independent community; often translated as 'peasant' but here referring to 'agro-extractive small producer'
<i>campo</i>	rural area, the countryside
<i>castaña</i>	Seeds of the Brazil nut tree (<i>Bertholletia excelsa</i>); synonymous with <i>almendra</i>
<i>castañar</i>	To collect the castañas, almendras, Brazil Nuts
<i>chaco</i>	Agricultural field of typically 1-2 hectares, cleared through slash-and-burn
<i>chaquear</i>	Preparing a new <i>chaco</i> between July and August
<i>chicha</i>	Fermented beverage made of maize or manioc
<i>comunario</i>	Inhabitant of a community
<i>comunidades libres</i>	Independent community
<i>El Niño</i>	Climate variability, occurs every three to seven years which has differing impacts on weather all around the world
<i>estrada</i>	Trail with on average 100 to 200 rubber trees that the <i>siringuero</i> used to follow for extracting rubber, and nowadays used for the collection of Brazil nuts
<i>finca</i>	Large landholding
<i>granja</i>	Farm focusing at cash crop production
<i>granjero</i>	Often urban based owner of a <i>granja</i>
<i>habilito</i>	Credit system established by the rubber industry, supplying in advance utensils, food products or cash in exchange for the future supply of forest products
<i>hacienda</i>	An estate on which productive activities were executed such as a plantation
<i>huerta</i>	Home garden with vegetables and fruit trees
<i>indígena</i>	Indigenous
<i>Kolla</i>	Designation of Highland Bolivians, mainly of <i>Aymara</i> or <i>Quechua</i> origin
<i>machismo</i>	Sturdy, masculine behavior typical for male dominant society; a stereotype construction of how a good man ought to be
<i>marianismo</i>	Pious, feminine behavior; counterpart of <i>machismo</i> representing women's moral and spiritual superiority in society; a stereotype construction of how a good woman ought to be
<i>Mestizo</i>	Person of mixed Amerindian and European ancestry
<i>patrón</i>	Formerly rubber baron and today owner of a <i>barraca</i>
<i>Pandino</i>	Person originating from the Pando province
<i>payol</i>	Platform with elevated floor and palm thatch roof for storage of Brazil nuts
<i>prefecto</i>	Head of department, prefect, also governor
<i>prefectura</i>	Indicates the office, seat and territorial circumscription of a <i>prefecto</i> .

¹ Largely based on Henkemans 2001

<i>quebradora</i>	Female worker in a <i>beneficiadora</i> cracking the Brazil nut kernels manually with nut-crackers
<i>reggaeton</i>	Distinct music from Latin-America based on rap, reggae and dance
<i>saneamiento</i>	Addressing of disputed land claims and clarify property rights
<i>sede</i>	Building build by <i>prefectura</i> in hazard prone communities, serves as extra house, meeting location and shelter
<i>siringa</i>	Rubber tree (<i>Hevea brasiliensis</i>)
<i>siringuero</i>	Rubber tapper
<i>surazno</i>	Cold wind from the south in the dry season
<i>tranquilidad</i>	A state of mind: a state of feeling at ease; peacefulness
<i>zafra</i>	Harvest of Brazil Nuts; in northern Bolivia harvesting period for Brazil nuts lasting from December to March

Abbreviations and acronyms

CIPCA	Centro de Investigación y Promoción del Campesinado
DIPECHO	Disaster Preparedness European Commission Humanitarian Aid department
INE	Instituto Nacional de Estadística
IPCC	Intergovernmental Panel on Climate Change
NGO	Non Governmental Organisation
OTB	Organizaciones Territoriales de Base
PAT	Programa Amazónico Trinacional
PODEMOS	Poder Democrático y Social
SLA	Sustainable Livelihoods Approach
UNDRO	United Nations Disaster Relief Organization
ZOFRA	Zona Franca

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1. Introduction

'With great expectations I arrived in Cobija today. Too bad I couldn't see anything of the promising jungle from the plane. Of course Aerosur was delayed and it was already dark at the moment I flew over the Northern Bolivian Amazon. When I got off the airplane the hot wind struck me: wow, I am in the tropics! what a difference from the coldness of La Paz I experienced just an hour before! Driving from the airport to the hotel I saw many families on the streets, enjoying their beers, dinners from food stalls or just hanging out. It seemed that daily lives take place outside in the evenings. Erika, from CARE who picked me up, however emphasized that I never should eat something 'from the street'. The most incredible I saw were the amount of motors! It seems that everyone is having one and driving without helmet. I think I am going to enjoy the relaxed lifestyle here!'

-Diary, March 25, 2008



Figure 1 Bolivia and the Northern Bolivian Amazon (above blue line)

1.1 Introduction to the research

The Northern Bolivian Amazon is located in the northernmost part of Bolivia, bordering Peru and Brazil (figure 1). It is a semi-evergreen tropical forest region counting on 100,000 square kilometres. Although rich in natural resources, the Northern Bolivian Amazon is a poor region in Bolivia. About 160,000 people inhabit the area, five percent is of indigenous descent, leaving the majority *mestizos*², who are referred to as *Cambas*. Two third of the population in the Northern Bolivian Amazon lives in the three principal towns; Cobija, Riberalta and Guayaramerín. The remaining one third lives in the rural areas; as peasants in one of the 400 independent communities or as labourers for a patron in one of the 300 forest concessions (*barracas*) where Brazil Nuts³ are gathered (Henkemans 2001:1).

Many people of the older generation who now engage in semi-subsistence agriculture and Brazil Nut collection used to work as *siringueros*, rubber tappers. The Northern Bolivian Amazon is heavily marked by rubber production since 1900, when many people from the eastern parts of Bolivia migrated to the area. The rubber production was characterized by a boom-to-bust economy, knowing high and low peaks. The rubber tappers were able to maintain their livelihood based on rubber in the sometimes harsh conditions of the forest and/or the patron for a century. When in 1992 the rubber market collapsed it was however no longer economic viable to continue. Many rubber tappers left the rural areas which resulted in a strong increase of the urban population (Stoian and Henkemans 2000). The boom-to-bust rubber economy has been crucial in shaping the current demographic and socio-economic situation of the region; a hierarchical society where social institutions are not (yet) strengthened and where family bonds are more important than formal relations (Bojanic 2001: 46; Henkemans 2001:2).

With the collapse of the rubber market, people saw their main economic activity disappear. People in communities now make a living out of semi-subsistence agriculture and the collection of Brazil Nuts. There are however not many opportunities to generate an income. Especially not for people in isolated communities. People thus have to leave the community to engage in wage labour in urban areas (Henkemans 2001). According to the Bolivian Index of Unsatisfied Basic Needs, around 70 percent of the population was poor in 2001 (INE 2002). To a great extent this is due to the lack of roads effectively linking the area to the rest of the country. Many products come from neighbouring Brazil, making them too expensive for the regular population.

An often heard complaint by people in the Northern Bolivian Amazon is that the current government, but also past governments do not focus enough on the area, resulting in the bad integration of the area into the economic and political life of the country. Recently, the largest part of the Northern Bolivian Amazon, the department of Pando, has joined forces together with the other tropical departments, Beni and Santa Cruz (along with Tarija and Chuquisaca)⁴ to demand an increasing autonomy for the region. In 2008 many uprisings against Bolivia's president Evo Morales in these regions, caused political instability; road blocks and even killings in the department of Pando on September 11. It was said that peasants of two provinces which were in favour of Morales, wanted to demonstrate against the governor of Pando, Leopoldo Fernández⁵ in Cobija. Along the way in Porvenir they were halted and hit men⁶ started to shoot. Eventually twenty people were killed in the civil unrest in Pando and many more disappeared. A state of siege was declared for three months in the department from September 12. Tensions between pro-Evo Morales (primarily highland) peasants and Morales opponents are higher than ever, causing many struggles and irritations from both sides.

² Of mixed European and Indigenous descent.

³ Edible nuts (*Bertholletia excelsa*) from the Brazil Nut tree, in Spanish: *almendra or castaña*

⁴ Together these departments are called 'Media Luna' (Half Moon).

⁵ In Bolivia a governor is called a Prefect, Fernández is member of the right-of center pro-business political party PODEMOS ('Poder Democrático y Social') (in English, Social and Democratic Power), but the word also means "We can".

⁶ Presumably arranged by Leopoldo Fernández

Next to the geographic isolation and recent political unrest, the Northern Bolivian Amazon is characterized by natural hazards which affect poor people the hardest. As a region characterised by a wet and dry season, it knows its problems accompanied with this climate. Just after the wet season in March and April, water levels of the rivers have risen, causing often floods. In light of climate change, which can have devastating effects on climate variability such as El Niño, flooding can become more severe or frequent (Brooks 2003; van 2006). In areas where people are heavily dependent on rivers for transportation, irrigation of crops etcetera, a flood can have devastating effects for their livelihoods. Due to climate change, uncertainty about the future of these forest livelihoods is rising. Not only in the case of floods however, also for the continuing threat of bushfires in the dry season. Bushfires may pose a threat to peoples livelihoods as well, as in one moment, an agricultural field or a house can be burned down, leaving nothing but despair.

In its aim to fight global poverty, CARE has implemented programmes and a projects in the Northern Bolivian Amazon to tackle problems among the rural poor. At the moment, one programme focuses on income-generating activities on a sustainable manner, not only for the rural poor, also for the environment. A DIPECHO project which is executed by CARE focuses on risk reduction in communities which are often affected by floods and bushfires. This research is done with the purpose to help CARE staff in gaining more knowledge on the communities they work in. I hope to add to this in studying the livelihoods of rural poor households in two communities in the Northern Bolivian Amazon. Not only what activities do households engage in during their daily life are studied, also why do they make certain decisions regarding income-generating activities. What is the relation between hazards and people's livelihood security? How do households cope or adapt to the risk of floods and bushfires and to what extent do people enjoy living in the rural area? These questions and many others will be answered in this research. I will now continue with the elaboration of the research and sub questions.

1.2 Research questions

Main research question which is central in the research is:

How do households in isolated communities in the Northern Bolivian Amazon maintain livelihood security in an unstable environment?

To answer the main question, the following sub questions are formulated:

- How do households construct their livelihood in two isolated communities in the Northern Bolivia Amazon?
- What do the households perceive as major risks to livelihood security?
- What strategies do households use in securing their livelihoods?

Households refer to the unit of interaction of which livelihoods will be studied. Usually a household consists of one family living in one house. Two **isolated communities** are studied. A community is isolated when it does not have a proper access to transportation, i.e. it is not situated along a main road, but further off, lacking an asphalted road. The **Northern Bolivian Amazon** refers to the area where the fieldwork is conducted, this is the northernmost part of Bolivia, which belongs to the Amazon. **Livelihood** is the central theme in the research as refers to what people have, do and where they can make use of. **Livelihood security** thus focuses on protection of capabilities, assets and activities required for a means of living (Chambers and Conway 1991: 1). Finally an environment refers to the context in which people live. As presented in the introduction (1.1) an **unstable environment** refers to political, cultural and economic problems as well as to shocks from natural hazards, such as floods of bushfires.

A thorough explanation of the different concepts used in the above questions will be given in the theoretical background (chapter two).

1.3 Structure of the research

The **second chapter** of the research elaborates on the theoretical framework for the analysis of household livelihoods, focused on the forest. CARE's livelihood model will be presented, followed by a short explanation of how it can be looked at in practice, focused on households. Furthermore, an overview will be given on the five capitals in the forest, followed by an elaboration of livelihood strategies. Then the concepts of risk, uncertainty and vulnerability will be presented and important factors influencing livelihood security identified. Research methodology with its methodological principals, selection of communities and households, data collection and data analysis is presented in **chapter three**. This chapter includes data on when the research was conducted and assumptions, limitations and opportunities of the research added with personal notes from the fieldwork diary.

In **chapter four**, an introduction to the area, that is the Northern Bolivian Amazon, will be given. This chapter includes sections on history, demography, economy, infrastructure, climate, soils and vegetation and important laws. Also current trends and problems are touched upon. Following the introduction to the area, an introduction to the communities of Palacio and Molienda will be given in the **fifth chapter**. Here its history, leadership, supporting organisations and overview of its inhabitants and their activities will be presented.

The chapters six, seven, eight and nine provide the answers on the sub questions mentioned above. In **chapter six**, livelihood construction in the forest will be presented, focusing on the five capitals in the two communities. In **chapter seven** forest dweller identity construction is presented using the concepts of *Camba* identity and *tranquilidad*. An overview of living in an unstable environment will be given in **chapter eight**, here the several influencing factors are identified. **Chapter nine** will then focus on decision-making and livelihood strategies. Here the different decisions and strategies refer to the problems mentioned in chapter eight.

The conclusion of the research is presented in **chapter ten**, here the main research question will be answered. Chapter ten is followed by **chapter eleven**, where a short discussion on the literature and the research practice will be elaborated upon. In **chapter eleven** I will personally reflect on the research; I will return to assumptions made in advance (3.5.1), lessons learned will be presented and as well, personal development is evaluated upon.

2. Theoretical background

This chapter focuses on the theoretical background of the research. It offers a framework for analysis of the livelihood and people's ability to develop sustainable livelihood. As the research takes place in the Northern Bolivian Amazon, I will focus on (tropical) forest livelihoods. In the first section an elaboration on the Sustainable Livelihoods Approach (SLA) will be made, followed by a section on households, the unit of decision-making for livelihoods. In section 2.3 the different capitals will be elaborated upon, specially focused on forest livelihoods. In section 2.4 different livelihood strategies are discussed in which the concepts of coping and adaptation are elaborated upon, as well as risk, uncertainty and vulnerability. In section 2.5 influential factors of livelihood will be presented.

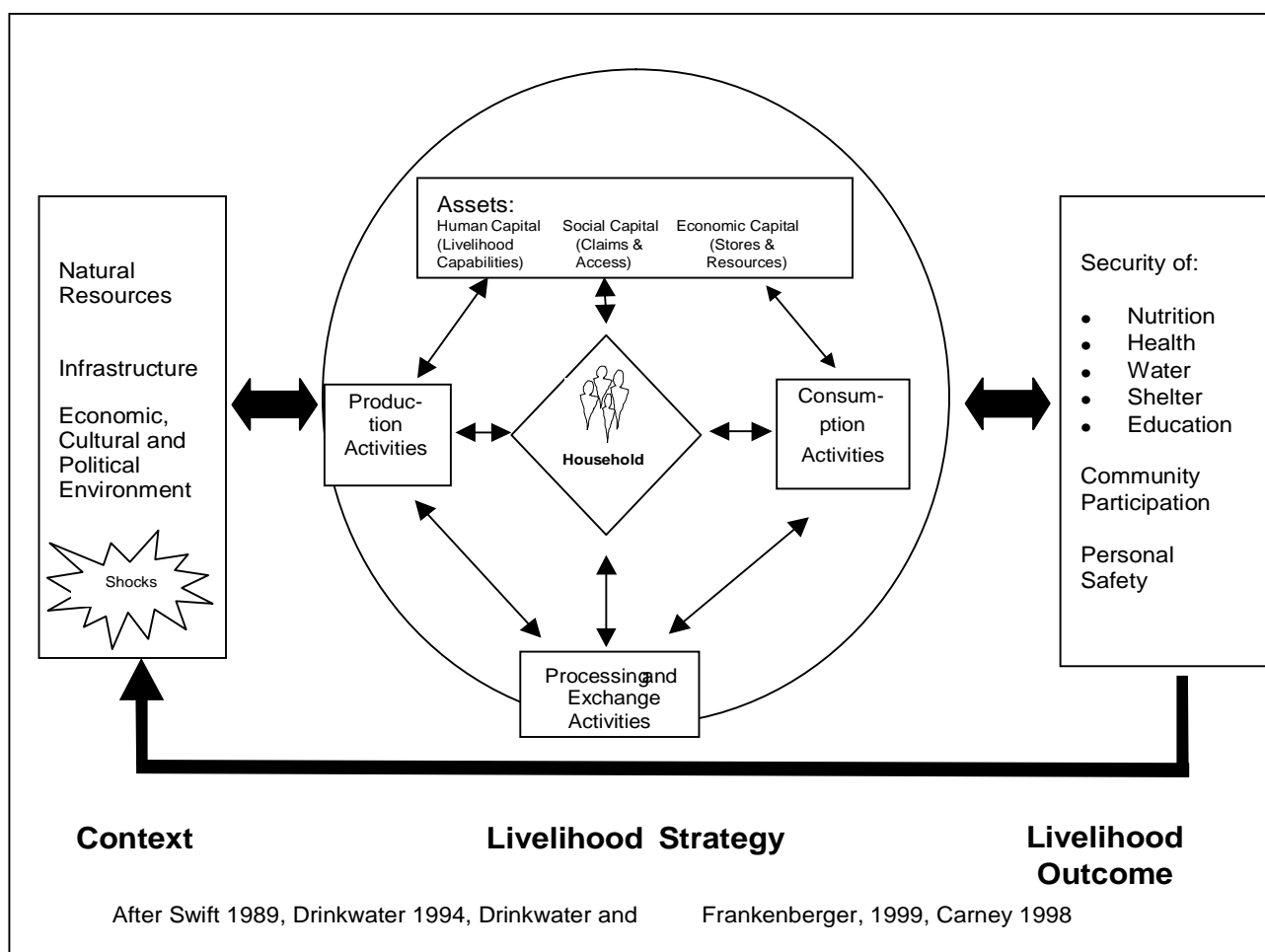


Figure 2 CARE's Livelihood Model

2.1 Sustainable livelihood approach

Livelihood is a complex concept, it is used in different ways and can constantly be reformulated. The definition which is most used by policy-makers is:

'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 in the long and short term' (Chambers and Conway 1991).

The above definition shows first what a livelihood is: *capabilities, assets (stores, resources, claims and access) and activities required for a means of living*. Capabilities are certain characteristics that people possess such as education, skills, health and psychological orientation. Assets refer to tangible (stores and resources) and intangible (claims and access) possessions. Activities required for a means of living refer to all that people do to sustain their livelihood, such as wage-labor, agriculture etcetera. The definition of Chambers and Conway refers to what a sustainable livelihood is; one that *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*. It is therefore important that the present day generation provides the material for future generations to have the same kind of livelihoods, or even to have improved livelihoods.

The livelihood model is showed schematically in CARE's Livelihood Model (Drinkwater and Rusinow 1999) in figure 2. Here, context, livelihood strategy and livelihood outcome are showed as three interrelated entities. The focus of attention of the research is on the center part, namely what kind of livelihoods strategies are executed in order to have the outcome of a sustainable livelihood within a context of various shocks and structural problems. At the center of the livelihood strategy is the household, the point of attention when studying livelihoods. In the following section, livelihoods will be studied into more detail; why is the household taken as focal point in studying livelihoods and how are livelihoods formed?

2.2 Livelihoods in practice

Schematically the idea of livelihoods shows a rather simple fact. Within a given context people pursue certain livelihoods strategies to aim for livelihood sustainability. The household is put at the centre, but why is the household used as a focal point for studying livelihoods, why not a whole community or just one individual? This will be answered in section 2.2.1. To show that the concept of livelihoods is far from simple, section 2.2.2 shows that there are various factors which determine the kind of livelihood a household has. More over there are many different livelihoods and households can change their livelihoods over time.

2.2.1 Household livelihoods

As the livelihood approach is human-centered it can be studied on different levels as long as it puts humans at the center. In my research I will study the livelihoods on the level of the household. Before turning to the reason for this level, I will first elaborate on the problematic concept of households and the limitations of the use of it.

Household is a problematic concept, it does not always, comprise a nuclear family, but can consist of aunts, grandparents and even neighbours or friends. In many indigenous groups, people may live together not according to the 'western nuclear family model' and may own assets collectively. In my research I will define households as economic decision-making units in which people share labor and other inputs and consume meals together under one roof (Wisner et al. 2004: 98). The study of livelihoods on the household level has next to the fact that the concept is problematic, some limitations. When only focusing on households, researchers may look too narrow at livelihoods, as concepts of networks, multi-locality and multi-spatiality are easily overlooked. One has to bear in mind that continuing processes on the micro and macro level influence households. Livelihood units are flexible, according to Kaag (2004: 68) it would thus be

'more useful to start talking and listening to people to find out their own definition of the problems they encounter, what their relevant social frameworks are and to build subsequent research on the insights thus gained'.

Aware of the limitations, I will still make use of the household as the unit for interaction to study livelihoods, but as an entry point. I have to define a level of interaction in advance as I will not be long enough in the field to present the open attitude Kaag described above. I have thus chosen for households as firstly, the study of whole communities would be problematic, communities are never homogeneous, it is therefore necessary to study on a more micro level. Of course members of a household are very different and intra-household dynamics such as gender and generational relations should also taken into account. Different members of the household may have different vulnerabilities, for example women and elderly in a crisis (Drinkwater & Rusinow 1999). Furthermore, livelihoods can be determined by assets, which can be clearly examined on the household level such as land and livestock. On the individual level this would be more difficult, as assets are often shared within a family. Thirdly, when studying different households, it is easy to compare between the poor and rich households and examine why certain households are more able to secure their livelihoods than others. I will however take Kaags position into account and bear in mind that households are not the only units of interaction and that networks residing outside households are also important, in fact some decision-making on assets will probably occur on a more collective level.

2.2.2 Determinants and types of livelihoods

As livelihoods can be studied on different levels, different kinds of livelihoods can also be identified and there are different determinants for livelihoods. People can be born into a specific type of livelihood, certain features of a livelihood are already predetermined at one's birth. For example socially defined class roles such as the caste system in India with assigned jobs and gender roles as determinants of certain livelihood activities. Individuals or households can also be inheritants of certain livelihoods, such as pastoralists or fishermen. Through various strategies people can also change their livelihood during their lifetime, for example through education and migration. People who are better off have usually a wider choice in choosing livelihoods due to economic growth, than those who are worse off (Chambers and Conway 1991).

Livelihoods can be made up of a range of on-farm and off-farm activities that together provide a variety of procurement strategies for food and cash. Thus, each household can have several possible sources of entitlement which constitute its livelihood. Examples of different types of livelihoods are farming households, small traders, fishermen and pastoralists. Not every household has only one type of livelihood, households involved in farming, may also gain an income out of off-farm activities such as making and selling clothes. Important are also the seasonal-related activities which constitute changes in peoples livelihood during the year. Examples include seasonal migration. It is all about the decisions people make regarding their assets, capabilities and income generating activities that constitute their livelihoods. In section 2.4.1 I will elaborate more on the concept of decision-making within households.

The focus of the research is on the livelihoods of forest dwellers or forest-reliant peasants. There are different kind of forest dwellers, defined by people's proximity to the forest. On the one side are the people who live within the forest and are dependent on the forest for their resources and services. On the other side are those that live far away from the forest but generate their income through transport and processing of forest products. The research focuses on the forest households which are farming communities drawing upon forests. In the past many of these households used to be forest-extractivists but are now engaged in small scale extractivism and semi-subsistence farming (see section 4.2 on history of the Northern Bolivian Amazon). These communities live close or in the forest and have few other livelihood opportunities than forest extraction and semi-subsistence farming (Henkemans 2001: 32). In the following section an overview will be given on different capitals (assets) which are used in the livelihoods of forest dwellers.

2.3 Livelihood capitals in the forest

Chambers and Conway (1991) refer in their definition on livelihoods to certain *capabilities* and *assets*. Assets refer to natural, human, social, physical and financial/economic capital. Human capital can also be seen as the (livelihood) capabilities (see CARE's livelihood model, figure 2). The five capitals thus refer to what people have and where they can make use of in their livelihood strategies. The capitals do not only refer to tangible assets, but also to skills, claims and access to different services. Obviously, forest households make an extensive use of their environment, the forest, which is described in the following section on natural capital.

2.3.1 Natural capital

Natural capital (land, water, biodiversity, forests, wildlife etcetera) is often the most important capital for people who live in rural areas, as they often lack a buffer in the form of physical and financial capital. According to Henkemans (2001: 20) *'the access to these natural resources forms for poor households a primary condition for livelihood next to a "healthy" ecology'*. A forest provides households in various renewable resources such as subsistence products and commodities for income generation. Wood can be used for the construction of houses and as fuel product. To a large extent food is derived from the forest (plants, animals) and people's daily activities take place in the forest; from forest-extraction activities to hunting (idem). Moreover, tropical forests provide the households with fertile agricultural soil and forest products and the forest can function as a safety net, as forest products such as timber (trees) can be maintained and stored and used or sold in times of need. The forest not only serves as a resource base for subsistence products or income generation, it is also where people derive their identity from. Living in the forest forces people to have an independent way of living (see also section 2.3.3 and chapter seven).

Tropical forests make it able for households to have a livelihood which is less dependent on income-generating activities in urban areas. Tropical forests can however also form an obstacle for livelihood development. First the tropical forest can be a tough environment with its fast growing weeds and dangerous plants, savage animals and insects which provoke diseases. Moreover, bush fires may threaten humans, animals and trees. Furthermore, when people are highly dependent on their natural environment, changes such as degradation, climate change and natural hazards in this environment can provoke serious threats to their livelihood (idem).

2.3.2 Human capital

Natural capital refers to what environmental resources people make use of or are able to make use of. The capabilities people have obtained during their lifetime are referred to as human capital. It thus refers to the skills, knowledge, ability to labour and good health important to the ability to pursue livelihood activities. For individual households it can refer to the quantity (number of productive individuals) and the quality (what these individuals know and how hard they are able to work) of human resources. Knowledge and skills can be learned through (formal) education, experience and non-formal learning (IISD 2003). Human capital can therefore be seen as among the main assets that shape a livelihood. Households in the forest often rely on family labor because of their isolated and remote location. Within a family, children, males and females have often specific productive and reproductive rights and possibilities. Besides, because of the isolated location and lack of heavy machinery, people are forced to contribute to communal chores.

When human capital is so important in shaping livelihoods, lack of a certain human capital can be a big threat to livelihoods security. Illness of one or more households can have devastating effects on livelihoods. Good health and nutrition are key assets for households. According to Bird (2007: vii) *'health shocks have been identified as a key driver of downward mobility due to the lost labour of the individual and their carer, which alters household dependency ratio, and the costs of seeking treatment. Illnesses that are both severe and chronic can be particularly damaging to household consumption and well-being. Chronic and terminal illnesses impose considerable distress on families which often disintegrate as social and economic units'*. Furthermore high age can

prevent people from sustaining their livelihood, as especially in the forest and in agricultural activities, a high demand of one's physical strength and condition is demanded.

Another important factor in human capital is the notion of gender. Gender inequality has an impact on decision-making in households. In Latin-American countries, male-female relations are to a large extent structured by *machismo* expressions. Machismo is a rather vague concept which can refer to negative characteristics such as sexism, chauvinism, but also to violent, rude, womanizing and prone to alcoholism. It however can also refer to more positive characteristics of men such as nurturance, protection of the family and its honour, dignity and hard work (Arciniega et al. 2008: 19-20). The opposite of machismo is *marianismo* which refers to woman's spiritual superiority (Steenbeek 1986). In the Northern Bolivian Amazon, during the past rubber era, women were often homebound, while men worked in rubber tapping. With the collapse of the rubber market, gender relations have changed, as female labour was needed in the many *quebradoras* (Henkemans 2001: 213). Furthermore, in many communities, women worked side by side with their husband on their *chacos* (small agricultural fields).

2.3.3 Social capital

People can draw upon a network of social relationships to pursue their livelihoods. This includes personal relationships such as kinship, neighbours, friendship, membership of groups and organisations but also access to wider institutions of society that are important to the operation of livelihood activities. Social bonds are important for sustaining livelihoods as credit, land and information can be obtained through relationships, but also people's wellbeing, sense of identity, honour and social status are advanced through social networks. In situations of stress people can rely on social capital. High levels of social cohesion demarcate a group and its resource base and thus excludes outsiders who are not committed to the agreements. Furthermore, social groups are more likely to be recognized as a party whose interests have to be taken into account by outsiders (Henkemans 2001: 24, 34).

In relation to food, Sen (1981 in Allen and Thomas 2000: 60) introduced the *entitlement* approach in which people gain command (entitlement) over food through social relationships. Entitlement refers to relationships established by trade, direct production or sale or labour power. The owned assets and personal capacities which an individual or household can use to establish entitlement to food is referred to as *endowment*. As semi-subsistence farming is important for households in rural areas in the Northern Bolivian Amazon, relationships around this type of activity will be important in securing one's livelihood.

Identity forms a not to be underestimated part of social capital. Households construct their livelihood based on the five capitals mentioned here. For major part these capitals influence the identity of individuals and households. Households in the forest thus derive their identity from their livelihoods. Identity is a fluid concept and may change over time, it is a continuing 'work in process'. In this constructivist approach, '*identity is not imposed on individuals by socialization (...) but they actively construct their identities within a given social framework (...)*' (Räthzel 1994: 82 in Ghorashi 2003: 28). Identity as a process of change is a dynamic process, a changing view of the self and other, in a constant manner new meanings and forms are acquired through interactions with social contexts and within historical moments (Ghorashi 2003: 27). It is important that identities are thus multiple and dynamic, someone can be a forest dweller, also a community leader and belong to an indigenous tribe and also feel like a real Bolivian, but when migrating to the city can feel suddenly now longer a real Bolivian but a poor wage-labourer.

2.3.4 Physical capital

Forest households mainly rely on natural capital for their livelihoods. In order to pursue these livelihoods, people make use of physical capital such as basic infrastructure, housing, potable water and energy, also tools, machinery, food stock and livestock are classified as physical capital. Physical capital includes that what people own themselves and also to what they have access to (roads, irrigation systems, telephone networks, etcetera) provided by the government of the private sector (IISD 2003). Tropical forest areas can provide in the development of physical capital. Natural capital such as trees and land can easily be transformed into housing and food

crops. On the other hand, other types of physical capital such as electricity, tools, infrastructure, transport, healthcare and education are often underdeveloped in forest areas (Henkemans 2001: 21).

2.3.5 Financial/Economic capital

Financial resources (savings, credit supplies, remittances⁷, insurance or social security payments) can improve households' livelihoods or can provide them with different livelihood options. In rural or remote forest areas however, the availability of financial capital is low. People who live in the forest often have small amounts of savings. According to Henkemans (2001: 23) this is because *'the cash economy rarely reaches remote forest areas and most of the cash money is spent directly'*. People however have savings, but in the form of food stock, valuable trees or domestic animals. Only through remittances and the commercialization of labor and production into cash people can obtain financial capital. In times of need, people from remote forest areas thus often turn to wage labor to sustain their livelihood. Important to note is that goods, not only have an economic value, but also a symbolic value (Bourdieu 1990). And that interactions between people around these goods are characterized by symbolism. Symbolic capital are the resources available to an individual or household on the basis of honor, prestige or recognition.

2.4 Livelihood strategies

I described the centre part of CARE's livelihood model; the household as focal point with its *capabilities, assets and activities for making a living* defining peoples livelihoods, presented in the five capitals. I now will zoom out a bit more and focus on the type of strategies households pursue to sustain their livelihoods. First I will elaborate on different livelihood activities and decision-making within the household (2.4.1). Then I will focus on two specific kind of household strategies coping mechanisms (2.4.2) and adaptation (2.4.3).

2.4.1 Livelihood activities and decision making

Livelihood activities refer to what members of households do to earn and make a living. These activities include decisions on the use of assets and other resources the households possesses, as well as the utilization of human capital and accessing of social capital (i.e. social networks or safety nets) in times of need. Livelihood activities of the poor are often quite diverse. Households often use their capabilities, skills, and knowhow to diversify income sources and off-set risks. Livelihood activities often refer to strategies, as people may make decisions and take action with a predefined goal, rationale or planning. They may grow certain crops because they know they can get a good price for it, or migrate temporarily to the city to earn more money. In insecure conditions however, people may not always be able to make strategic decisions based on rationale, and well in advance as they do not know what will happen in the future. The notion of pathways is important here as it refers to *'the strategies arising out of decisions actors, households and groups of people take to deal with risk in an unstable environment'* (De Bruijn, 2005; Van Dijk, personal communication⁸; Kaag 2004: 67-68)

The economic and social means to secure household livelihoods are not simply 'handed down' on them, households are not passive recipients of a profile of opportunities. Household members' pattern of access is determined by their agency; decision-making under externally created constraints and struggles over resources and co-operation. They thus have agency, which means that household members are able to make decisions regarding their livelihoods. Households actively shape their lives in a particular context through tangible and intangible resources (Kaag 2004: 53). Structural processes of this particular context need however to be taken into account as they shape people's decision-making and may add up to social exclusion and poverty. The concept of *habitus* (Bourdieu 1990) may help to explain how people's decisions are shaped by a social framework:

⁷ transfer of money from family members who engage in wage labour in another area.

⁸ March 4, 2008.

'The habitus (...) is the active presence of the whole past of which it is the product. As such, it is what gives practices their relative autonomy with respect to external determinations of the immediate present. This autonomy is that of the past, enacted and acting, which, functioning, as accumulated capital, produces history, on the basis of history and so ensures the permanence in change that makes the individual agent a world within the world' (Bourdieu 1990: 56).

Actors unconsciously develop a certain *habitus* which is a product of history and the present. This 'embodied history' shapes household's decision-making.

It is important to study people's capacity to cope and adapt, because without a proper understanding, policy makers are more likely to make stereotyped responses in preventive measures of vulnerability reduction and relief work. Furthermore, misdirected relief efforts may undermine rather than assist affected people in their efforts to help themselves towards recovery (Wisner et al. 2004: 112). Two types of livelihood 'strategies' can be identified; coping strategies which refer to short-term responses and adaptive measures which are taken over the long run. Both activities are based on decision-making, sometimes in uncertain conditions. Together they constitute the pathways which people take in trying to secure their livelihoods.

2.4.2 Coping strategies

Coping strategies refer to how people deal with the adverse impacts of hazards and other problems. These short-term responses are often related to a particular hazard and are taken within the limits of people's assets and capabilities. I refer to them as strategies, because people do what they think is best at that moment, with the goal to secure their livelihood at that moment, but their actions however may constitute livelihood insecurity over the long run. During a shock, tangible assets such as livestock, crops, land, houses, tools may be destroyed or lost. Also physical assets where people are entitled to may be destroyed, these can include infrastructure, water irrigation etcetera. Intangible assets may also be destroyed, for example because of illness or death. People thus command to their assets to cope with a shock.

There are many examples of coping strategies, when people lose their livestock or land, they may set claims on their social network to obtain food or other resources. To secure their livelihoods, households may sell assets such as jewellery or other valuable items. Important to note is that coping strategies not always refer to 'positive' activities, as people may also get involved in criminality or prostitution. Here it is important to distinguish between reversible and irreversible strategies, Coping often refers to reversible strategies, people will sell some of their assets and are then again able to secure their livelihoods. Irreversible strategies may change people's livelihoods and in the case of criminality or prostitution may increase livelihood insecurity over the long run.

People may know a hazard will occur in the future, because it has happened in the past, so they often set up ways of coping with it. Such coping strategies depend on the assumption that the hazard itself will follow a familiar pattern and that people's actions earlier on will be a reasonable guide for similar events (Wisner et al 2004: 115). In light of climate change however, the intensity and magnitude of future hazards is becoming more unpredictable, so people's coping strategies may not function sufficiently anymore to future hazardous events. People may not be able to cope with the hazard anymore and are thus not able to secure their livelihood. I will now turn to the concept of adaptation which is used frequently in the literature especially focused on climate change (Adger 1999; Kelly and Adger 2000; Leary 2008). Over time, coping strategies can become adaptive measures when hazards are recurrent and people feel they continuously have to make changes in their livelihoods over time.

2.4.3 Adaptation

When continuing hazards or structural problems keep on threatening peoples livelihood security, coping strategies may no longer be sufficient. Coping strategies are the short term measures which can only be linked to a specific hazard and are activities which are used to secure ones

livelihood. Adaptation refers to the long term measures in which people may change their livelihoods, because they feel that current livelihoods are no longer able to secure. Or they may secure their livelihoods by taking adaptive measures over the long run. Adaptation refers to the longer term and permanent changes in livelihood strategies that have been developed to deal with recurrent shocks such as hazards related to climate variability or change (CARE n.d.). In my research I will only focus on what the IPCC (2001) calls private adaptation, which means that I will focus on adaptation by individuals, households or communities and not on adaptation by institutions.

Adaptive measures are ways in which individuals, households and communities change their productive activities and modify local rules and institutions. Adaptation can be a specific action, such as a farmer switching from one crop to another because it is better suited to the anticipated conditions. It can also be a systematic change such as diversifying rural livelihoods as a hedge against risk from variability and extremes. Adaptation is also a process, this includes learning about risks, evaluating response options, creating the conditions that enable adaptation, mobilizing resources, implementing adaptations and revising new choices with new learning (Leary 2008: 6).

Adaptation measures can be varied and can only be measured with taking past activities into account. Here the notion of pathways becomes relevant. What did people do in the past to secure their livelihoods or did they change their livelihoods because under the changing economies or changing weather conditions they were not able to secure their livelihoods anymore? In section 2.5 an overview will be given of the most important structural problems which can be identified in the Northern Bolivian Amazon. It is however useful to elaborate on the concept of risk and vulnerability first. As coping strategies and adaptive measures are taken to avoid risk. Why do households run the risk of livelihood insecurity? Why do people take risks? These questions will be answered in the next section.

2.4.4 Risk, uncertainty and vulnerability

People make use of a diversity of *capabilities, assets and activities required for a means of living* to construct their livelihoods. Influential factors (section 2.5) such as certain climatic conditions but also shocks, such as a disease outbreak and natural hazards, present a major pressure on household livelihoods. Before turning to the different factors that pose a threat to household livelihoods, it is first useful to elaborate more on the concept of risk. Risk knows a rather technical definition: *'The expected numbers of lives lost, persons injured, property damaged and economic activity disrupted due to a particular natural phenomenon'* (UNDRO 1991 in Frerks et al 1999). This definition however does not say anything about how people perceive risk and to what extent they feel there is a risk at all. It is thus a social construction which can mean different things to different people (Slovic 1987: 283). I define risk as the subjective interpretation of the probability of a harmful consequence to peoples livelihoods.

Local people and households often make decisions based on taking risk or avoiding risk. In relation to the same hazard, people may make different decisions, beforehand or afterwards, to cope with the risk they face. Sometimes people feel they are at risk, while outsiders, such as development workers may have another perception. There is thus no universal response to a particular hazard. Some cultures have an extensive belief in God(s) and with respect to power and social relations, perceptions of authorities can be contradictory from the ones of the local population. Elements of power and culture play a big part in these perceptions. (Frerks et al. 1999, Heijmans 2004). A risk analysis thus allows an investigation of both households' livelihood circumstances and their interpretation of circumstances, with an eye to the future (Kaag: 2004: 57).

Important in the understanding of risk is the fact that people often have limited information about the probability of things happening which leads to uncertainty. This can be due to lack of knowledge or lack of tools for adequate measurement. Information relating to the 1997 El Niño was available months in advance to developing countries, but according to studies the farmers in Southern Africa and North East Brazil did not respond to the information. This can be caused by a gap between information needed and delivered, lack of trust or miscommunication,

the ability to respond was limited or non-existent or the capacity was not available to address agricultures needs (Valdivia et al. n.d). The risk that hazards pose to livelihoods can thus be reduced when people know what will happen and when uncertainty will be reduced, people than can take action to prevent that the security of their livelihoods will be threatened.

Livelihood security refers to the stability and resilience of a livelihood in the long run. Resilience refers here to the ability of people to withstand shocks. Livelihoods are secure when households have a secure ownership of, access or entitlement to, resources (tangible and intangible) and income earning activities, including reserves and assets, to off-set risks, ease shocks, and meet contingencies. Households have secure livelihoods when they are able to acquire, protect, develop, utilize, exchange, and benefit from assets and resources (CARE 2002). Livelihoods are however never stable and especially poor people in developing countries regularly worry about whether there will be enough food for their families and if they will have work, money or at least access to a loan. When confronted with external shocks such as natural hazards, or an economic crises, but also intra-household dynamics such as the loss of a family member or income failure, the consequences are often most severe for the poorest people (Kaag 2004: 58-59).

Households try to secure their livelihoods and thus diminish the risk they face through various (collective) arrangements and insurance mechanisms. An important example of how households try to secure their livelihoods is through strengthening political relationships and the organization of local support systems that provide assistance in times of need, these are based on kinship, friendship, shared ethnicity etcetera. Kaag (2004) states that *'being insecure has a 'relational' aspect as social isolation – not a (temporary) decline in income – is the greatest threat to livelihoods.'* So when people are not able to participate in systems of (information) exchange, insurance, access to resources and redistribution, it prevents them from receiving social assistance and protection in times of need and thus feel more at risk.

I have showed that risk perceptions can differ from actor to actor. Before turning to the next section in which I will elaborate on factors which can cause risk to household livelihoods, it is useful to introduce the concept of vulnerability. Vulnerability is *'the extent to which an individual, community, sub-group, structure, service, or geographic area is likely to be damaged or disrupted by the impact of a particular disaster hazard.'* (Kotze and Holloway 1996 in Frerks et al. 1999: 13). Although focusing on disaster hazards, vulnerability is caused by various factors such as lack of government capacity, physical environment etcetera. To conclude the preceding, risk is the subjective of probability of a harmful consequence to peoples livelihoods. It is subject to different interpretations and means different things to different people. Risk can be seen as the result of a hazardous event and household vulnerability. A household is vulnerable when it is subject to different factors on which I will elaborate in the following section.

2.5 Influential factors

Livelihoods are studied on the household-level. As stated in the chapter on household livelihoods, decision-making sometimes goes beyond the level of household. Peoples opportunities and choices are influenced by other actors' strategies, face-to-face or even by global actors. External structural factors or shocks can have devastating effect on household livelihoods, but may also enhance them. Below I identify two factors that may influence forest livelihoods, climate (change) and political economy.

2.5.1 Climate (change) and natural hazards

Environmental resources play a crucial role for a large proportion of the world's population, threats to ecosystem functioning and integrity undermine thus peoples' livelihood security. As I already showed in section 2.3.1 poor households in the forest are often highly dependent on natural resources for the security of their livelihoods. Evidence suggests that pressures on peoples livelihoods are due to environmental concerns significantly increasing in the future, in part due to climate change but also because of other forms of resource and livelihoods pressures such as deforestation and the free-market trade. In the 2001 IPCC Working Group II report on Impacts, Adaptation and Vulnerability it is stated that:

Populations are highly variable in their endowments [of different capitals] and the developing countries, particularly the least developed countries (...) have lesser capacity to adapt and are more vulnerable to climate change damages, just as they are more vulnerable to other stresses. This condition is most extreme among the poorest people (IPCC 2001: 8).

It is predicted that climate change will lead to changes in temperature and rainfall patterns, this will have devastating effect on crop yields and thus will affect the livelihoods of many poor people also the viability of many livelihood activities may cause problems, such as livestock raising, fishing and the use of forest products. Moreover the predicted increase of frequency and severity of extreme weather events will affect many livelihoods. Rapid-onset disasters such as floods may destroy livelihoods at once or may render livelihoods insecure for a long time. Not only livelihoods are directly affected, also indirectly, for example by the destruction of essential infrastructure. Another important factor contributing to household's livelihood insecurity are the increasing health risks posed by increasing weather extremes. In particular water-borne disease such as cholera and vector-borne such as malaria and dengue. *'These health impacts pose a double jeopardy for poor people's livelihoods: the contribution of key productive members of the household is lost and the cost of health care is expensive and time consuming'* (IISD 2003).

In what way climate change will influence the people in the Northern Bolivian Amazon is hard to say yet. People already have to cope with several natural hazards. After the wet periods the water levels rise, resulting in floods. Sometimes causing heavy flooding, particularly the last four years, namely Trinidad, the capital of the Beni department had to cope with severe flooding last year. Natural hazards which can result out of climate variability and weather extremes are hydrometeorological natural processes or phenomena which occur in the biosphere that may constitute a damaging effect. I already introduced flooding as a result of climate variability, but other hydrometeorological hazards such as rain and wind storms, temperature extremes, wild land fires and desertification also may constitute a risk to peoples livelihoods (UNISDR⁹). Another kind of 'environmental factor' will be elaborated upon in the next section.

2.5.2 Political economy

Political economy refers to how political institutions, the political environment and the economic systems influence each other. In a political economy approach, vulnerability should be understood in terms of powerlessness, instead of simply as a deficit of the resources required to sustain life. Vulnerability and power in this sense are understood as a political and economic *process*, in which a variety of actors play part. When household strategies to sustain livelihoods are blocked or undermined, households are the most vulnerable. We can thus say that political economic processes play an important role in household livelihoods, both in an enabling or constraining way. In complex political emergencies for example, political and military factors are often central in determining people's and household's access to assets (Collinson 2003: 1-2). Important is the way how power is used by different actors and how power relations evolve, notions of governance prove to have a strong linkage with livelihoods.

Governance can be defined as *'the manner in which power is exercised in the management of a country's economic and social resources for development'* (World Bank 1992). Governance refers to more than just the government, but also to power in a broader sense and the way all actors and stakeholders (private sector, civil society and international organizations) are involved in power relations. According to Cannon (2008: 5) *'the type and quality of assets available to each person is influenced by the way that wealth and income is distributed between different groups of people, and this is affected by power relations.'* For example policies on land distribution, which is often unequal in developing countries, influence household livelihoods. When households do not have sufficient access to enough land for farming, they are forced to engage in other income-generating activities. Moreover, welfare distribution is largely a function of the type of government (idem). Cannon (2008: 5) expects that there is a high

⁹ <http://www.unisdr.org/disaster-statistics/occurrence-trends-century.htm> visited 10/04/2008

correlation between inequality of wealth and vulnerability to hazards: *'if inequality is high, there will be more poor people with weaker and less resilient livelihoods.'* Likewise, governments that tolerate high levels of inequality pay less attention to the needs of the poor and vulnerable.

Another notion referring to political economy is household access to markets. Dorward et al. (2002) argue that we need to place our understanding of livelihoods and their development in a much more explicit context of dynamic market and institutional change. Improved access to markets can be a critical driver of a sustained and broad based poverty reducing development. First, because livelihoods are dependent on a range of markets (as employees of demand and supply of goods); secondly that major current and historical poverty reduction processes have depended on 'equitable private sector economic growth'; thirdly because poor people often identify problems with markets as critical to their livelihoods and fourth markets *'can provide a highly efficient mechanism for exchange, coordination and allocation of many resources, goods and services'* (Dorward et al. 2000: 1). On the other hand, an expanded access to markets can also pose a threat to households livelihoods. Global fluctuations in a market economy can even affect the most isolated communities. In the Northern Bolivian context, the price of extractive products paid to the collectors, depends on international price setting and hereby on the demand in developed countries. Poor people's livelihoods and strategies, especially in rural areas, are thus extremely subject to change (Henkemans 2001: 27-28).

Finally (political) institutions play a major part in household livelihoods. Institutions can be seen as 'rules of the game'; defining the incentives and sanctions affecting people's behaviour (Dorward et al. 2000: 5). A clear distinction should be made between structures and institutions. One can change a structure, for example more participation for woman, but when institutions do not make the same change in norms and beliefs, increased woman participation is not likely to succeed (Bingen 2000 in Schafer 2002: 21). According to Nuijten (1999), in the literature *'the focus is always on the community and the way in which institutions contribute to the achievement of collective goals. Much less attention is paid to the way individual households are embedded in multiple institutional settings at the same time and how this is related to household livelihood strategies.'* It is thus important to investigate how the different households react on different institutions and organisations working in the community. An interesting case would be how households react on the recent political struggle which is taking place in Bolivia (box 1).

2.6 Concluding remarks

When studying household livelihood decision-making and strategies the SLA will be a good analytical framework. The five capitals households make use of shape their livelihoods. For forest households, natural capital will be the most important one. Based on these capitals, households have certain strategies to sustain their livelihood. These strategies arise from people's agency, but are shaped by structural constraints. Certain factors influence how households arrange their livelihoods, certain shocks may force people into coping strategies, while through more structural problems, households may adapt to changes. CARE's SLA forms the basis of the research, I however also take other concepts into account such as risk, uncertainty and vulnerability as these are highly intertwined with livelihood decision-making and strategies. Furthermore it is important to analyze livelihood capitals, strategies and outcomes in a broader context, taking climatic factors and political economy into account.

Box 1 Recent political struggle in Bolivia from own experience

During my first fieldwork period in Bolivia, the country was occasionally on the foreground of the world news because of its political instability. Dissatisfaction from the departments of Santa Cruz, Beni, Tarija, and Pando about the indigenous president of Bolivia, Evo Morales resulted in the organization of a highly controversial referendum for more autonomy of the above mentioned departments. The departments, with Santa Cruz on the foreground, protested against the nationalization of gas reserves. Especially this department has many resources. Bolivias president, Evo Morales wanted the gas reserves to be nationalized, as it would benefit the whole country, the poor Aymara and Quechua *indigenas* in the countries highlands as well.

In Pando this referendum took place in the first week of June, just when I left the country. The habitants voted with an overwhelming 85 percent in favor of autonomy. Months before this referendum various signs in the city of Cobija said '*Autonomía, si!*' And weeks before the referendum several stands from among others the agricultural university filled the streets with students distributing leaflets which all said, *Autonomía, si!* I never encountered a stand with people who were against the autonomy. It appeared that many locals were not in favor of Evo Morales ideas.

The political problems were at its peak during my second fieldwork period in Bolivia. When I arrived in Bolivia, I learned that just the day before, a massacre occurred in Porvenir, a village just half an hour of Cobija in the Northern Bolivian Amazon.

In the 'massacre of Porvenir' which occurred at the 12th of September 2008, 14 *campesinos* were killed by hit-men arranged by the prefect Leopoldo Fernández. Weeks after the killings, Pando was in a state of siege. Which prevented me from travelling to the Northern Bolivian Amazon, as the airport was closed and travelling would be dangerous. Also CARE advised me not to go, as the staff wasn't even working till the first week of October because of the problems.

A couple days after the massacre, when the bodies arrived in La Paz, there were heavy demonstrations in front of the American Embassy in La Paz, complete with American flag burning. *Campesinos* were marching in the street and demanded the government to imprison Leopoldo Fernández. The next day Fernandez was caught in the *Prefectura* of Cobija and sent to prison in La Paz.

In other parts of the country *campesinos* were blocking roads, the city of Santa Cruz was completely blocked by *campesinos* and in Cochabama the prices of oil and foods were rising sharply because of road blockades. Newspapers headed '*Bolivia en las puertas de una guerra civil*' (Bolivia on the gateway to a civil war)¹

3. Methodology

In this chapter the methods I used during the research will be elaborated upon. I made use of two methodology books; *Research Methods* ('t Hart) and *Analysis in Qualitative Research* (Boeije), my research proposal in which a theoretical framework and topic lists were included and my experience which I obtained through a Bachelor research in Guatemala on food security. The research started in February 2008 with the writing of the research proposal. The fieldwork consisted of two periods. The first fieldwork period lasted from the start of April until the end of May (seven weeks). Due to medical reasons (see 1.6.2) I was forced to break off the visit. I was however able to return and my second fieldwork period was from October till mid November (four weeks). During the field work I was stationed in Cobija, the capital of Pando in the Northern Bolivian Amazon. From here I made trips to the communities of Palacio and Molienda, preceded by a short pilot study of different communities. This chapter is divided in five sections. In the first section the methodological principals are identified and in the second section the selection of communities and households. The different methods of data collection such as interviews, participating observation and analysis of field documents is presented in section 3.3. In the fourth section the data analysis will be elaborated upon and in section 3.5 the assumptions, limitations and opportunities of the research.



Figure 3 Doing research in the Northern Bolivian Amazon

3.1 Methodological principles

In this section I identify how the fieldworks has been done. As described in the former chapter I made use of the *sustainable livelihoods approach*. It is a tool for the analysis of livelihoods and thus the methodological principal of the research. As showed in CARE's livelihood model, households are the starting point. From here we can identify the essential components such as assets (capitals), income-generating activities, consumption activities etcetera and external factors and structures that influence them. In making use of the SLA framework, people's decision-making is central, questions such as 'why did you sell your motor a couple of years ago' or 'why is your husband 'working in the city' and 'how come your children do not go to school' can be asked and point often to structural underlying problems. From the SLA framework I derived a topic list (annex 1)

In order to protect the quality of the research I made use of several methodological principals. The research object is complex, therefore *triangulation* is needed, this means that data is collected through different methods. In my research I made use of in-depth, face-to-face interviews with people in the community and experts, analysis of existing documents, participant observation, observation, casual talks with people and listening to conversations of people in the community.

During the research I constantly reflected on my own *role as a researcher*. What would people think of me? How would people see me? Why would they tell me private things? questions I asked myself a lot. A large, blank, blonde, western, female with a strange accent doing research alone was not something the people in the communities see every day. It struck me sometimes how much people told me about their lives during the first interview. Being aware of your own role as a researcher is very important as my appearance and focus influence the obtained data. In anthropological research the researcher him/her self is an instrument and always adds something to the research. I however have tried to look as objectively to the research object as possible and not to make value judgements or add personal preferences.

As a final methodological principal I made use of a *contextual and holistic approach*. Contextuality means that the research object may not be isolated from the field context. This context can be about historical, economical, cultural or political aspects in the field. Also, in holism, the research situation will not be reduced to certain personal characteristics. The research situation is an integrated, organic entity. I thus tried to have an eye for the richness and detail of the field and the coherence between events.

3.2 Selection of communities and households

I chose two communities, Palacio and Molienda as focal points for the fieldwork. Within these communities I chose several households on which I executed in-depth interviews. The fieldwork started with a pilot study, followed by the sample selection of households within the chosen communities.

3.2.1 Pilot study

As I had no knowledge on the different communities in the Northern Bolivia Amazon, I chose the selected communities together with CARE. A pilot study took place in the last week of April. Criteria for the visited communities where:

- Small community (approx. 50 people);
- Closeness to river (preferably the Tahuamanu river);
- Relatively isolated (not along the main road);
- Relatively close to Cobija, able to reach within one day.

During the pilot study I spoke to the community leaders and asked questions about the basic characteristics of the community and what problems the community had. As some communities recently flooded it was an easy topic to talk about.

I visited the communities of Porvenir, Chachuelita Baja, Palacio and Florida. From these communities only Cachuelita Baja and Palacio seem to be appropriate, as Porvenir was too big and not isolated and Florida too small (only four families) and partly indigenous, which would make comparisons to the other community difficult, as indigenous communities have other rights in Pando. During the visit, Palacio was partly flooded, which made the community very interesting and here I started my research. The idea was to visit Cachuelita Baja afterwards, but due to medical reasons (3.5.2) I had to go back to The Netherlands as I was not able to visit it anymore. When I came back in September, the problems in Porvenir were peaking and I was not able to visit Cachuelita Baja (closely located to Porvenir) anymore, because of security reasons. CARE suggested I could visit the community of Molienda, because of its closeness to Cobija, for security reasons it was not encouraged to sleep in the community. Molienda also fitted in the other requirements. During the fieldwork I came to know another community; Tres Arroyos. I was not able to interview households in this community, but from stories I learned that this was a unique community, in chapter seven, box eleven will provide an insight into this unique community.

3.2.2 Sample selection

Above I described how I selected the communities of Palacio and Molienda. Within these communities I selected households. This was easy as both the communities consisted of approximately twelve households which were all relatively accessible. I tried to talk to at least one member of every household and then selected five households in Palacio and six in Molienda which would be appropriate for the research. I tried to make an equal selection between men and woman respondents, respondents living their whole life in the community, or only for a short period and between old and young respondents. Important was that all the households contained at least one child, to make comparisons between households more easily. All interviewed persons in Palacio belong directly to the Andrade family¹⁰, except for Victor Jiménez, husband of Julia Andrade.

Table 1 Interviewed persons in the communities¹¹

	Molienda	Palacio
1	Carlos, +/- 50, 1 child, 30 y in community	Paola, +/- 60, 5 children, whole life in community
2	Patricia, 40, 1 child, born in community, now lives for 3y in community, teacher	Marcelo, +/- 30, 6 children, born in community, now lives for 1 y in community
3	Alvaro, +/- 50, 9 children, 30 y in community	Rafael, +/- 60, 9 children, whole life in community
4	Valeria, +/- 35, 1 child 3 y in community	Sandra, +/- 40, 3 children, whole life in community
5	Rafaela, +/- 40, 3 children, 2 y in community	Julia, 36, 5 children, whole life in community Husband Victor, 35, 15 y in community ¹²
6	Gabriela, 24, 2 children, 1 y in community	

Next to interviewing key persons in the household. I interviewed the community leaders (Pablo Bedoya in Molienda and José Andrade in Palacio) for several times. Also outside the communities I conducted interviews with two engineers, acting mayor of Puerto Rico and CARE staff. These interviews provided me with some general information,

¹⁰ Names of respondents including CARE staff in this research are pseudonyms.

¹¹ Annex 2 shows an elaborate version of this scheme of interviewed persons.

¹² I interviewed both Julia and her husband Victor, as it would be interesting to interview also someone not belonging to the Andrade family.

3.3 Data collection

There are many methods to obtain information in the field. Below I elaborate on the three used methods; interviews, participating observation and analysis of field documents.

3.3.1 Interviews

From the interviews I derived the most and valuable data for the research. I tried to do the interviews as loosely as possible, as I discovered that people would speak more freely in an informal setting. In general I approached people and had a regular conversation with them about the family, the products they cultivate, the kind of house, the community life. Slightly I was able to ask more private questions on problems, money etcetera. Sometimes this was only possible in the second or third interview. I made use of topic lists (annex 1), which were adjusted during the research time. I only made use of open-ended questions, leaving the respondents sufficient time to speak about many things. I preferred to speak with respondents alone, but it was not unusual that partners and children were listening too and also giving answers. During the second visit to the area, I had my own driver, who had to stay with me all the time due to security reasons. The driver also attended some interviews, which was sometimes annoying as in the beginning he gave answers to some questions as well. I found it however also helpful as he started to have conversations with people as well on which I could derive data. As a gift I often gave cookies, tea, coffee, sweets to the families after the interviews. In Palacio I became very popular with the kids as I bought paper and felt-pens to draw. The second time I visited the community, after half a year, the kids were telling me they wanted to draw, luckily I had bought paper and pens again.

3.3.2 Participating observation

To get a relative close relationship with people I tried to participate in daily activities. This also gave me an insight in the daily activities and how people execute their activities. Furthermore I was able to ask many questions on the activity while doing it. I went out fishing, weeding, carrying products from the land, feeding animals, swimming, cleaning the house, eating, walking to the lands, playing soccer etcetera. My participation in these activities also showed the people I was enjoying my stay. Due to observations I was able to make an inventory of the surroundings of the households, I checked the type of housing, assets, livestock, cooking possibilities etcetera. Also community characteristics could be observed such as, closeness to the river, amount of trees surrounding, distance to the fields, distance to the main road, electricity opportunities, distance between the houses, availability of public services such as schools, latrines or private toilets, drinking water etcetera. To obtain a close relationship with the staff from CARE I translated an interim report on the DIPECHO project.

3.3.3 Analysis of field documents

Information on the area and specific research on the field could be obtained through the analysis of existing documents I mainly got from CARE. Useful documents included documents used for the DIPECHO Amazonia project (baseline study, systematization document and a document on local risk perceptions, executed by CARE, furthermore the Agro-ecological and socio-economical zonification document on Pando proved to be helpful to describe general characteristics of the Northern Bolivian Amazon.

3.4 Data analysis

Interviews were held according to the topic lists. During the interview I quickly wrote down as much as possible the respondent was saying in a work-book. When I had access to my computer I preferably the same day typed everything I wrote down in the work book. Afterwards I structured what I wrote down per subject as comparisons could be made between the different households on the different subjects (family, work, food, risks). During the fieldwork I also made several types of field notes in my workbook. These included observation notes, theoretical notes, methodological notes and personal reflection which was written down in a diary. All notes except

for the diary were typed afterward on my computer. Example of an observatory field note on the community woman, getting ready for the cleaning-of-the-road project:

'In the morning the woman gather in the house of Jorge and Maria. They bring small buckets with smoking leafs and other organics to get rid of mosquitoes. They talk about Sandra's child who is sick. She will not be working today. She asks José for permission to stay at home with her child. After the small talk they leave with their buckets and machetes to the road'.

- Field note October 2008

Parts of what I have written down in my diary will be presented in this research. To keep up with family and friends I also wrote regularly on a travel blog¹³ (box 2)

Box 2 COBIJA!! travel blog fragment, October 6, 2008

'Yes, I am finally there, I am in Cobija, it is incredible!

After the conversation with, CARE's director in Cobija, I immediately booked my flight; everything was supposed to be quiet again in Cobija/Pando. He however warned me it would be very hot (40 degrees) in the north.

(...)

An then I arrived in Cobija, the promised heat is trying to keep away from me, as the first showers cooled down the air for me. Now it is often cold and I haven't seen the sun yet. Sunday it was so boring here, I forgot how boring it could be here. I hung around with the only other 'gringo' in Cobija, Flo from France. When the power however broke down in the evening and I was completely surrounded by darkness in my just too expensive hotel room I wanted to go back...

(...)

In comparison to my last visit, good arrangements have been made with CARE about my visit to the communities. On Wednesday I will be able to visit the communities already!

By the way, everything looks normal in Cobija, there are slightly more soldiers, but not in extremely amounts and a shop burned down. For the rest everything is normal. The only problem for the people here seems to be the curfew. Till December a state of siege is declared in Pando, what means that nobody is allowed to enter the streets after 12 pm. So it is very quiet at night, you do not even hear the dogs!

3.5 Assumptions, limitations and opportunities

As in every sociological study it is hard to predict how a research situation will be. It is however useful to have some assumptions in advance. These are taken into consideration in section 3.5.1. In the discussion of the research (chapter ten) I will reflect on these assumptions. Furthermore, the research has known some limitations and opportunities, which are elaborated upon in respectively section 3.6.2 and 3.6.3.

3.5.1 Assumptions

Before I started the fieldwork I had several assumptions based on the theory on livelihoods, derived from the literature in chapter two:

- Households try to pursue a sustainable livelihood
- Livelihood strategies are not always based on rational decision-making
- People are agents and not mere victims of the structural processes
- The studied households live in an unstable environment

¹³ simoneweert.waarbenjij.nu

3.5.2 Limitations

As I tried to obtain as much information as possible, data is however always limited due to various circumstances. First I had to cope with some *organisational* constraints. Due to the isolated position of the communities, I was not able to travel alone, as there were no frequent buses and the communities still lie far off the main road. I was therefore dependent on the transportation from CARE. During the first visit it was hard to make clear arrangements about it, as often staff told me they would go to the communities, but then at the last moment, the trip was cancelled. This resulted in the fact that in the first month I had not been able to travel to any community. During the second fieldwork period this problem however was solved as I got my own driver due to the security reasons. With my driver I was able to plan trips ahead. Although at the end, organisational problems were starting again, as it was hard to get any fuel and certain staff, who were on business trips, had to sign for fuel.

I was however fortunate to have the *backing of CARE* to do the research. I however think that it may have influenced how the people in the communities saw me. First they thought I was also an employee of CARE, as I came always with the CARE car. I however always stated that I was a student doing research. The fact that they thought I was from CARE may have influenced their answers on my question. But it was hard to be sure about that:

'During my first visit to Palacio I talked two hours with José, the community leader. He gave me a lot of information on the community and the problems they coped with. José was repeating all the time that the community did not receive any help the last week, when the community was flooded. I saw desperation in his eyes. He asked me for help (food, medicine etcetera) I felt tangled between my role as a researcher and an aid worker, which of course I wasn't, but probably was in his eyes. I also found it hard to judge whether he was really in desperate need of help or was exaggerating to get things done'.

-Diary, April 2008

To prepare for the research I improved my Spanish through courses and self-study. I however found it difficult to understand everything people said to me, there still was a *language barrier*. The people in the Northern Bolivian Amazon speak quite slow, but sometimes not very clear. Also they used words for things, which I never learned before. Of course they found me talking in a strange accent, sometimes when I asked a question, they looked incomprehensibly at my driver, who asked the same question in the same words, but probably with a different accent. Overall I did not feel constrained due to language difficulties.

When the research was finally getting on in April 2008, I suddenly had to cope with serious *medical problems* which forced me to go back to The Netherlands. A serious cut in my cornea followed by an infection made it impossible for me to finish the research as my eye was very sensitive to dust and it had to recover. In September 2008, I was able to return to The Northern Bolivian Amazon to finish the research. At least that was what I thought as right at the moment I was in the plane to the USA, *political problems* peaked in Bolivia. The American Ambassador was expelled which resulted in the fact that there were no planes leaving from USA to Bolivia when I arrived at Miami Airport. After two days I was able to fly to La Paz with another company. But in La Paz I learned that in Porvenir, a village close to Cobija fourteen people were shot. The airport of Cobija was closed for three weeks. This again limited my time in The Northern Bolivian Amazon. When I finally arrived in Cobija, I had to work as efficient as possible and collect as many data as possible from the interviews, I was less able to have chit-chats with people in the communities.

3.5.3 Opportunities

Beside limitations, the research also had on opportunities. The above described *backing of CARE* also served as an opportunity as without CARE the research would not have been possible. The local office in Cobija provided me with documents, space to work, internet, expertise and weekly barbecues. Because I had my own driver during my second fieldwork period I was able to quickly plan the trips to the communities and stay there for a couple of hours (Molienda). Furthermore

my driver sometimes also took part in some conversations which helped me to obtain more data. Another opportunity was the fact that I got to know three other Dutch students from the Utrecht University who also did a Masters' research in and around Cobija during the same time. Although focusing on different subjects we could share information and experiences. They also made my stay in Cobija more fun.

As in Molienda I was often arriving just before lunch time and I had the opportunity to eat with some of the families. This not only gave me an insight in what people have for lunch, also how they cook, interact with each other and I was able to have some small talk. Sometimes when I left a family after the lunch to search for some other people, I was invited for the second time for lunch which of course I could not refuse:

'When I arrived in Molienda, Jasmina of five was already welcoming me and taking me by the hand. The school just finished and she was ready for lunch. Her mother, Valeria was cooking in the outdoor kitchen and invited me cordially, while quickly sweeping off the small wooden bench and the table in front of me. She cooked me rice, as usual, but added some slice of chicken to it, this in comparison to other dishes which I ate in the communities and Cobija which often only consisted of plain rice and a piece of meat or fish. (...) Afterwards I visited Patricia the community school teacher who made me lunch as well, plain rice with plantain and a piece of 'chango de monte' (wild pig) her husband just caught that morning. As a beverage she gave me lemon sweetened water, which was delicious on such a hot day, but as there was no drinking water in the community, consisted of water taken from the stream..'

-Diary October 2008

3.6 Concluding remarks

The presented research is conducted during two fieldwork periods; in spring and autumn of 2008. During a short pilot study in the Northern Bolivian Amazon, two communities were selected which would be the focus of the research; Palacio and Molienda. In these communities five to six households were selected to form the basis of the data. To obtain data, several methods were used. The most important method was interviewing, here topic lists, based on the SLA framework served as a basis. Other useful methods were participating observation and the analysis of field documents. To analyze the data, I made use of the information from the interviews and own field notes. Sometimes the personal diary also proved to be helpful in analyzing data. Several limitations and opportunities shaped my own enabling and constraining environment in which the research was conducted. In chapter ten we will see whether the assumptions made in advance were true in the practical context of the Northern Bolivian Amazon, on which I will elaborate in the next chapter.

4. Introduction to the area



Figure 4 Road in the Northern Bolivian Amazon

Source: Simone Weert

The department of Pando is located in the Northeast of Bolivia and ranks fifth in surface size of all the departments. The entire 63,827 km² surface is covered by a thick jungle, crossed by a complex network of rivers, feeding it since the dawn of time. It features within this network the most vibrant and beautiful rivers that spill into the great Madera River, which, in turn, flows into The Amazon.

The flora and fauna is considered an unequalled reservoir of species that makes for a rich and vast biological diversity. Many of their medicinal plants are still unknown, although the first aboriginal tribes used them with great success. It is believed that the Amazon jungle houses plant life that could be used to cure diseases such as cancer.

The Capital of Pando, Cobija, has very deservedly earned titles such as "The Sentinel of Nationality" and "The pearl of the Acre River". It is considered the most beautiful city in the Amazon jungle.

- Text from a tourist brochure "Discover Bolivia" to promote tourism in Pando 2007

4.1 The Northern Bolivian Amazon

The department of Pando is part of the Northern Bolivian Amazon which is the northernmost part of Bolivia and borders Peru to the west (department of Madre de Dios) and Brazil (departments of Acre and Rondônia) to the north and east. The province of Vaca Díez of the Beni department and the province of Iturrealde of the La Paz department are also part of the area. The Northern Bolivian Amazon can be seen as an independent part of the rest of Bolivia considering that rainforest covers the area, in the past, the rubber production was the predominant activity, it is the only area where Brazil Nuts are found and extracted, and indigenous tribes have their own organization and still some native languages are only spoken in this area. With its roughly 100,000 km², the Northern Bolivian Amazon area comprises ten percent of the total territory of Bolivia. Of the area 94 percent consists of tropical moist forest. The remaining six percent consist of patches of savannas, water bodies, agricultural fields and urban spaces. The estimated population is about 160,000 people of which five percent is of Indian descent, the other part, *mestizos*, or usually called *Cambas* makes up for the majority of the population. About 70 percent live in urban areas, the rural areas are sparsely inhabited by about 40,000 people (Bojanic 2001).

4.2 History of the area

The Northern Bolivia Amazon has been dominated by commercial forest product extraction for more than one and a half century. The region has been characterized by a boom-and-bust economy cycle, which refers to economic up and downswings.

Before people started to extract forest products, the Northern Bolivian Amazon was considered 'land to be discovered'. The border with Brazil was ill defined and only various indigenous groups inhabited the area. Around 1820, the region started to be incorporated into the world economy as the first extractors entered the area in search of Peruvian bark containing the anti-malarial drug quinine. Primarily indigenous people were involved in the extraction of Peruvian bark and the economy did not develop permanent new settlements (Assies 2002: 85).

Around 1850, the first exploitation of rubber started by Bolivian and Brazilian explorers who tapped wild rubber trees in the area. The invention of the pneumatic tire by Dunlop which was used in bicycles in 1888 and the emergence of the automobile industry at the end of the nineteenth century triggered a boom of the rubber industry between 1900 and 1913. The main infrastructure which was used for the transport of rubber were the rivers in the area. The Bolivians went downstream of the Beni River, making Riberalta the centre of the rubber industry in the Northern Bolivian Amazon, The Brazilians however went upstream of their rivers and the meeting with the Bolivians resulted in conflict and eventually war. With the Treaty of Petrópolis Bolivia had to cede the territory of Acre to Brazil and a new Bolivian border was established (Assies 2002: 86).

Rubber extraction and production was organized in *barracas*, which were established on forestlands formerly inhabited by the indigenous peoples of the Northern Bolivian Amazon. A *barraca* consisted of a river-based hut of an owner or *patrón* (patron) which served as administration and storage facility and its surroundings; a territorial extension of a rubber estate. Here *siringueros* (rubber tappers) lived in forest-based rubber posts or rubber centers in small wooden huts with hardly any basic facilities. The *siringueros* did their work in exchange of basic necessities such as rice, sugar and manioc and were initially not allowed to engage in small farming or hunting activities. This in order for the patron to maintain its monopoly on food products and his laborers more dependent as he could easily charge heavily inflated prices. It was however also in the patron's interest to keep his laborers healthy for a continuing rubber supply. This debt-peonage system is called *habilito* and marked the labor relation in forest exploitation up to present. Apart for a few indigenous settlements, the *barracas* were the only type of rural settlement in the start of the rubber exploitation (Assies 2002: 86-87; Henkemans 2001: 48-49).

The rubber production in the Northern Bolivian Amazon was characterized by a few large 'rubber houses'. The most powerful was the *Casa Suárez* (The House of Suárez) which took over many indebted *barracas*. In 1916 the Suárez brothers had consolidated their enterprise, claimed 75 per cent of the Northern Bolivian Amazon and represented about 60 per cent of the Bolivian rubber production. In the heyday of the *Casa Suárez* the company, which had its headquarters in

Cachuela Esperanza and offices in London, had a radio-telegraph station, residential blocks, a hotel, a restaurant, a cinema a hospital under Swiss direction and a couple of large machine shops. It is for a good reason that patriarch Don Nicolas Suárez became known as the 'Rockefeller of the rubber trade' during the booming period of rubber in the Northern Bolivian Amazon (Assies 2002: 87). In 1940 Nicolas Suárez died, which gradually meant the end of the Suárez empire.

Characterizing for a boom and bust economy are its cycle of high and low peaks. The first bust of the rubber trade in The Northern Bolivian Amazon took place in 1913 when the prices in the rubber industry crashed. This was for a mayor part due to the introduction of plantation-produced rubber from British and Dutch colonies (mainly Southeast-Asia). The new cheap rubber triggered important changes in The Northern Bolivian Amazon. In the first place, agriculture became more important. (Assies 2002: 87) Many rubber patrons abandoned their *barracas* which were subsequently taken over by the laborers. This was the starting point of the first *comunidades libres* (independent communities) which were found in the late 1920s. The Agrarian Reform of 1953 (see 4.4.1) accelerated the formation of *comunidades libres*. To survive, the *comunarios* (people who live in independent communities) had to grow food which was organized on small plots close to the community. The second big change in The Northern Bolivian Amazon was the emergence of Brazil Nut as a complimentary activity next to rubber extraction (Henkemans 2001: 49; Assies 2002: 87). Brazil Nuts could only be collected (*castañar*) from December to March, in the rainy season, when rubber tapping happened to be less frequent. As a consequence the households in these *comunidades libres* relied on rubber tapping, small-scale agriculture and the gathering of Brazil Nuts which was resulted in a '*complementary set of activities of a year-round agro-extractive-cycle*' (Assies 1997; 8-10).

The second boom of the Amazonian rubber trade was accelerated by the Second World War. From the United States of America there was a high demand on natural rubber from the Amazon, as the country was cut off the Southeast Asian market. After the War however, the demand for natural rubber dropped due to the emergence of synthetic rubber and the second rubber bust lasted well into the 1970s and early 1980s (Henkemans 2001: 49). The oil crisis in the late 1970s caused another boom for the natural rubber market, as prices of oil peaked, making synthetic rubber less attractive. When the economy recovered from the shock in the mid 1980s and Bolivia was hit by a monetary crisis and the abolition of Brazilian price support scheme, keeping prices of natural rubber artificially high, the Bolivian rubber production suffered again. This third rubber bust resulted in the deathblow of the Bolivian rubber industry which ended in 1992. The end of the rubber industry led to an rapid conversion into the *comunidades libres*.

Nowadays, on a very small scale, rubber is still tapped in The Northern Bolivian Amazon. Many of the generations which used to work as *siringueros* in the rubber estates however left to cities such as Riberalta, Cobija and Guayaramerín. The end of the rubber era bought modifications in rural livelihood strategies; a new balance had to be found between agriculture, extractivism and wage labor (Henkemans 2001: 51). *Barracas* still exist in The Northern Bolivian Amazon, but are only populated during the Brazil Nut collection season. The rest of the year, the people reside in one of the three cities or in the smaller communities. I will now describe other main characteristics of the Northern Bolivian Amazon.

4.3 Characteristics of the Northern Bolivian Amazon

As described earlier, the Northern Bolivian Amazon can be seen as a separate part of the country. It features certain characteristics. Below are the demography, economic activities, infrastructure and transport and climate, vegetation and soil described.

4.3.1 Demography

According to the census of 2001, Pando counts 52,525 inhabitants (in 1992 38,072 inhabitants). With its 63,827 km², the department has 0.82 inhabitants per km². The capital of Pando, Cobija counts more than a quarter of the total population of the department. The biggest city of the Northern Bolivian Amazon is Riberalta however, with 56,393 inhabitants in 1998 (INE 2001). After the collapse of the rubber market, many *siringueros* migrated to the urban areas (see table 2).

Table 2 Population divide of Pando

	Population 1976	Population 1985	Population 1992	Population 2001
Department of Pando	34,493	46,933	38,072	52,525
Urban	10.6 %	10.3 %	26.3 %	42.6 %
Rural	89.4 %	89.7 %	73.7 %	57.4 %

Source: Henkemans 2001

4.3.2 Economic activities

As described in the section on history, rubber production used to be the main income generating activity in the Northern Bolivian Amazon. Nowadays however, the most important economic activity is the collection and production of the Brazil Nuts. Other activities are the agriculture, primarily for subsistence, cattle breeding, selective cutting of wood and the extraction of products such as asaí. The three last activities are increasing. All are accentuated close to roads and on the margins of rivers, primarily in the province of Nicolás Suárez, Manuripi and Abuná (Weeda and Suárez 1997: 14). In order to breed cattle or engage in agriculture, tropical forests need to be burned down. Also tropical forest is burned down, in which the large Brazil Nut trees can be found (figure 5).

Other activities in the Northern Bolivian Amazon include exploitation of alluvial gold, which is realized on the margins of the Madre the Dios and Madera rivers. The extraction of alluvial gold has been developed explosively from 1986, but nowadays has declined to a certain manner. The manufacture industry has known little importance in the Northern Bolivian Amazon. Primarily due to reducing internal market, lack of good infrastructure and the strong competition from Brazil. Other activities are generated by other sectors which show mayor growing dynamics, for example, the transport and communication sector, the growth of the informal economy and market opportunities with Brazil, which originates a mayor demand of the Brazil border population of several goods and services at the Bolivian side (Weeda and Suárez 1997: 17-19). For example, every weekend, many Brazilian tourists 'invade' Cobija and buy goods such as electronics, but also food and drinks; Brazilian beer is cheaper in Cobija. From 1983, Cobija is called a *Zona Franca (ZOFRA)*, which means that it is an commercial and industrial free trade zone. It means that people are excused of paying certain taxes within a range of 19 kilometers from Cobija. This measure was put into place to populate the Cobija area, to stimulate economic activity at the border and to give foreign investors an incentive to invest in the border area of Cobija (Lahaije 2007: 66-67).



Figure 5 Burned Brazil Nut trees

Source: Simone Weert

4.3.3 Infrastructure and transport

Cobija is connected to the rest of the world (or the rest of the world to Cobija) through a couple of roads. These can hardly be called highways, as it are dirt roads. From Cobija, is it possible to go to four directions. To the north, Cobija borders Brasileia and Epitaciolandia, both in Brazil. To the east, one road runs from to Puerto Rico and further on to Riberalta. To the south, a road runs to Porvenir and further on to the south. To the west is a dirt road to Extrema, which borders Peru. During the wet season, these roads may become inaccessible. Along the roads small communities are settled, mostly consisting of no more than ten houses. The investigated communities for the research are however situated further off these main roads. From the main road it takes half an hour to one hour to reach the communities on small dirt roads.

The other way of transport is through mayor rivers. This way of transport used to be the main mode of transport in the old days. Nowadays many river-based communities make use of this kind of transport with small motorboats or canoes. It is however difficult to use the river transport in the dry seasons, because of sandbanks. The main navigable river is the Madre de Dios, especially in the wet season. Other navigable rivers are the Manuripi, Tahumanu and Orthon rivers in Pando. The last mode of transport is by airplane. Pando has several small runways with the capacity for small and mediate airplanes. Only Cobija has an asphalted runway and has capacity for big airplanes (Weeda and Suárez 1997: 17). Characteristic of the cities in the Northern Bolivian Amazon are the many motorbikes used for transport. As these are cheaper than cars, it is an attractive alternative. Many men generate some extra income, by driving around as a 'motortaxi'. Also in the communities, people make use of the motorbikes, it is not only cheaper, it is also a good mode of transport during the wet season. It is easier getting through mud with a motor than with a car, which gets stuck easily.

4.3.4 Climate, vegetation, soil and fauna

The climate in the Northern Bolivian Amazon is hot humid tropical, with a relatively dry period from May to September. During the dry period, several cold fronts from the south gather above the Northern Bolivian Amazon. These cold winds are called '*surazos*'. The mean yearly precipitation varies between 1834 mm to 1774 mm according to registration from weather stations in respectively Cobija and Riberalta. The mean yearly temperature is 25,4°C and 26,2°C in the respective cities. The predominant wind direction is Northwest to Southeast (Weeda and Suárez 1997: 14).

For mayor part the Northern Bolivian Amazon is covered by evergreen forests, characterized by a variety of living forms and complex flower compositions. Around the cities these forests are however disappearing due to human influence. The vegetation varies according to climatic conditions, soil differences, impact of floods and human influence. Only in the Southeast one is able to find small areas of Savannah with some isolated groups of trees (Weeda and Suárez 1997: 14). In the Northern Bolivian Amazon, roughly two types of soils can be identified; the plateau and the lowlands floodplains. The soils from the plateaus have good physical characteristics when it comes to structure, drainage and profundity, it are poor soils with a low natural fertility and develop frequently toxic levels of aluminum. This last characteristic constitutes a main constraint for the cultivation of foods. In dried out areas, the forest copes with mayor degradation in its soils, exaggerating a high degree of hydric erosion. The focus communities however both are situated in the lowland flood plains which are influenced by rivers originated from the Andes. These soils are relatively more rich in nutrients as result of the regularly left behind sediment. The use of these soils however is limited by the risk of floods and bad drainage (Weeda and Suárez 1997: 14-15).

The northern Bolivian Amazon is characterized by a high diversity of fauna. However, many species know a reduction in their population due to subsistence hunting and for mayor part due to commercial hunting which has altered certain species in the danger of distinction. The species most affected are the big and average mammals such as the *tigre* (jaguar), *londra* (giant otter) and the big saurian such as the *caimán negro* (black caiman) and the *lagarto* (caiman). The subsistence hunting and fishing are traditional activities which complement the diet as a form of proteins. The pressure on the fauna is increasing, especially in the period of the collection of the Brazil nuts and by the growth of wood logging activities (Weeda and Suárez 1997: 15).

4.4 Important laws

Although the focus communities are located quite isolated, they are influenced by structural processes such as certain national reforms and laws. The two most important for the communities in the Northern Bolivian Amazon are identified below. First the Agrarian Reform of 1953 which accelerated the formation of independent communities. The Popular Participation Law of 1994 and the New Agrarian Reform of 1996 were established in the framework of the decentralization process which took place at global level.

4.4.1 Agrarian reform Law 1953

In 1952, Bolivia was a good example of Latin American rural inequality. Six per cent of the landowners owned 90 per cent of the arable land, with estates that averaged over 2000 acres. Indigenous peasants who had only access to small 'dwarf farms' were forced to work for large landowners to survive. Here they received in return for their hard work only the right to plant their crops on idle marginal *hacienda* lands. It is no surprise that the indigenous peasantry became the major base of support for the Bolivian revolution of 1952 resulting in the Agrarian reform. Militant miners from among others Potosí encouraged the indigenous peasants together with urban middle-class reformers. The indigenous peasants seized lands that had been taken from their ancestors and destroyed the *haciendas*. Peasant unions were formed, backed by political support by a new generation of politicians (Winn, 1992: 250-251).

The Agrarian Reform Law which was implemented in 1953, granted (indigenous) *campesinos* a piece of land, resulting in the formation of the first independent communities. In the

Northern Bolivian Amazon, the Reform resulted in a forest plot with an *estrada* for *campesinos* (Henkemans 2001: 76). A consequence of the Reform was however that free land trading resulted in land concentration. Many smallholders sold their land to rich large estate holders (*granjeros*) which resulted in the fact that these *granjeros* had access to the comparatively large plots of former *barracas* (Ormachea and Fernández 1989).

4.4.2 Popular Participation Law 1994

As part of the decentralization process, the Popular Participation Law was established in 1994. As Bolivia coped with internal social conflicts in the mid 90s, the central Bolivian government introduced major structural reforms and institutional changes in the country. This in order to assign more authority to municipal governments aiming at improving social investment at local level and promoting more regional participation in public management (Pereira 2004: 15). The Popular Participation Law expanded the municipal governments' jurisdiction, covering the whole rural area and not only the urban centers. With the Law, municipalities were responsible for local schools, health facilities, road maintenance and water systems. Before the implementation of the Law, funds for urban development were allocated directly to municipal capitals or indirectly through regional development corporations, organized at the departmental level. Prior to the Law, 92 per cent of the national expenditure used to go exclusively to the three cities on the central axis; La Paz, Cochabamba and Santa Cruz (Kohl 2003: 155-156; Pacheco 2006:11-12)

In order to finance the new responsibilities the central government assigned twenty percent of the national budget to the municipal governments, to be distributed among the municipalities in proportion to the population size. The Law aimed at a more equitable distribution of public resources, by allocating one Boliviano¹⁴ for each Bolivian citizen. In this way addressing historical, social and regional exclusion on rural and some urban areas (Pereira 2004: 15-16). At the heart of the Popular Participation Law where three measures. The first was the legal recognition of ten thousand peasants and indigenous communities throughout the country. Second the recognition of traditional governing structures of these communities. Thirdly the recognition of their territorial rights (Kohl 2003: 156).

As the Law is called Popular Participation Law, municipal governments became more democratic and rural populations (mainly smallholders and indigenous people) gained the right to participate in municipal elections. Furthermore, local social organizations such as farmer organizations, indigenous groups and neighborhood committees were recognized as territorially based grassroots organization; OTBs (*Organizaciones Territoriales de Base*). These local organizations are allowed to participate in the formulation of development plans as well as to oversee municipal financial management by forming a community-based vigilance committee in each municipality. These committees' representatives however had to cope with continuous pressures of political parties Furthermore, indigenous governments were forced to subordinate to the municipal governments. Indigenous jurisdictions however overlapped municipal jurisdictions and are often spread over different municipal territories. Indigenous requested upon the recognition of autonomous territorial units with the same hierarchy as municipal governments (Pacheco 2006: 12). This request was agreed upon in the New Agrarian Reform of 1996.

4.4.3 New Agrarian reform 1996

Frustration from unmet Agrarian Reform expectations led to increasing land conflicts in rural Bolivia. In 1996 the new Agrarian Reform Law was passed. This Law required land to serve a socio-economic function by being used productively or being protected as an ecological reserve. Large landholdings were forced to redistribute land to the landless. Main effect of the Law was to put in place the procedure known as *saneamiento* which is the addressing of disputed land claims and clarify property rights (Hertzler 2007). Stagnant decentralization of government services and the lack of papers proving land claims however prevent a fast *saneamiento* process (Henkemans 2001: 77).

¹⁴ Bolivian coins, one Boliviano (bs) is 0.11 euro (exchange rate March 1, 2009)

The new Agrarian Reform along with the new Forest Law of 1996 guaranteed the recognition and protection of indigenous and *campesino* communities' rights. One of the key issues of the Reform is the restructure of community property. *Tierra Comunitaria de Origen* (TCO) for indigenous communities and *Propiedad Comunal Campesina* (communal *campesino* property) were introduced. These two land reforms were set in motion by the Agrarian reform of 1953, but never brought significant change in Pando. In the years between 1952 to 1991 power in the region was distributed only between entrepreneurs and *barraqueros* (Aarts 2009: 37, 50). Nowadays, independent communities have access to a communal shared territory for an initial period of 40 years. Usually the territory is divided internally between the inhabitants. Community syndicates (OTBs) are responsible for the management and can divide all the forest land or manage a part of it as communal forest. In this communal territory, households have on average access to a forest plot of about 500 hectares (Henkemans 2001: 77).

4.5 Current trends and problems

Although isolated, communities in the Northern Bolivian Amazon can be affected by certain trends and problems. This can extent from climatic problems to global economic processes. In the theoretical framework (chapter two) I already elaborated on three external factors which can influence household livelihoods all around the world, namely climatic, political and political-economical factors. When looking at the Northern Bolivian Amazon context, certain trends and problems can be distinguished. These can also have an impact on forest livelihoods. As mentioned in the previous section, unclear land distribution caused uncertainty among *campesinos*. In 2008 the process of *saneamiento* was still not completely finished. Some independent communities still could not count on a land title (*titulo*). Prospects are however good for the *campesinos* as the process is almost finished. With a *titulo*, *campesinos* (and also indigenous communities) are given access to all the forest resources, but on the condition that the use will be for non-commercial uses (Aarts 2009: 86).

Commercial use of forest resources, the logging industry in particular, is recently characterized by an expansion. Although compared to its big brother Brazil, the Bolivian logging sector is rather moderate in size and concentration and mainly concentrated in the eastern lowlands around Santa Cruz. The recent increase of logging activities in the Northern Bolivian Amazon is a threatening development which poses a risk to forest livelihoods. The Forest Law of 1996 allows the government to lease forests to private companies in 40 year concessions according to sustainable principles. But as the Northern Bolivian Amazon and especially Pando is a remote region, state control over these principles is non-existent. Recently lumber companies along with independent loggers have speeded up their activities and diversified the list of economic species. As concession boundaries are not always respected, conflicts about legal extraction on indigenous lands, *barraca* territories or the community forests of the *campesinos* are abundant (Henkenmans 2001: 78).

Another trend is the massive migration to urban areas. Table 2 shows the divide of population in the department of Pando. Between 1992 and 2001 there has been an enormous increase of the urban population. Before, the majority of the population lived in the rural areas, but after the collapse of the rubber era, many former rubber tappers moved to the urban areas. Nowadays the migration to Cobija is less than just after the rubber period, Cobija is still a growing city. Migrant forest dwellers often reside in *barrios marginales*, with hardly any basic services present. They leave their communities due to a lack of education, healthcare, diversified food and income opportunities, as well as the difficult access to other services (DHV, 1993). With a lack of space to cultivate their own food and the cash economy of the city making services inaccessible for the poor. Often jobs do not appear to be that easy to find or do not generate enough income to survive in the city. As a result increased overpopulation and poverty in the town and seasonal involvement of town inhabitants in aggressive forms of forest exploitation characterize the urban areas and its surroundings. *'The scarcely populated forest becomes an inefficiently exploited resource base with several rural development options left unused and a free area for large companies and private land owners to perform uncontrolled logging and forest conversion.'* (Henkemans 2001: 79). One of the main constraints for community development are the frequent

outmigration (also seasonal) which cause organizational instability. Forcing development agencies in focusing on stabilizing rural livelihoods (Idem).

4.6 Concluding remarks

The Northern Bolivian Amazon is a distinct part of Bolivia. It is covered mainly by tropical rainforests and knows a hot humid climate, with wet and dry seasons . The history is characterized by the many migrants entering the region to engage in rubber tapping. This industry has been characterized by boom-to-bust cycles, demanding a resilient lifestyle of the rubber tappers. Nowadays rural inhabitants of the Northern Bolivian Amazon primarily engage in (semi)subsistence agriculture and Brazil Nut collection. These two activities are often complemented by (temporal) wage labour in more urban areas, sometimes resulting in situations marked by high poverty in the urban areas. The lack of hard infrastructure makes it hard for people to travel around, asking an independent attitude of *campesinos*. Different factors such as illegal logging can also pose a threat to forest livelihoods. Certain laws however have made it possible for *campesinos* to sustain their livelihoods in the communities. How life looks like in two focus communities will be presented in the next chapter.

5. Introduction to the villages

As described in the methodology chapter, two communities were selected in the department of Pando. Both are situated in different municipalities, but in the same province, Nicolas Suarez (Figure 6). Palacio was selected after the short pilot study in April 2008, Molienda was proposed by CARE staff in October. Both communities proved to be interesting to the research, as both had some mayor similarities and differences. Below in section 5.1 I first present Palacio with its main characteristics, history, leadership, supporting organizations and the inhabitants and their activities. In section 5.2 the same themes will be presented for the community of Molienda.

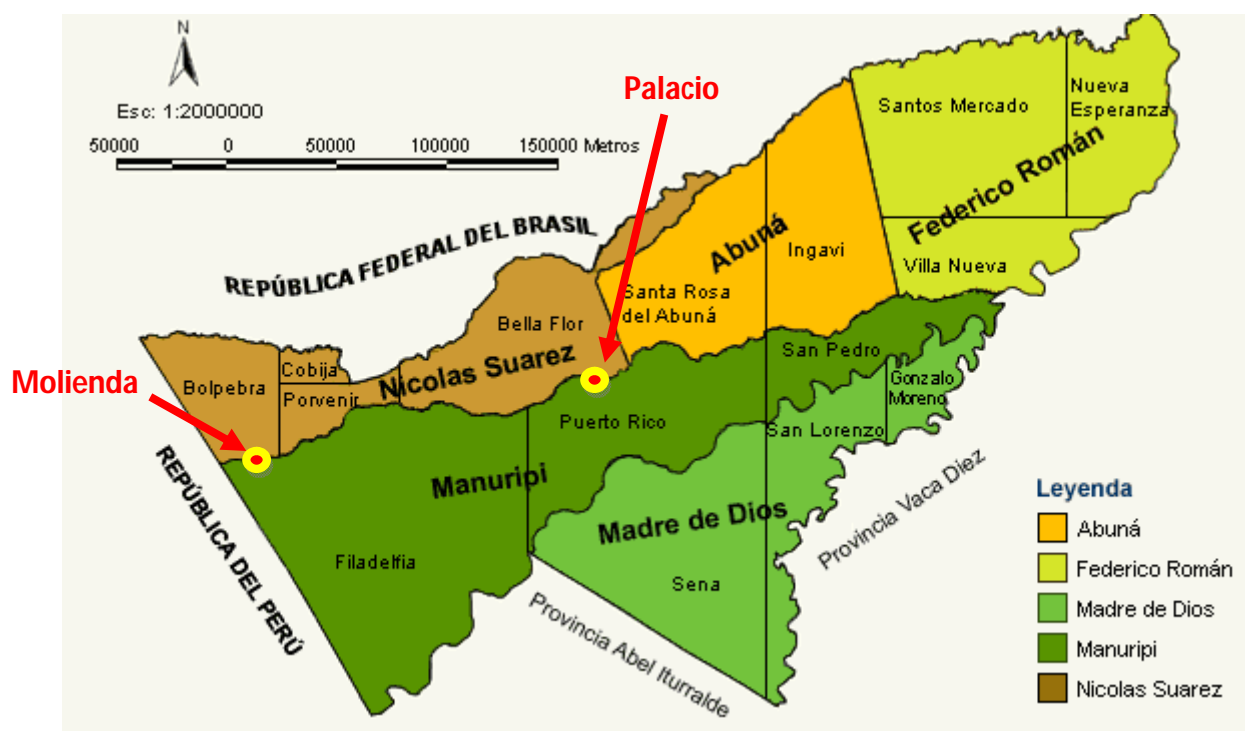


Figure 6 Pando and its provinces, indicated are the two communities

5.1 Palacio



Figure 7 Entering Palacio

Source: Simone Weert

'During a visit of several communities along the Tahuamanu river, one community appeared to be inaccessible by road. From neighbouring community Florida I learned that the community named Palacio 'tiene llenura'; it was flooded. The next day Daniel the CARE driver and I arranged a boat and cruised in the early morning for one hour and a half along the Tahuamanu. Suddenly a small green/white flag of the Pando district appeared at the right brink of the river. This showed the entrance of Palacio, but our boat was too big and we couldn't access the small doorway in the wide diversity of jungle bushes. After making several loud noises, a man in a sports t-shirt and army printed shorts appeared in a wooden canoe with two little boys. After a short introduction they brought us deeper into the jungle. When we arrived at a small lake with huge water lilies, the small village of Palacio appeared. With its small wooden palm leaf covered houses, numerous (fruit)trees, kids playing in the lake, hammocks and blue skies it was a true paradise'.

- Diary, April 2008

5.1.1 Palacio in a nutshell

The independent *campesino* community of Palacio is situated in the municipality of Bella Flor (figure 8), about 5 km from Puerto Rico (walking 2,5 hours, half hour by car) and about 170 km from Cobija (3,5 hours when road in good condition). It is situated about 20 minutes by car from the main road between Cobija and Puerto Rico. The closest other community is partly indigenous Florida, which is situated on a half an hour walk. A frequently used mode of transport to go to Puerto Rico is by the river Tahuamanu, it takes about an hour by small motorboat. Palacio counts on almost 3000 hectare of land. The amount of land cultivated by the community members is about twenty hectare (1,5 h per household) The rest is communal land and mainly covered by trees. Also a large amount of land is located low by the river, this *bajío* land is not cultivatable as during the wet season it gets flooded.



Figure 8 Communities in Bella Flor

Source: CARE

In Palacio live officially thirteen families and it counts 58 habitants. All families are related to each other by family ties. There is a community school which has 24 pupils. There are two groups, the 'kindergarten' which is led by a teacher who comes every day from Puerto Rico to teach and the older students (up to thirteen) who are led by the teacher who lives in the community (not a family member however). The school is located in the center of the community and has a concrete soccer/basketball field and a grassy soccer field (only in use in the dry season). The houses are located within a distance of 100 meter with in the middle the house of Jorge and Maria, the founders of the community and literary the (grand) (grand) parents of the communities habitants. Their small house has a separate kitchen and a 'veranda' on which the community habitants gather for small official meetings (big meetings are held in the *sede*) or informal chats. Palacio was founded on the 24th of June, 1950, which makes it the oldest *campesino* community in the municipality. In the following section, the history of the community is described.

5.1.2 History

'In the beginning there was nothing, can you imagine how it is to arrive at a place only covered by trees?'

-Jorge Andrade, Palacio, October 2008

The history of Palacio is told by Jorge and José Andrade as a legend. It starts somewhere in 1950. Jorge Andrade who was born in Santa Cruz, came in the end of the 1940s of the 20th century to Pando to work in the rubber industry, he was only eighteen years old by then. In Pando he met his wife Maria Antezana. Jorge first lived with Maria's family for a while, when he learned from a friend from Puerto Rico about a place called Palacio. This was a place which was abandoned by former *barraqueros* of the Nicolas Suarez empire. At that moment the land however had no

owner. Jorge and Maria decided to camp at the location to see whether they could live there and start a family. On the 24th of June in 1950 at 5 pm the couple arrived at the bank of the river with no more than the clothes they were wearing and started to camp right there, as the rest of the place was completely covered with trees. They found Palacio a beautiful spot, located next to the river Tahuamanu, which was used as a main way of transport to Cobija or Riberalta and from there on to Brazil, as there were no roads yet. Most important however to Jorge was the presence of many *siringa* trees of which rubber could be extracted.

The first months the couple was all alone in the jungle and Jorge and Maria were risking their lives. '*I had to fight against the jaguar, snake and caiman, I was afraid to go to sleep*' tells Jorge. The couple however decided to stay and start a family. Little by little they found their way in Palacio, they cut down trees, built a house and cleared forest to make a path to Puerto Rico. After a year the parents and brother of Maria arrived at Palacio and started to live there as well, as well as some friends, who were all working in the rubber extraction. In 1953 the Agricultural Reform gave Jorge the opportunity to obtain the document in which it was stated that he was the owner of the place called Palacio. Maria gave birth to nine children. To give the children some form of education, Jorge and the other parents started to pay for a private school in Palacio to educate their children. Little by little Palacio was converting from a savage, wild place into a 'rubber centre'.

The daily activities of the extrativists in Palacio were as follows: in the early morning the men left their houses and went into the forest to mark the *siringa* trees¹⁵ and put bowls under the marks to extract the rubber. In the afternoons they returned to their houses for lunch and to rest. After 3 pm, they continued their work on the small agricultural fields, *chacos*, where they cultivated manioc, rice, maize and plantains. After numerous years, the government of Bolivia placed schools in all communities and assigned a government-paid teacher. This replaced the private school, Jorge and the fellow parents paid for. When around 1992 the rubber market came to an end, many community members left Palacio. The remaining community members had to spend more time on their *chacos*, since they started to sell their agricultural products as well. Others left temporarily, to engage in wage labor in Puerto Rico or Cobija, or travelled to a patron owned *barraca*, where they collected Brazil Nuts.

5.1.3 Leadership and community institutes

The main body of leadership is the OTB (*Organizaciones Territoriales de Base*) and resembles the municipal council. The fundamental idea of the OTB lays in the law of Popular Participation (4.4.2). The law has described the rights and duties of the OTB (box 3). In Palacio, the OTB is led by José Andrade. According to himself and community members, his duties are to take care of the community and represent the community in the municipal government of Bella Flor. The job is voluntary. Next to the OTB several groups are formed around different themes. First there is the 'School group' which controls the teacher, takes care of school material and presents to the municipal government. This group is formed by two adults and a child from the highest grade. Second, the 'Mother group' takes care of all the necessities of the community's woman and represent the smallest children. Thirdly, a 'Sport group' focuses on youth sports, social gatherings and makes sure the soccer field is cleaned (getting rid of the weeds). There is furthermore a 'Health group' which was established by CARE, this group however has no coordination as there is no health facility in the community. The last group is the 'Watercommittee' which takes care of the water system and buys fuel when it is needed. Although pretty good organized, in the next section I will show that the community receives support from various organisations and the government.

¹⁵ Palacio is said to have good quality of *siringa* trees, as it is located low by the river. On higher locations, there are less *siringa* trees, or of a lesser quality. Because of its low location, Palacio however has no Brazil Nut trees, trees that are more located on higher locations

Box 3 Legally defined responsibilities of the OTB¹⁶

Rights

- Propose, request, control and supervise public services according to the communal needs concerning education, health, basic infrastructure, neighbouring roads, sports and rural development.
- Participate and promote actions related to the management and preservation of environment and sustainable development
- Represent and obtain the modification of actions, decisions and, services provided by public administration opposite to communal interests.
- Propose the replacement or ratification of educative and health authorities within their territory.
- Have access to information about resources assigned to Popular Participation

Duties

- Identify, favour, participate and cooperate in the execution and administration of projects aiming at communal welfare, notably concerning aspects of formal and informal education, house improvement, health care, sport, and improvement of technical support to production.
- Participate, cooperate with solidarity work in the execution of projects and in the administration of public services.
- Cooperate with the maintenance and protection of public, municipal and communal wealth.
- Inform the community about the activities developed as their representatives.
- Make use of administrative and juridical means to defend the rights recognised by the current law.
- Promote the equitable access of men and woman at representative level.

5.1.4 Supporting organisations and government

Although community institutes (informally called groups) form the backbone of the community. Many communities receive some external support. Palacio is no exception and receives support in the form of programs or projects from (municipal) government and NGOs.

5.1.4.1 (Municipal) government

Communities in Pando do not get a lot of attention and support from the government. There are however some projects of the municipal government executed throughout the years. Palacio is backed by the municipal government of Bella Flor by various projects. At the moment of the fieldwork the community was deeply engaged in the '*Mantenimiento de Caminos Vecinales Comunidad Palacios*' or as the community members call it : 'cleaning of the road project'. This project started in 2008 and is co-financed by the Spanish Foreign Affairs and Oxfam. It is part of the PLAN¹⁷ project, which is established to create employment in both rural and urban areas, to stimulate local policies to provide infra-structure for the improvement of roads and maintenance, to facilitate access to the communities and to assure trading of agricultural products. It is an agreement between the National Service for Roads, the prefecture and the municipal government. The idea is that community members contribute with work and the prefecture provides in machinery and the municipal government in fuel and food for the workers. In Bella Flor, the project is executed in sixteen communities. In Palacio the project mainly focuses on the cleaning

¹⁶ As described by the Popular Participation Law in Pereira (2004: 64)

¹⁷ Plan Nacional de Empleo de Emergencia

of the road from the main road between Cobija and Puerto Rico to Palacio. The first 30 m of this road is cleaned by community members of neighbouring Florida as this includes a shared road. Cleaning of the road means that the road has to get rid of the weeds in order to make it accessible by cars (i.e. from the mayor of Bella Flor).

Community members receive 800 bolivianos (bs.) a month each for working five days a week, about four hours a day. It is ruled by the government that they only have to work half a day, as the community members also have to take care of their children (school is only till 12pm) and their *chacos*. During my first fieldwork period, the community only had a contract for three months and it was to be seen whether this would be extended. In October however, the community member were still engaged in the project and the activities were even expanded. The municipal government of Bella Flor did not only pay the members to 'clean the road' but also to build their own houses. According to José, it has to be seen however whether the project will be continued in 2009.

The municipal government furthermore has constructed a water pump about ten years ago in the community. Before, the community members had to drink the water from the river/lake. With the new pump the community members found there were less diseases such as diarrhoea among the children. This water pump is used manually (pumping the water from the ground). The government also placed a school in Palacio, and the accompanying teacher's house. The above described 'school group' is necessary for the establishment of a community school. A community needs to have a minimum of 15 children attending a school and a 'school group' in order to receive government support for the construction of a school building and the appointment of a teacher. There is furthermore a kindergarten, as well accompanied by a house for the kindergarten teacher. Teachers are usually provided by the municipal government. In October the kindergarten teacher did not live in Palacio, but came every day from Puerto Rico on his motor. Another programme from the municipal government are the school breakfasts. Every day a group of woman makes the breakfast from the ingredients provided by the municipal government:

'These breakfasts are not really good, sometimes they only get some oat and tea, that is not a breakfast isn't it? But it is better than nothing'

-Rafael and Daniela, October 2008

Another project which was executed by the municipal government was the placing of small solar energy cells close to several houses. Not every house had these cells, but it was to be expected:

'We hope to get the electricity soon, then we do not have to sit in the dark all night. Did you see that all the houses along the main road have solar energy? It is because of our isolated location that we have to wait longer'.

-Julia Andrade, October 2008

5.1.4.2 CARE

CARE is an international leading humanitarian organization fighting global poverty. The organization places a special focus on woman, as these have the power to help whole families and entire communities escape poverty. CARE also delivers emergency aid to survivors of war and natural disasters, and helps people rebuild their. In Bolivia, CARE is executing programs and projects for 32 years now. At the moment of my fieldwork period it had one project and one program in Pando. The project is among others executed in Palacio. The program in Molienda (see 5.2.4.3) Sometimes the projects and program are added by an emergency project mainly focusing on the construction of drinking water systems and latrines. The emergency project was executed in November 2006 and included the construction of potable water facilities and latrines. This "*Construcción de sistema de agua y saneamiento básico*" project resulted in two latrines and potable water facility. The latrines (one for adults, one for children), are especially used by the children as it is closely located to the community school. The potable water facility and sink are located in the centre of the community. The water is generated from the groundwater which is

pumped out of the ground by a generator which runs on fuel. The project is for the main part financed by CARE France. The generator is however not only used to pump the water:

'Today was Labor Day which mend party! (...) While the woman were preparing the meal, the guys were fixing the radio. As batteries are very expensive, the guys tapped some power from the generator from the potable water facility. After half an hour we all were able to listen (with continuing breaks) to reggaeton and even some European dance hits from the 90s!'

- Diary, May 2008

During my second field trip in October, I wanted to wash my hands, but no water left the tap. Only after consulting José I learned that since there was no fuel, it was not possible to make the water pump working. Luckily the community had the manual water pump from the municipal government. Fuel prices were running extremely high in October due to political problems.

The other project is a CARE/DIPECHO project called *'Strengthening capacities in disaster risk reduction in the binational region of Pando (Bolivia) and Madre de Dios (Peru)'*. This project was executed while I was in Bolivia in April and I got the chance to attend one of the meetings, given by CARE staff in the community of Las Abejas, not far from Palacio. I even got the chance to give a small unprepared presentation of the concept of vulnerability. Main goal of the project is to make people aware of the risk from natural hazards they face. Awareness rising was done by organizing meetings in the various participating communities which face high risks of flooding and/or bushfires. In these meetings, certain 'risk committees' were founded, and various participating activities executed such as, drawing a risk map of the community, identification of main risks etcetera. Furthermore, meetings were organized with different stakeholder such as municipal government, civil defence, prefecture etcetera. Also several information commercials were shown on television to the prevention of bushfires. Workshops are given and about 300 officials were trained and participated in risk-management activities.

During my fieldwork period in October I was able to identify the thoughts of the community members on the DIPECHO project. In April they still had no idea what the project was about, while it was already running for half a year. In October José Andrade told me:

'The CARE staff organized a meeting here in Palacio about bushfires. Now we know what we can do to prevent them. When we burn our chacos, we do it all together now, we work as a group, just to prevent the fire from expanding to the forest. We also make small path between the forest and the chacos'.

- José, Palacio October 2008

The community members did not learn anything new about floods.

5.1.4.3 CIPCA

CIPCA is a non-profit Bolivian private research and promotion institute focusing on poor rural people. Its mission is to contribute to the political, economical and cultural strengthening of the peasants and indigenous people. As well as to participate in the construction of a democratic, intercultural, equal and economical sustainable Bolivia. The institute supports various programs and projects around Bolivia. In Pando, CIPCA works in the municipalities of Bella Flor and Puerto Rico. At the moment it was executing two projects in Palacio both focused on the improvement of the cultivation¹⁸.

On October 18, 2008, CIPCA organized a training workshop on rural development and political participation in Palacio. Through different methods, the community members analyzed problems in their community, identified solutions and made arrangements of how to influence the municipal government. The main problem that was identified was the flooding of the community. Together with CIPCA the community member thought about possible solutions. One

¹⁸ http://cipca.org.bo/index.php?option=com_content&task=view&id=1001&Itemid=46 02/02/09

solution was to construct a platform of one meter height on which the community members could cultivate their products. In this way the flood would not affect the cultivated products. The other solution identified was to change to crop calendar. Now, seeds are sowed in September/October (see annex 3), the small plants will grow during the wet season, making use of the precipitation. When there is however too much water, the plants die. When changing the crop calendar and thus sowing just after the wet season, the precipitation no longer influences the cultivation. It is however hard to grow the small plants in the dry season, therefore, irrigation is needed. It has to be seen whether one of the solutions will be executed. José however was in favor of the second solution:

'CIPCA however has to provide these irrigation facilities as we have no knowledge on these things'
- José, Palacio, October 2008

Part of the same project was a training on political participation. In this training, themes such as leadership, community organization, municipal government were discussed. José was very enthusiastic about this project as he took part in various workshops, in Pando, but also in other parts of Bolivia. During the workshops, all the community leaders from around Bolivia talked about the problems in their community and how it could be solved. This was a good opportunity for Alejandro to see something of the rest of Bolivia, as he hardly ever travels:

'CIPCA paid for everything, together with the engineer (of CIPCA) we went with the plane from Cobija to Cochabamba. I liked travelling in a plane, it is just like a bus but a bit bigger'.
- José, Palacio, October 2008

The other project focuses on the actual products to be cultivated. This project is co-financed by the municipal government of Bella Flor. During a couple of years, the community members of Palacio receive small plants such as cacao plants. This in order to diversify the range of products. I saw many of these plants stored in houses. When I asked why people did not plant them, people often said that it was not the good season to plant. I also sometimes got the answer that people did not have any knowledge of how to take care of the plants. CIPCA also distributed certified rice seeds to the different community members in Palacio. These certified seeds are supposed to give twice as much harvest as 'normal' seeds (pers. communication F. Ventura, engineer CIPCA).

5.1.5 The inhabitants and their activities

Every community is unique, Palacio however beats them all, as all inhabitants are related to each other by family ties. At the head stands Jorge Andrade and his wife Maria Antezana. Of the nine children the couple got, five live in Palacio. The others passed away or live in Pando as well. The other community members, are grandchildren of Jorge and Maria. In the past there used to live other families in Palacio as well. These last *amigos* however left shortly after the end of the rubber era (1992). The Andrade family stayed:

'After everything my father build up, we could impossibly leave when the rubber era ended, this is his land'.

-José, Palacio, October 2008

After the end of the rubber period, the community members continued for mayor part their daily activities such as taking care of the *chaco*, washing, fishing, hunting, resting, constructing or repairing houses, cooking, taking care of animals, selling some of the products, visiting Puerto Rico or sometimes Cobija.

During night-time, the most community members gather at their own house and spent the evening together. Often diner is followed by washing the plates and cutlery and washing one's self in the lake. When gathering in the houses, people talk with each other. During my first fieldwork period, the community members had no electricity, they thus made use of one or two candles to light the house. In October however two houses had electricity from solar power and we were

able to talk to each other by neon light, less cosy however. In these nightly conversations all type of themes are covered. Such as politics, economical issues such as fuel prices. My presence however influenced these conversations, as the differences between Bolivia and the 'western world' were often discussed when I was around. During these night time conversations also less tangible subjects such as mystics and belief were covered. On one night José told me the extraordinary story of the Motacú (box 4).

Box 4 The Story of the Motacú

"I was nine years old, it was 11 o'clock in the morning, I was watching my mother who was washing the clothes in the gorge. I felt I had to look after her, as my father was busy in the forest extracting rubber. Suddenly I saw an air bubble, about 50 meters of the lake's shore. 'Look at the water' I screamed to my mother, and she looked up. We both saw the rising from the water of a Motacú tree. The whole body of the tree was appearing. It lasted only for about five minutes. It came slowly and it left and didn't leave anything behind. It didn't disturb the water. The Motacú appeared with dry branches and had no leafs. When it appeared there were no drips. It was completely dry.

Afterwards other villagers also saw the rising of the Motacú. Like on the day that people from the municipal government project were constructing the community school. I told them the story, but they did not believe me and on one day, the workers were just leaving their house close to the lake to go fishing. Then suddenly the Motacú appeared again, they were finally convinced! There was also the couple who went swimming and washing in the lake in the afternoon when the Motacú appeared.

The Motacú lives here, but we do not know when it appears. One time the lake was almost dried up, strangely enough we did not encounter the Motacú.

The last time when someone saw the Motacú appearing was in 2005, the community teacher has seen it. So the Motacú just keeps on appearing, but we do not know when, for us it is not very special anymore, it is not that we are waiting for it to appear."

- Jose Andrade, April 2008

Differences between the community households are small. Almost all households have hens, and to a lesser extent ducks. The household of Sandra has one pig and the household of Rafael has 30 pigs. No households have cars and only recently a son of Paola has bought a motor. The most valuable that people have in their houses are their rifles, used for hunting. Marcelo has a Marlin which cost him 3000 bs. ammunition can be bought in pack of 50 bs, which costs 50 bs. In October it was however a bit difficult to buy the ammunition because of the state of siege (box 5). There are about two canoes available in the community which are shared by the community members, these are bought by people themselves. There is also a motorboat which can be used for transporting products to Puerto Rico which is donated by the municipal government.

Most community members stay all day in the community. Some of the younger generation sometimes leave the community to work in Puerto Rico or Cobija. When they have a family, usually the whole family leaves and goes to live in the new place for a couple of months. Marcelo and Mariana recently came to live in the community. Marcelo, as son of Rafael was born into the community. The couple lived for three years in neighbouring Florida, but when Marianas father died and she had no family left, they decided to leave for Palacio. The couple is thinking of leaving the community for a short while in the wet season to work in the collection of the Brazil Nuts. It however depends a bit on the price, when there is a bad price maybe they stay and take care of their *chaco*. In October they however did not know what the Brazil Nuts would yield. Last year the family left for four months to *castañar*, they worked for a patron. This time there was a house where they could sleep, but sometimes they have to build their own house as well. For a daily twelve hour work he received last year 170 bs. When they go this year as well, they will buy a

motor to go to Puerto Rico, but also when there is an emergency, as Mariana was in an emergency during her pregnancy and the medics could not come because there was no fuel. Luckily the woman of the community were able to help her.

Box 5 State of siege

During my second fieldwork period in October, the state of siege was declared for three months in Pando. The three measures that were the most important:

- Political meetings were forbidden;
- The use of and carrying of arms was forbidden;
- No allowance on the streets after 12pm.

For the people in the communities the first two measures were the most important ones, as most people go to sleep before 12pm. Especially in the start there were no meetings, even CARE could not organize meetings in the communities. Also meetings with engineers were postponed. The second measure could actually be of big importance to the members of both communities as they need their rifles for hunting. In Molienda community members were taking this measure very seriously and said they did not hunt during the three month state of siege. It was also impossible as they could not buy ammunition anymore. In Palacio, community member continued hunting as they were not afraid they would be checked. It was however harder to obtain ammunition, as this happened through the black market circuit.

5.2 Molienda



Figure 9 'The centre' of Molienda

Source: Simone Weert

'After spending a couple of days with families in the centre of Molienda, I decided to visit some houses a bit further off the center, among others the first house of Alvaro. As the way leading to the house of Alvaro was unknown to me and Luis, my CARE driver, we had to ask permission to take his son out of school to show us the way. During the one-hour walk it started to rain and it did not stop. To protect ourselves from the big raindrops, The son offered me a big banana leaf to hold and to cover my head. "That's how we do it in the jungle!"

-Diary, October 2008

5.2.1 Molienda in a nutshell

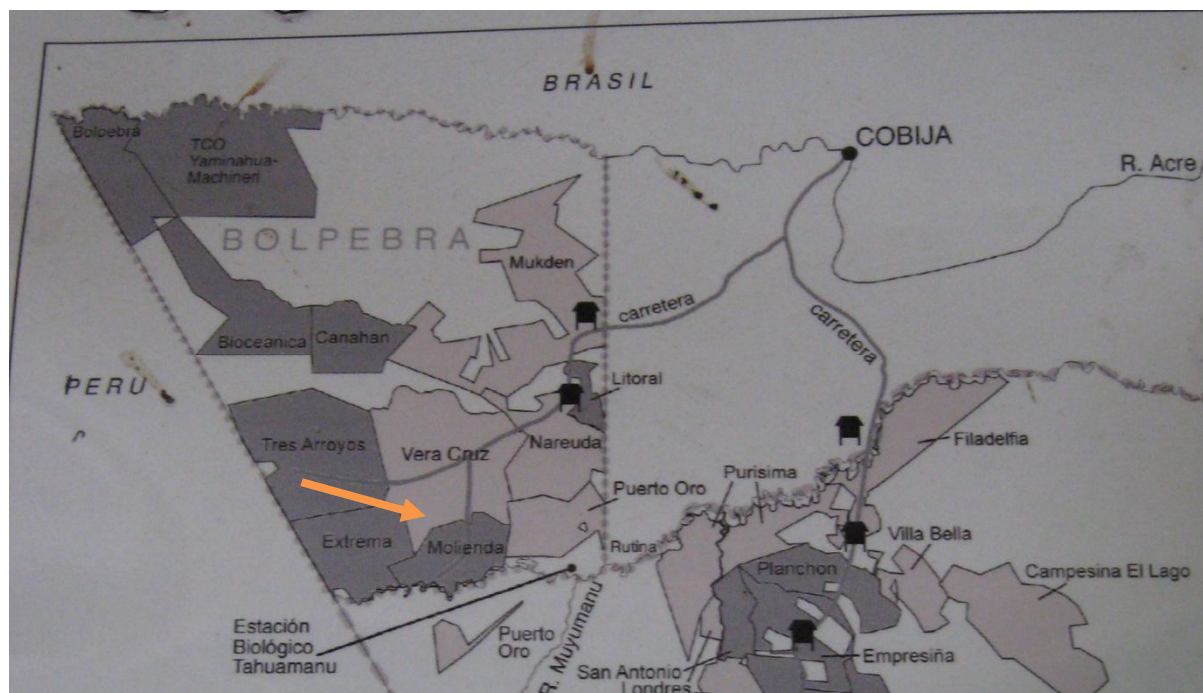


Figure 10 Communities of Bolpebra

Source: Simone Weert

Molienda is located in the south of the municipality of Bolpebra (figure 10) and has 6400 h. To the south it borders the Tahuamanu River. The community has twelve families. It is just like Palacio an independent *campesino* community. The community is however quite dispersed. There is a 'centre' in which the school and the house of the teacher are located. Around the school are about five houses with families located. This is a grassy area, in which small paths lead to the different houses. The houses are often hidden behind trees and bushes. The other families live further off. Families can live about 1,5 hour walking from the community centre. This is the typical structure of a former rubber centre, in which people lived dispersed, to tap rubber in different areas of the community. The closest other community in Vera Cruz, which is located along the road from Cobija to Extrema (border Peru), here is a small shop where one can buy drinks or snacks. From Vera Cruz a small road leads to Molienda in about 45 minutes. The bigger community is Nareuda, where there is an Entel Phone line, on foot this however takes five hours, (one hour by car). The community school counts on eleven students.

5.2.2 History

As the foundation of Palacio is told like a legend, the history of Molienda is written down in a book of Patricia, the community teacher, who teaches this history to her pupils. Just like the history of Palacio, the story starts in the early '50s. In 1952 the rubber patrons left the *barraca* in the area on which now the community of Molienda is build. Former rubber tappers, Anadeto Ramirez, Angel Carballo, Juan Chalqui (still alive at age of 67) and Maximo Bedoya, however stayed and founded the present-day community Molienda. These man however continued to work in the rubber tapping industry, but sold their rubber to patrons who lived in Cobija. The families worked quite independent and sold the rubber, making use of the river Tahuamanu to transport.

'The patron came every fifteen days and bought my rubber, I worked here all alone, the others worked further off'.

-Carlos, Palacio, October 2008

In 1983 the first community school was founded and counted at the time on 22 students. Some people however left the community in the decline of the rubber market after 1992. From 1997 the

community counted on a '*personeria juridical*' (recognition as a legal entity). And from then, several projects were executed under the lead of former community leader Alvaro Artieda. Among others, projects about Brazil Nut collecting, the radio for communication, the community school, the production house, a machine to get rid of the weeds, the road to Vera Cruz and the house for the teacher.

5.2.3 Leadership and community institutes

In Molienda the OTB is leaded by Pablo Bedoya who is son of one of the founders of Molienda. He lives his whole live in the community and knows everyone well. Where Jose Andrade served as an important key person during my research in Palacio, someone who took me to the *chacos*, fishing and introduced me to the other community members. Pablo Bedoya did not talk a lot about the community, on simple questions as 'how many people live in the community or how long do you live in the community he could not find answers. Every month a meeting is organized with the whole community. Many community members however complained about the lack of organization. Not only of the OTB, but of all the members. Groups, such as the school group did not function. It was interesting to see that many members complained about the lack of organizations and pointed only to the other community members. Often people mentioned : 'The people do not want to' when referring to organizational themes.

5.2.4 Supporting organizations and municipal government

Just like in Palacio, several organizations and the municipal government support the community in various ways. As Molienda is located in another municipality (Bolpebra) as Palacio (Bella Flor), the municipal government has other projects.

5.2.4.1 Municipal government

The municipal government constructed the community school of brick and the teachers house. Also a 'canteen' was constructed. Here, Patricia, the community teacher makes food, for those children who do not go directly to their homes for lunch. Another project of the municipality was on *huertas*, small vegetable gardens. Community members were encouraged to make these small gardens close to their homes where vegetables such as tomatoes and cucumbers could be cultivated. Valeria has one of these gardens and is happy with it, although it is quite some work, as often the hens try to eat the little plants. According to many community men these *huertas* are 'soft' and only for women. The fact that it was not a success in the community is because according to the *comunarios*, there was not sufficient interest in the project.

5.2.4.2 CARE/COINACAPA

CARE is executing the *Programa Amazónico Trinacional* (PAT) in several communities in Pando, among others in Molienda. The program is for major part financed by the Dutch Embassy and is executed in Peru, Brazil and Bolivia in the three departments of the MAP (Madre de Dios, Acre and Pando) region. Duration of the project is from 2006 to 2010. It aims to contribute to the sustainable development of poor people (men, woman and youth) in the area. It promotes the adoption of best socio-economic strategies and facilitates their integration with the conservation of biodiversity of the forest. Main role for CARE is to complement with other organizations according to its programmatic principles as a partner for local organizations and institutions.

In practice in Molienda, CARE is searching for income-generating activities around forest products, but in a sustainable way both for the community members and the forest. An important partner which helps implementing these income-generating activities in the communities is COINACAPA. COINACAPA is a cooperative of various Bolivian Amazonian communities. The cooperative started in 2001 as an initiative of ten villages in Pando that aimed for a better community control over the commercialization and export of Brazil Nuts. As the collection of Brazil Nuts is sustainable, because it is not harming the trees or affecting the environment and natural resources, it is a product with good potential for organic certification. COINACAPA has a small credit programme in which it pays the collectors of Brazil Nuts in advance. The cooperative

also offers information and training in the field of environmentally sound collection and marketing to its members.¹⁹ In Molienda, COINACAPA works with several households:

'Together with don Oswaldo I work for COINACAPA. We collect the nuts around our own houses, we do not have to leave Molienda. I am also busy making a payol for the storage of Brazil Nuts, COINACAPA pays me for this as well.'

-Alvaro, Molienda, October 2008

Another new project of COINACAPA is the small opening of the rubber market. This is a very recent project, as in the week I was leaving, an engineer of COINACAPA was organizing a meeting in Molienda on this theme. The idea is to produce sustainable rubber on a small-scale, profiting the members of COINACAPA. Carlos was very excited about the meeting:

'I prefer working in the Brazil Nuts or in rubber extraction rather than working on my chaco. Working on my chaco is more difficult. I hope the engineer will tell us something good!'

-Carlos, Molienda, October 2008

As the PAT project is funded through CARE by the Dutch Embassy, very recently, minister Koenders of Development Cooperation visited the cooperative and the community of San Luis. His reaction on the renewed opening of a small scale rubber market: 1) 'Interesting to see that the rubber can counterbalance price fluctuation of the Brazil Nut, especially now when the price for the Brazil Nuts is low', 2) 'what is needed for up scaling and what kind of approach is needed in order for the local communities to go ahead without the support of CARE/Dutch Embassy?'²⁰

5.2.4.3 CARE

The (emergency) project focused on communities affected by floods in Bolivia was executed in Molienda during my fieldwork period. The last three years water level of rivers is rising, affecting the communities near the rivers. Together with the municipal governments, CARE is (re)constructing water systems near the schools, as a means to reduce and protect from gastrointestinal diseases of the children. The presence of diseases caused by mosquitoes (dengue and malaria) shows and increase year after year. SEDES (Departmental Health Services) cannot help adequately to destroy these diseases. CARE donated a motorboat to SEDES in combating the diseases and reduce the population of mosquitoes. The team also distributed medicine and first-aid-kits among the communities. In Molienda CARE was constructing a water well (40 mts. depth) with a pump on solar energy to keep water running. The water which leaves the pump will be stored in a deposit and from there sinks, washing facilities and toilets can be provided with water. Involved in the project were a CARE engineer, three plumbers from Cobija and all the community men. For two weeks the man worked every morning to construct the latrines and water pump. It was communal work and they did not earn anything with it. While chewing on his coca leafs and drinking his wife's *chicha* out of a pail, Marco tells me:

'We do it for the children. It is hard work, but I know something about plumbing, so I can add some of my knowledge and learn from it as well. In the afternoon I can work on my chaco.'

-Marco, October 2008

¹⁹ <http://www.hivos.nl/index.php/dut/community/partner/10006492> visited: febr, 12 2009 and <http://www.coinacapa.com> visited: febr. 12, 2009

²⁰ <http://www.hivos.nl/personal/blog/3836/3836> visited: febr. 20, 2009



Figure 11 Carlos overlooking the construction site of the new latrines
Source: Simone Weert

5.2.4.4 Universidad Amazónica de Pando

In 2006 a project of the University of Pando was implemented in Molienda which was not directly benefiting the community members. This project focused on the re-population of river turtles. As the population is decreasing due to commercial use (Fundacion Jose Manuel Pando 2006: 101). According to the community members of Molienda, it were the people from Cobija who took the eggs from the turtles to eat them. They see more and more visitors from Cobija arriving on the beach. The community members of Molienda helped to restore the turtle population.

5.2.5 The inhabitants and their activities

The houses of the families in Molienda are located far from each other. Some families live from an hour walk from the community centre where the school is located. This structure forces the different households to live independently. Main activities of the different households are working on the *chaco* and *castañar*. Just like in Palacio, households also engage in hunting and fishing. All households have hens, to a lesser extent pigs and cows are possessed by households. Cows serve as a source of milk, but are also sold in Cobija when one needs money. For Alvaro, his cows also serve as beast of burden when he collects the Brazil Nut on his own parcel. Other activities where the *comunarios* are engaged in is selling their agricultural products, working on

other *chacos* and engage in wage labour in Cobija. Some community members are engaged in projects from the municipal government (breeding hens) or COINACAPA. At the moment of my second fieldwork period, all men were engaged in the construction of the potable water system and latrines for the community school.

5.3 Comparing the communities

It is by no means my intention to make a full-scale comparison between Palacio and Molienda, as every community is unique. Both communities are characterized by past events and by the kind of people which are member of the communities. A full-scale comparison would be impossible given the short time span. I can however point to the main similarities and differences and carefully try to find reasons for these differences.

Main similarities:

- Both communities are formed around the same date (early 50s) and thus share a similar past in rubber tapping as an independent community.
- Both communities share the same amount of inhabitants, about 12/13 families
- Both communities are located close to the river Tahuamanu and about half an hour/an hour from the main road. Isolated location.
- The members of both communities are engaged in subsistence agriculture and for a small part in commercial agriculture
- Some households engage in Brazil Nut collection

Main differences:

- Palacio consists of one family, Molienda of a wider variety of families
- Molienda is a former *barraca*
- The members of Molienda have bigger pieces of land
- The houses of Molienda are quite dispersed. Palacio has a centre around which the houses are built.
- The members of Molienda are more 'on their own', less organized
- Some members of Molienda have cows, in Palacio none have cows
- Molienda has Brazil nut trees, Palacio has not
- In Palacio the members make use of the river as transport. Not in Molienda; there are no boats

5.4 Concluding remarks

The research is conducted in two communities, Palacio and Molienda. Both communities give an interesting insight in how different households in the Northern Bolivian Amazon develop a livelihood. Both communities are marked by their past as rubber centers. The two communities developed however differently, Palacio being a socially firm community, while in Molienda families live more independently. In the next chapter I will go into more detail in the construction of the livelihoods of households in both communities. In chapter seven I will shortly introduce and reflect on a new community 'Tres Arroyos'. Although this community was not part of the analysis of the research, it serves as a good example of how a completely other community than Molienda or Palacio functions.

6. Livelihoods in the forest



Figure 12 José looking for a fishing spot near Palacio

Source: Simone Weert

“The lake represents the richness of the fish, the palm trees represent the flower that gives us oxygen and are beautiful, the animals represent the food that we gain from the forest, the siringa and the Brazil Nut represent the economic benefit that we obtain from the forest and the medicinal trees represent the medicinal use on which we count”

- Motto of Molienda, as presented in the community school

This chapter gives an answer on the first sub question as presented in the introduction: *How are people's livelihoods constructed in two isolated communities in the Northern Bolivian Amazon?* It gives an overview of how livelihoods in Palacio and Molienda are constructed. I will identify how the different capitals are related to the livelihood of the households of Palacio and Molienda.

6.1 Livelihood capitals

In the theoretical background (chapter two) I elaborated the five capitals on which households have access to, in order to construct their livelihoods. Below the five capitals are presented again, this time in relation to the different households of the isolated communities of Palacio and Molienda.

6.1.1 Natural capital: nature as main asset

For poor rural people, natural capital is often the most important capital where livelihoods can be derived from. Palacio and Molienda are no exception. As the household members live literally in the nature, forest, water, land, biodiversity and wildlife are used in an extensive manner. The forest and its surroundings provide for a mayor part in the livelihoods of forest dwellers, resulting in a livelihood based on agro-extractive activities.

Main economic activities are derived from natural capital, from the forest. For the main activity for all the households²¹, forest land is cleared to make *chacos*. These are created by burning trees of a plot of one hectare. The *chaquear* (burning of a chaco) is practiced in the dry period (august), then households wait till the first rain comes in order to sow the maize and afterwards the rice. Households have *chacos* ranging from one h to four h. Households in Molienda have a parcel of 500 h or 50 h. people who live for a longer time in the community have a parcel of 500 h. All land is divided in Molienda among the *comunarios*. In Palacio, land distribution is arranged a bit different. All households have a *chaco* of 1 to 2 h. Households do not have a parcel. The rest of the land of the community is 'communal forest', this consists also of land that is impossible to cultivate, (*bajío* land). Products which are cultivated on the *chacos*, usually consist of the 'big four' (rice, maize, plantain and manioc). Households in Molienda tend to have a bigger variety of crops, as also tomato, cucumber and a range of different fruit trees are grown on one's own parcel. In Palacio fruit trees are again communal property.

Another important economic activity which is derived from the forest is the collection of Brazil Nuts. Five households in Molienda engage in *castañar*. Two of the households collect the Brazil nuts from their own parcel (they have a parcel of 500 h), the other three leave the community for several months to *castañar*. Patricia and her household do not engage in Brazil Nut collection. As she is the community teacher she has a holiday during the wet season/Brazil Nut season, so she leaves the community to stay in her 'holiday home' in Cobija. In Palacio two households engage in Brazil Nut collection outside the community. In one case, the whole family leaves for several months, in the other case, only the husband leaves for a month/two months. The other households prefer to stay with their *chacos*, as it is also the time of taking care of the *chaco* (weeding and making sure, animals don't eat the plants) and harvest.

Another way the households make use of the natural capital is through fishing and hunting. Usually all households fish or hunt once a week/once a two weeks 'when we need food'. It depends on the availability of meat/fish. Most popular animal to hunt is '*chango de monte*' (wild pig), but basically everything that moves in the forest can be shot and eaten, including monkeys. When the water level is high, people often hunt, as there is less space for the animals to hide. When the water level is low, it is easier to fish as the water is clearer. Popular fish species are *sábalo*, *suruvi* and *sardine* but in general, everything that moves in the water, including piranha.²² Other food products derived from the forest include various types of fruits. All households regularly eat fruit such as mandarins, Motacú (in Palacio) and sweet lemon (in Molienda). Some households have these trees on their parcel (Molienda), fruits are extracted from communal trees (Palacio, to a lesser extent Molienda). The forest itself provides also in various food sources.

²¹ Except the household of Patricia, the community teacher who was a fixed job but also a *chaco* and livestock

²² Fishing is usually done by men and older sons, although some women also enjoy fishing. Fishing can be done on three ways; with a fishing line (that is just a line, no rod) and bait (*suri* larvae) with a net or with a machete (when there is a lot of fish around). The *comunarios* in Palacio make their own nets, with rope and lead. These nets can be used for five years. It takes about fifteen to twenty days to make such a net. With this type of net *comunarios* can catch fifteen to twenty kilos.

Households use sugarcane (for drinks or just sucking the sugar), palm heart and asaí from the forest. Natural capital is also used in another way except for food and economic activities. People use the trees to build their houses (box 6) and for fuel wood. Both communities count on a lake and streams, these are beside fishing also used for washing oneself, clothes and dishes, leisure and transport in the case of Palacio and source of 'potable' water in the case of Molienda.

Natural capital however also brings threats to people's livelihoods. Due to the isolated location, people are less able to travel to urban areas to sell their products or work in wage-labour. Also certain services as hospitals or at least medical posts are far away. Furthermore, disease-provoking insects threaten people's health, other animals pose danger to oneself or to the cultivated plants. Households often referred to *changos the monte* and birds which were eating their crops. Weeds are an ever returning threat, which costs the different households a lot of time to clear (such as burning the *chaco* every year). On the other hand the weed also generates an income in the case of Palacio with the cleaning-of-the-road project.

The environment is for the community members of Palacio and Molienda a way of living. Many forest dwellers are born in the forest and spent their whole live in it. First primarily in the rubber tapping, later also in hunting, and collecting Brazil Nuts, in the community (Molienda) or sometimes at another place for a patron (Palacio). The forest however requires a form of independency and own initiative of its inhabitants. When someone has certain skills one is more likely to succeed than others. Human capital is thus after natural capital one of the most important capitals in forest dwellers livelihoods.

6.1.2 Human capital: creativity is the keyword

Human capital refers to skills, knowledge, ability to labour and good health which are important for the livelihoods households pursue. Human skills are an important asset when surviving in the forest. In particular after the rubber collapse, many people found themselves unemployed. The practice of agriculture was something that many already did next to rubber tapping. Now however there was only agriculture, something which has always been an important, but secondary activity, as with rubber tapping it was possible to earn money. As the Brazil Nut collection replaced the rubber production partly, it could only be executed during the wet season. This was also the season for the rice harvest, so a very busy time. The rest of the year people had to find other activities. In Molienda some engaged in timber extraction, it was however impossible on large scale as no one has a tractor. Some people however are creative enough and found other activities to engage in (box 7).

In Palacio, José wants to organize a sewing group. The municipal government promised in May a couple of sewing machines, when a woman's group would be established in the community. In October, the sewing machines however still did not arrive. According to José it is not that the woman have a lot of experience in sewing, they would have to learn it, but the machines would give them the opportunity to make their own clothes and may sell some as well, it would give another opportunity to earn some money.

Box 6 Building a house in the forest

Resting in one of the two hammocks in the open house of Jorge and Maria, I could look at the inside of the roof of the house for hours. From the inside it looked so professional, as if it was made in a factory. I wondered how they could make anything of those huge though leaves which could stand heavy tropical rains, but also many days of hot sun for many years.

Most houses in both Molienda and Palacio have a wooden construction, walls and floor and a palm leaf top. For the construction of the house, up to 40 plant species are valuable (Henkemans 2001:122) and can be found close to the communities, as both communities consist of (communal) forest with a high diversity of trees. For the roof, about ten different species can be used, such as Cuzi, Asai, Palmito and Redondo.

For a regular house of nine meters wide, about fifteen to twenty palm trees have to be cut. Every palm tree consists of about fifteen leaves. So a roof of a house of nine meters consists of 300 palm leaves.



Figure 13 Two girls in front of the new house of Marcelo and Mariana in Palacio.

Source: Simone Weert

First a wooden skeleton is constructed. Then the palm leaves, which can have a longitude of about three meter, are lightly cut when they are still green, the small leaflets can after the cutting then be bent over to the other side, which results in the string of the palm tree and on only one side the small leaflets. With nails the string which is pretty strong, can be put on the wooden construction. After a couple of days the sun makes the roof go brown and dry.

For the construction of the house the *comunarios* use a chainsaw, to make straight, flat poles. Sometimes they give the poles a colour.

A roof has an endurance of fifteen to twenty years and is highly preferred by the different households. The family of Julia in Palacio just moved from their old house with metal roof to their new constructed house in which still the walls are to be constructed. Julia: *'the old house was so warm'* her husband however admits that a palm leaf rooftop is more dangerous *'a couple of years ago there was a big fire and three houses in Florida were burned down. It was like there was gasoil on the rooftops, the house of Sandra, almost burned down. José: 'the whole community had to work to save the house, we were throwing water from the lake on the roof.'*

Box 7 Alvaro and his activities

Alvaro Artieda lives for 30 years in Molienda. Before he used to live on the other side of the Tahuamanu. He however left the area as it was located very low and every year just after the wet season his family lost their products as floods destroyed the plants. In Molienda he doesn't have problems with the floods, his *chaco* is located much higher.

Alvaro used to work in the rubber extraction. When many people left Molienda after 1992, he stayed and engaged in other activities. First he engaged in timber extraction and made boats out of the wood. Boats people in the community could use to go to places like Porvenir. *'But because many people left because of the collapse of the rubber era, I could not sell a lot of boats anymore'*. Alvaro still had many *siringa* trees on his property, so he decided to continue on a small scale on rubber tapping. He however did not sell the rough rubber, but made products such as bags and shoes using rubber.



Figure 14 Alvaro smoking rubber in his own backyard

Source: Eben Broadbent

Up till now, Alvaro is still busy with various activities. He has his *chaco* where he cultivates rice, manioc, plantains and beans. He is engaged in a project from the municipal government on the cultivation of manioc and in a project for the breeding of chickens (for selling). He also has some small pigs and sixteen cows. During the wet season, Alvaro collects the Brazil Nuts from his own property. In October 2008 he was constructing a shed (on his own) for COINACAPA where the Brazil Nuts of Molienda could be collected: *'For a while I could not work on the shed, as there was no fuel and I could not extract timber from the forest'*.

With his experience as a rubber tapper, Alvaro is looking forward to the new project of COINACAPA to extract rubber on a small scale.

In general most members of both communities went to school till 6th grade or less. Only few community members had the opportunity to study in college or even follow continuing education. The trend is that the younger generation leaves the community to attend college. In Palacio, three (20, 18, 15) children of Paola did not live in the community during my first fieldwork period in April/May. During the second fieldwork period they however lived in Palacio and where even building their own house near Paola's house:

'They studied in Puerto Rico and lived there with my sister. But when my sister passed away last year I could not afford to rent the house, so my children live here now, they cannot go to school anymore'.

- Paola, Palacio, October 2008

In Molienda, Gabriela left the community when she finished the community school (6th grade). She went to Cobija to go to college and further on to continuing education. Last year she and her husband however decided to go back to Molienda and build up their family in the place where she was born.

Although during the day many people engage in various activities, there are always some people who are not able to work. This can be due to high age or to illness. I however never encountered an elder person who did not work on his *chaco* anymore. Jorge, of 80 years old was still harvesting his maize. Although he was slowing down after he had to stay a week in the hospital in Cobija due to intestinal problems. Also community elder Fransisco in Molienda of 65, still works on his *chaco* every day. Illness however prevents people to work. When Mario is laying in his hammock in Palacio in April, his wife Paola speaks out her concern: *'he cannot work on the chaco now, I don't know why he is sick, he is hot, maybe he has malaria.'* Strikingly, at the same moment, also her son of eighteen is sick. He stepped on a nail and since he feels sick, he is also 'hot' and he has problems with walking. Paola used a medicinal leaf to cover his foot. This however has the consequence that neither Paola's husband, nor her son can work on the *chaco*. Paola herself is too busy with taking care of the other children and cooking. Luckily however at the moment there is not a lot of work on the *chaco*.

As Molienda and Palacio are isolated and remote communities, both are heavily dependent on family labor or the other *comunarios*. Households cannot just hire someone from outside the community to work on their *chaco*, as there are not so many opportunities to travel between communities other than by foot. People however hire other people in the community to work on their *chaco*:

Gabriela is 24, she just moved into the community, a year ago she studied in Cobija. Molienda however is 'her land' as she was born there, she doesn't even like Cobija as 'you have to pay for everything there.' She likes living in the campo, it is more tranquilo. At the moment however she does not have a lot of food. She still has no harvest, as she only started up her chaco. Her mother, who also lives in the community however helps her by giving rice donations. To earn some money she works (i.e. sowing) on the chacos of other comunarios. In two weeks she can earn between 500 and 800 Bs with this work.

The existence of family labour is abundant in both communities. All interviewed households have children (this was a criterion for the selection) ranging from one to nine children. When children leave the community school (age 12/13) they will usually go to another place to study in college. This means they leave the community. The children however regularly come back to the community and help on the *chacos* during busy periods. Children also help in other activities, girls often help their mothers with washing and cooking, but also execute these activities independently from very young ages (age ten). Households with a larger amount of children tend to have slightly larger *chacos*, but also Patricia who has one child has a large *chaco* in comparison to the other households. A *chaco* of one hectare is the least a family needs to feed themselves.

Another characteristic of isolated communities is that some chores need to be executed communally, as these communities lack heavy machinery. In Palacio and Molienda some activities are executed communally, such as the 'cleaning-of-the-road project' (Palacio) and the construction of latrines and potable-water facility (Molienda). In Palacio the members of the different households work together a lot more than in Molienda. In Palacio, the *comunarios* also burn their *chacos* communally and build houses together. The most important factor can be because the members of Palacio are all family members. More on community organizations will be presented in the next section on social capital.

Only the household of Valeria engages in temporal wage labour. Her husband leaves the community to work for several weeks in Cobija. This activity is also mentioned by Gabriela, but as

she recently moved into the community it did not occur yet. The general idea is that households only engage in wage labour outside the community when they need money. No specific skills are needed when working in the urban area, it is however easier to find a job when one is more experienced. Marco, Valeria husband however has some experience in plumbing and construction, so for him it is easy to find a temporal job.

Within households, divisions between men and woman are often pretty clear. Woman do the dishes, cook and take care of the children. Men tend to work more on the *chaco* (although woman also work on the *chaco*). In October (sowing period) in both communities several men told me that woman did not know how to sow, so this is usually a men's job. In Palacio this was clear, when during my visit, only the woman worked on the cleaning-of-the-road project, while the men were sowing rice on the *chacos*. Even Palacio woman told me that they did not know how to sow. In Palacio, the woman are also organized in a woman's group. I did not encounter differences between households in terms of male-female task divisions. Even *machismo* expressions were not that present. As far as I could judge, there was no alcoholism in the households²³ and men and woman seemed to live in harmony with each other. Except for the household of Juan, of which his wife passed away, all households consisted of a (married) couple. To me *machismo* expressions seems to be more visible in Cobija. In the theoretical framework I presented identity as important part of human capital. I will elaborate more on the concept of identity in chapter seven.

6.1.3 Social capital: Independency versus social coherence

As described in the introduction the rubber past has shaped the current demographic and socio-economic situation of the Northern Bolivian Amazon. This situation is marked by loose informal institutions within communities and family bonds are more important. This pattern is also visible in Palacio and even more in Molienda. Although there are communal groups, such as the school groups, these do not cross beyond communities. Although school groups are necessary for the establishment of community schools, they also have a very informal character.

Due to the isolated location of the communities, social relationships within the community are important, people don't easily go to other communities to visit friends or family. In Molienda however, household members live their lives quite independent of each other. Especially the households of which the houses are in the remote areas in the forest. These households only come to the centre when there is a meeting of the OTB or of an NGO. One would think that the different household members would know each other very well as they live together in very small communities, but sometimes *comunarios* did not even know the names of other *comunarios*. It seems that the male *comunarios* could get along better than the woman. The men were working together in constructing the latrines and potable-water facility, although this was an unwritten rule of the OTB, they did not complain. I never encountered small woman's groups together.

As described in chapter five, The community is leaded by the OTB. Every month there is a meeting with the OTB. These meetings are not obligatory. In Palacio these meetings are usually attended by all *comunarios*. In Molienda, often the majority does not show up. I attended one meeting in Palacio which was about the upcoming workshop of CIPCA. Community leader José talked extensively about the program, but most of the community members were not paying attention. Children were yelling and some community members were talking to each other. At the end, no questions were asked. Meetings with outside organisations are often better attended in Molienda. There is an unwritten rule that when projects need to be executed in the community, all community members contribute. For the rest, household members live their own lives independently. In situations of stress, the households in Palacio could rely on each other to a certain extent. When there is a flood however often all *comunarios* are affected and everyone has its own problems:

²³ Only once I noticed a drunken man in Molienda, but he was not part of the focus households

'There are people who lose a part of their harvest and others not, the ones who loose have to buy food from the others'

- Paola, Palacio, April 2008

In Molienda never occurred such a heavy flood that households lost large parts of their harvest. But when they do, they would also buy the food from other *comunarios* or go to the city to engage in wage-labour. To leave the community however, households are heavily dependent on the 'road' (dirt track) to go to Vera Cruz and from there to Cobija. Although limited in presence, physical capital is very important for households in isolated communities.

6.1.4 Physical capital: access to muddy dirt roads

Physical capital not only refers to what people own, but also where they have access to. In the communities there is not a lot of hard infrastructure. In tropical forest areas, physical capital is often underdeveloped (Henkemans 2001: 21). In and around the communities there are no asphalted roads (actually only the road between Cobija and Porvenir is asphalted). There are no telephone lines. In Molienda there is a lack of electricity, in Palacio only recently have households electricity generated by solar energy. Potable-water facilities and latrines are recently constructed in Molienda, Palacio has these for a couple of years. Heavy machinery is not available in the communities. Households only possess individually sometimes a chainsaw for cutting trees and making houses and fishing equipment. Rifles to shoot animals are among the main assets of households in both communities (and as well the most expensive²⁴).

As most household members lived their whole life in isolated communities, it does not seem to bother them too much that there is no electricity or a good road. They know that these shortcomings are part of their lifestyle. When there is however an opportunity to get electricity, it is not that households are resistant. They know exactly how to 'survive' without the 'luxury' but when it is available they will use it as well. It was rather interesting to hear that Raphaela, who lived in Cochabamba and had everything such as electricity, television, streaming water did not miss these kind of things when living in the *campo*. The households are furthermore used to their lack of access to financial resources which is presented in the next section.

6.1.5 Financial/Economic capital: animals as safety net

Another economic activity is selling crops and animals. This activity was practiced among all community members a year ago, but because there is no communal transport anymore, only the household of Rafaela is able to sell the crops and animals on a regular basis in Cobija²⁵. Other activities in the community include working on other *chacos* (one household) and constructing a *payol* for COINACAPA (one household). Accumulation of financial capital is difficult in rural areas, especially in forest environments (Henkemans 2001: 23). Main activity for the people in Molienda and Palacio is semi-subsistence agriculture in which the bigger main part of their products is for the own consumption. People thus do not earn a lot of money. The small amount of money they earn is from wage labour and Brazil Nut collection. With this money products such as clothes, oil, sugar, soap and fuel are purchased. Households are not able to save a lot of this money. Savings in the two communities are kept in the form of livestock and food stock.

²⁴ A rifle costs 3000 bs

²⁵ Rafaela's brother who lives in neighbouring Vera Cruz has a van

Box 8 To breed or not to breed

As all interviewed families have a bunch of hens, I got interested in the question why just a couple of families breed pigs. Master pig breeder was Rafael Andrade the oldest son of the Andrade family. At the first time of interviewing, Roman had 30 pigs, but very small ones. During my second visit to Palacio, the many pigs which were strolling around the community surprised me. Yes the pigs grew up and were dominating the whole village now. They kept me awake during the night as they were making noises under the floor where I was sleeping (floor on poles). The other community members did not seem to be too bothered by the animals. Surprisingly as I spotted one of his pigs eating the fresh rice plants of the *chaco* of his son Marcelo.

Rafael loves to breed pigs. He sells alive pigs for 25 bs for one kilo or, 30 bs for a kilo pork. Rafael does not have to go to Puerto Rico, as people come to his house to buy pork. *'At the end of the year people from Puerto Rico are lining up here to buy pork, to celebrate the end of the year'*. Rafael also sells to the other community members, even his son has to pay if he wants a pig. According to Rafael it is not hard to breed pigs, you only have to give them food, mainly manioc and corn, pigs however eat everything.

About 200 km from Palacio in Molienda, Raphaela is also breeding pigs, she sells the pork for 28 bs per kilo in Cobija. In the community centre, Patricia is also thinking about breeding pigs. She now lives in the official teachers house, but she is building a new house near her *chaco*, as there is more room for breeding chicken and pigs. *'where I now live, the animals are bothering the other comunarios, so they have to stay inside in the shed'*. When breeding the pigs, the only thing she has to do is buy a male and female pig and give them food. According to Patricia, a grown up pig costs about 150 bs, they are however being sold by the kilo.

When it is so easy to breed pigs, why does not everyone have them? Victor, husband of Julia: *'it is beautiful to breed pigs, but they will interfere with my neighbour Rafael, as the pigs will not stay close to the house'*. On the other end of the community of Palacio, Paola Andrade also doesn't breed pigs, but for other reasons: *'I just don't like pigs'* she says while cutting the meat of a wild pig. The blood, smell of raw meat and the wild pig's head almost makes me nauseous. *'it is good food, but I don't like to breed them, you have to take care of them'*. Valeria in Molienda states: *'I don't have enough space to breed the pigs, they would eat the plants of my huerta, the chickens already are doing this'*. Valeria is however thinking of breeding pigs when she will move into her new house. Alvaro in Molienda also has some pigs, but mainly for the own consumption. He focuses more on breeding of chickens which he sells in Cobija and on his cows, which he has for the milk, occasional meat and used as a beast of burden when collecting the Brazil Nuts.

While usually it does not seem to be a lot of work to take care of the pigs, it can be during a flood. Pigs need a shed to which they can flee when the water touches their legs. Sandra has built a shed, for her just one pig. It is however impossible for Roman to build a shed for 30 pigs. A couple of years, when he had even a lesser amount of pigs, the majority fled into the forest: *'The pigs fled, but didn't come back when the flood was over, they just stayed in the forest, so I lost them'*. Patricia would not have this problem, as the place where she will let her pigs wander around is situated high enough.

To conclude, one has to love pigs to breed them and needs to have the space as well. Rafael does not seem to have a lot of space, but since he is the only one breeding more pigs in the community, his pigs can wander around the whole community. This only prevents the other community members who live close by from breeding pigs as well. As I found in Molienda, most people prefer to breed cows, as these are more valuable (milk, meat, beast of burden). It needs an investment however. Community members in Palacio are not able to invest in cows and they also do not have knowledge on cow breeding, furthermore, cows need some grass land to graze, this means that more forest needs to be burned.

All households have hens. These are crucial for one's diet (eggs and chicken). Households which count on large amounts of hens, sell them. Some on a regular basis (Raphaela in Molienda), some on occasional basis, for example when NGO drivers buy hens, as it is cheaper in the communities than in Cobija. Another form of live stock which can serve as a saving is pigs (box 8). In Palacio only Rafael has pigs, he is doing a good job in selling them, as people from other communities visit him to buy the pork or pigs alive. With this money Rafael is able to buy the necessary goods such as sugar and oil. Having pigs prevent him from the necessity to work in the Brazil Nut collection. In Molienda three households have pigs, only Raphaela sells the pigs on a regular basis. The other two households who have pigs, also have cows. Cows are the most valuable kind of live stock. To

buy a cow, a household needs however some savings. Another way in which saving can be generated is through household's property. In Molienda every household has a parcel of 50 h of 500 h, on this valuable trees grow, which in theory could also be 'used' as a saving. Households however do not have the capacity to log these trees on a big scale. In Molienda only Alvaro is engaged on a small scale in timber. The community of Palacio has a lot of communal forest in which also valuable trees grow. It however never occurred in the past that trees were used for selling.

Although the forest households could survive without money, the little cash they earn is however of high priority. It is for the households not possible to obtain a credit, money-borrowing from other community members or friends is the only option. Households however prefer to choose to engage in wage labour in the more urban areas, in Puerto Rico or in Cobija, here is always work to do which sometimes results in exaggerated situations:

'While waiting for Rick (CARE staff) who had a meeting with in the healthcare post of Puerto Rico, I sat in the car with Daniel. We were looking over the 'garden' of the police department. Here about fifteen people, probably from communities in the area, were all getting rid of the weeds with their machetes. As the surface they were working on was about 10 m² they did not have a lot of room to effectively cut the grasses, annoying each other with their machetes'

-Diary, April 2008

According to Bourdieu (1990), economic capital is heavily intertwined with symbolic capital (box 9). It is not always about the real value we add to things, but also the degree of symbolism is important. A weapon for example not only serves to kill an animal, it also gives a feeling of independency and safety. It thus adds to people's identity as an independent forest dweller.

6.2 Concluding remarks

Households in Palacio and Molienda are highly dependent on their natural resource base. The most important (economic) activities are derived from the forest, such as working on and preparing the *chaco* and *castañar*. Natural capital added with human capital provide the basis of forest livelihoods which are based on agro-extractive activities. Due to lack of physical and financial/economic capital households are highly dependent on their own skills and to a lesser extent on social networks (social capital). Safety nets are however created by having live stock such as pigs and some households even possess cows. This type of livelihood and lifestyle in the forest asks an independent way of living from the different households. This feeling of independency add to their identity as forest dwellers, which will be elaborated upon in the next chapter.

Box 9 Symbolic capital: patron-client relationships

People use and make use of different capitals to construct their livelihoods. As showed in this chapter, not only tangible capitals such as natural capital are important, also human and social capital. To this scheme of capitals, another kind of capital can be added: symbolic capital. This concept which was introduced by Bourdieu refers to the resources available to an individual on the basis of honor, prestige or recognition:

'Symbolic capital procures all that is referred to (...) the network of affines and relationships that is held through the set of commitments and debts of honour, rights and duties accumulated over the successive generations, and which can be mobilized in extra-ordinary circumstances. Economic and symbolic capital are so inextricably intertwined that the display of material and symbolic strength represented by prestigious affines is in itself likely to bring material profits, in a good-faith economy in which good repute constitutes the best, if not the only, economic guarantee' (Bourdieu 1990: 119).

In the Northern Bolivian Amazon, during the patron-client system in the rubber era, this symbolic capital was very important as the patron had the power over the rubber tappers, who worked for him in exchange of basic needs and food. Later on, patrons could gain prestige by taking care of their rubber tappers. Nowadays this system is only practiced on a small scale in *barracas* where Brazil Nuts are gathered. Here the *barraqueros*, the patrons, take a lot better care of their clients than in the past, where it is said that patrons used the first rubber tappers, the indigenous people, as slaves. Where Bourdieu referred to a positive connotation of symbolic capital, (honour and prestige as economic capital) it can also be used negatively. The system of patron-client is still echoe-ing in the Northern Bolivian Amazon. The former prefect Leopoldo Fernandez is a offspring of former rubber-patrons. Fernandez, who has large amounts of lands, used for cattle raising (actual burned down tropical rainforest). Fernandez is still a symbol of a patron of the people around him, someone who has to take care of its workers, but can also misuse the power he has. It can be no surprise that many *campesinos* saw it as a victory the moment he was caught and put into jail.



Figure 15 The cows of Leopoldo
Source: Simone Weert

7. Forest dweller identity



Figure 16 Gabriela in front of her house in Molienda

Source: Simone Weert

'In the campo I feel more tranquilo'

-Gabriela, Molienda, October 2008

The concept of identity is important in constructing livelihoods. Identity refers to a sense of belonging. Something that makes it possible for households to live in the forest. When people do not feel happy, or as we shall see, *tranquilo*, in the forest, they are not likely to succeed in the forest. Group identity is something that should not be underestimated when focusing on livelihoods. When one is a smallholder farmer, a *campesino*, one belongs to 'the group of *campesinos*, people thus shape their identity based on what they do and think:

'We are campesinos'

-José, Palacio, April 2008

It is important that identities to note that identities are multiple and dynamic, someone can be an agro-extravist, also a community leader and belong to an indigenous tribe and also feel like a real Bolivian, but when migrating to the city can feel suddenly now longer a real Bolivian but a poor wage-labourer. Except for one household, the households of Palacio and Molienda share a common '*Camba*' identity which will be elaborated upon in the next chapter.

7.1 *Camba identity*

In Bolivia, people often refer to themselves as *Camba* or *Kolla*. Roughly, *Cambas* live in the lowlands, *Kollas* in the highlands. The term *Camba* is believed to be originated from the Guaraní language which means 'friend'. Initially the term was used for the lower class and was applied on people who worked on *fincas*, large agricultural establishments in the eastern part of Bolivia. As time passed by, the term was however used to all people who lived in the Bolivian lowlands, thus also to the people in the Northern Bolivian Amazon. It became a means in which lowlanders could distinguish from the highlanders, the *Kollas*²⁶ (Stearman 1985: 20).

In the Northern Bolivian Amazon *Camba* identity is actually a mixture of indigenous and extra regional immigrants, that is *mestizo*. In the late 19th century more than 8000 migrants from the eastern parts of Bolivia, such as Santa Cruz, came to work as rubber tappers in the Northern Bolivian Amazon. Here they mixed with indigenous people and culture and identity of the indigenous people changed dramatically. The Amazon forest was a familiar home and spiritual sanctuary for the indigenous, it was however a wild environment for the extra regional immigrants from the south. Only after a long process of adaptation, the immigrants were able to internalize skills for coping with the wild hostile forest environment. The indigenous people also helped the visitors to discover the treasures of the forest, such as medicinal plants, food and crops. Some *Camba* people have African phenotypic characteristics (figure 16), which can validate the story that the eastern Bolivian city of Santa Cruz became a refuge for black slaves escaping Brazilian plantations. *Camba* ethnicity is thus a mixture of lowland indigenous people (Guaraní, Guairay, Chiquitano, Tacana and many more), European (primarily Spain), highland indigenous people (Quechua, Aymara), and perhaps African heritage (Stearman 1985: 20; Henkemans 2001: 192-193). Nowadays people seem to be proud to be a *Camba* or *Kolla*. When talking to people they often refer to their *Camba* roots and seem to feel more united with other *Cambas* than with *Kollas*:

'When I try to sell my water bottles to the shopkeepers, I talk to the Cambas. My driver who is a Kolla talks to the Kolla shopkeepers, I stopped trying, because to me they won't even listen. Tensions are higher nowadays with the political struggle'.

-Orlando, 28, salesman of Naturagua in Cobija.

We can thus say the although all the *Cambas* do not know each other, they feel united, they are an *imagined community* (Anderson 1993). This feeling of unity is strengthened by the recent political tensions in Bolivia. It may not come as a surprise that the Bolivian lowlands (Pando, Beni, Santa Cruz) and Chiquisaca and Tarija is mainly '*Camba land*' and fighting for autonomy against primarily Evo Morales, a *Kolla* from the highlands.

The mixture of the different roots has formed a new socio-cultural identity, not only in the cities of the Northern Bolivian Amazon, Cobija and Riberalta, but also in the different communities. Although the *Camba/Kolla* distinction was sometimes discussed among my *Camba* friends and seemed to be more visible in Cobija, it did not seem to be an important issue for my research, as I thought all the community members of Palacio and Molienda were *Camba*. But then I learned about Rafaela, the only *Kolla* woman in Molienda (Box 10).

²⁶ The term *Kolla* is derived from the Quechua word *Kollasuyo*, the Bolivian sector of the Inca Empire

Box 10 '*Trabajamos no paramos*'

At first sight, Rafaela, looked just as the other community members, but during the conversation I noticed a difference, she talked very fast and was less shy. Rafaela lives for four years now in Molienda and cultivates many products and has also about 75 hens and ten pigs. She says she is always working '*trabajamos no paramos*' (we work and do not stop). Next to the usual rice, manioc, plantains and maize, she also cultivates cotton and pine and some other vegetables I could not identify. Rafaela has a good insight in business opportunities, as she wants to cultivate cocoa as well, because it earns well. She sells often her chickens in Cobija and makes a kind of oil from *suri* larvae which is said to be a remedy against various diseases.

Where other community members are often somewhat reserved, Rafaela talks a lot and very fast about politics and community life. She feels she is discriminated against, she wanted to run for secretary of the OTB, but it was denied, because she is a *Kolla* she says. According to Rafaela, *Cambas* do not have enough courage to work hard. Also in Molienda there is no feeling of unity, as 'there is almost no friendship among between the people in Molienda'.

Rafaela used to live in Cochabamba, but she left as there was a lot of drinking and criminality. She feels better in Pando; '*the best thing is nature here, I am never short on anything*'. At first hand Rafaela can not mention anything bad about living in the campo. Only after interference of Luis, my driver, she admits that it is true that it is sometimes hard living in an area with no electricity nor potable water.

In the rubber era, the *Camba* identity was highly associated with rubber tappers livelihood and identity. In the many folk stories produced from the rubber era, the rubber tappers is presented as a courageous and proud inhabitant of the forest who beats the dangers of the wild, such as jaguars, falling trees and evil spirits. Rubber tappers self esteem and image was thus derived from their hard work, high rubber production and beating wild animals. The forest was seen as a wilderness which had to be discovered, but also controlled and exploited. On the back side of these stories were however the harsh condition the *Camba* rubber tappers had to face. As lack of basic services, and many diseases threatened the lives of many rubber tappers (Henkemans 2001: 193)

Always focused on rubber tapping, the *Cambas* of the Northern Bolivian Amazon did not diversify their livelihood a lot. They did some subsistence agricultural activities, but the main focus was always on rubber tapping and to a lesser extent hunting and fishing. Migrants from the eastern parts of Bolivia, only came to the Northern Bolivian Amazon to engage in extraction activities and not in agricultural practices. According to Henkemans (2001: 195) this can be the reason why the current *Cambas* lack agricultural tradition and experience with the maintenance of (perennial) crops:

'We don't have the knowledge, we don't know about the cultivation of other products than rice, maize, manioc, plantains and beans'

-José, Palacio April 2008

This in contrast with the *Kollas* who have an extended tradition of agriculture, practiced in the highlands of Bolivia. The community of Tres Arroyos (box 11) in the municipality of Bolpebra forms an interesting example of how a *Kolla* community functions in the Northern Bolivian Amazon.

Box 11 The community of Tres Arroyos

During the conversation with Rafaela I came to learn about the community of Tres Arroyos (literally “three streams”). Actually my driver Luis mentioned the community before and he talked about it again during my conversation with Rafaela. The community of Tres Arroyos was supposed to be an unique community in Pando.

Tres Arroyos is about the size of Molienda and Palacio and is situated between Molienda and Extrema, at the Peruvian border. The majority of the inhabitants are *Kolla*. The *Kollas* in Tres Arroyos are very organized, and practice some fine ‘*Kolla* agriculture’. All members have large amounts of lands (50 hectare per person) and cultivate these lands as well. As for subsistence agriculture one hectare is said to be enough, the remaining products are sold in Cobija. The community members have communally arranged a van to transport the products and use it every weekend to drive to Cobija. During the conversation with Rafaela she emphasized that the people of Tres Arroyos ‘*know how to organize*’ referring to the people in Molienda who ‘*don’t have courage, don’t want to (work)*’. Also Luis, who is a *Camba* in heart and soul was very enthusiastic about how the people in Tres Arroyos work.

After the interesting stories of my driver Luis I had to visit the community, which was luckily relatively close to Molienda. On a rainy day we arrived. Already half an hour before we entered the centre, Luis was pointing to the many agricultural fields which were all cultivated with crops, in neat rows. When arriving in the centre, all houses were closed and there was nobody at home. This never happened to me before in Palacio nor Molienda. Far away I saw people hard working on their fields. Only when we decided to leave, I saw in the pouring rain an old couple, carrying a huge pile of plantains in a wheelbarrow. As they looked tired and very wet I just did not dare to bother them...

The community of Tres Arroyos is only one case in which the difference between *Camba* and *Kolla* seems to be very visible. Why Tres Arroyos is so successful is hard to say. Are *Kollas* more zealous workers? I think the difference can be explained by the fact that *Kollas*, who come from the Bolivian highlands, have longstanding experience in agriculture. Although tropical agriculture differs of course from agriculture in the *Altiplano*, some techniques are the same.

Another factor influencing *Cambas* lack of knowledge and experience on agriculture is that the *Cambas* livelihood is often marked by migration throughout the year; when working in the Brazil Nut collection people often have to move for a couple of months to other areas, leaving their *chaco* behind, which is invaded by weeds, insects and animals in no time with a lack of maintenance. A good relationship with other community members can then be a good asset:

‘If I go with Mariana and the children to work in the Brazil Nut collection in the province of Manuripi, I have to leave my chaco behind. I can however ask my family to take care of it, in exchange for some products. They only have to get rid of the weeds. I sow when I leave and harvest when I come back’

-Marcelo, Palacio, October 2008

Many people also migrate to the city to engage in wage labour for several months:

‘To build a wooden house of our own, we need a chainsaw. My husband will go to Cobija to work in construction or plumbing for two months. We are then able to buy the chainsaw and pay some people from the community to build the house’.

-Valeria, Molienda, October 2008

This migration prevents the *Cambas* in the communities for setting up a permanent stable home with sustainable agriculture. Adding to this are the harsh living conditions of the forest dwellers, factors as flooding, bushfire destroying *chacos* do not add up to sustainable agriculture. More on

influential factors on peoples livelihoods will be presented in chapter eight. I will now turn to another distinction in the identity of the community members of Palacio and Molienda. As the people are proud to be a *Camba* or *Kolla*, people in the communities are also proud to be a *comunario*, someone who does not live in the urban areas, but in 'el campo' in the rural areas. This expression of a rural dweller is presented in their feeling of *tranquilidad*.

7.2 *Tranquilidad*

Through outsiders eyes and often confirmed by *Cambas* themselves, *Cambas* are characterized as backward, somewhat lazy, unsuccessful producers but also as easy-going and homebound²⁷ (Green 1998). According to Heath (1994) the modern image of the *Cambas* is that of hedonistic people who prefer *fiestas*, eating, drinking, singing and dancing over working. Also they prefer to spend time in their hammock and taking a *siesta*. Although these characteristics tend to stereotyping, one aspect of *Camba* identity which was heavily emphasized by community members was the notion of *tranquilidad*.

Different research on the lowland *Cambas* have been focused on this concept of *tranquilidad*.²⁸ In English the concept can be translated as tranquility, which refers to the quality of calm experienced in places with mainly natural features and activities, free from disturbance from man-made areas. In the Northern Bolivian context it is however used in many different ways and knows multiple meanings. Before visiting the Northern Bolivian Amazon I never heard about the word *tranquilo*, but during the research I not only came to know a new world but a whole new concept (box 12), a way of living. It is exactly the feeling of independency that makes the people want to live in the rural areas. Rafaela even moved to Pando, to live in the *campo*. She likes the quietness and the many space she has (50 hectare). As a *Kolla* woman she also referred to the concept of *tranquilidad*. Interestingly, a study of Romanoff (1992) shows that 30 percent of his urban respondents (from Riberalta or Guayamerin) would have preferred to live in the *campo*, while only seventeen percent of the rural dwellers preferred to live in a city.

The most important aspects which were brought forward by community members is the feeling of independency, working on their own *chacos*, catching their own food, it thus adds to their own knowledge and skills (human capital), but also to the possibility (although limited) to sell their own products and work whenever they will in wage labour or Brazil Nuts (economic/financial labor). The capital adding most to the feeling of *tranquilidad* is natural capital, as people feel free in almost everything they do in the forest, close to the rivers. Isolation can be painstaking, but also beautiful, as only people visit the community when they want something (which can benefit the community members). Although isolated, the communities have links with urban areas and other communities, to sell products, but also to play soccer games or exchange information. Complete isolation would not be *tranquilo*, it are the small linkages with the outside world that make living in the community worth it, links in the form of small roads (physical capital). Furthermore, families are very important in the communities, family bonds are tight. People in Palacio would not leave the community easily as their whole family is in the community, this social capital add to feelings of *tranquilidad*. As in Molienda these social bonds are less tight, people complain a lot about the disorganization of the members. It seems that because so many people referred to the concept of *tranquilidad*, it should be a desirable goal. Thus a way of living and something people wish to obtain in their livelihoods. Peoples livelihoods should be *tranquilo* in order to be secure. The goal to obtain *tranquilidad* in peoples live is the main motive for people of making decisions regarding their livelihoods.

²⁷ This in comparison to the aggressive and migratory traders mentality of the Kollas.

²⁸ Henkemans' study on livelihood perceptions of *Camba* forest dwellers: *Tranquilidad* and Hardship in the forest and Greens (1998) study on home ownership in Santa Cruz: The quest for *Tranquilidad*

Box 12 The concept of *Tranquilidad*

People use the word in different settings: If one asks how someone is doing, this can be answered with '*tranquilo*'. Referring to the fact that everything is fine, someone is not in a rush (actually I never encountered someone who was in a rush) and feels good.

I often heard this phrase:

'Como andas?' (How are you?)

'tranquilo, no mas'.

People also said to me I had to be *tranquilo* regarding my research as I sometimes was losing my patience when I heard again that CARE was not travelling to the communities.

The term is also used when referring to a state of mind. In a conversation with my driver Luis, he said:

'I am an exception, I am more 'tranquilo' when on the road instead of at home with my wife and kids. Most Pandinos are more tranquilo when they are at home, they are not used to travelling as much as the Dutch people'.

-Luis, October 2008

Many community members also referred to this state of mind in answering my question on whether it was better to live in the city or in '*el campo*'. With no exception all answered that live was better in the *campo* than in the urban area.

'Here it is more tranquilo, here we have everything'

-Gabriela, October 2008

That feeling of having everything, sounded a bit strange in my ears, but Gabriela and many others referred to the fact that they grow their own goods, they fish and hunt:

'When going to Cobija, you need a lot of money, you need to buy everything, here everything is for free. What do I need money for here in the community?'

-Rafaela, October 2008

The general idea is that people in the urban areas have to work more hard than the people in the *campo*:

'We do not have to work 8 hours a day for a boss, we decide how much we work and when'

-José, October 2008

7.3 Concluding remarks

Living in the forest asks a form of independency from the different households. Group identity which is translated into a common *Camba* identity adds to peoples positive feeling of living in the forest in which household's history as former rubber tappers plays a major role. This positive feeling of living in the *campo* is practised in households feelings of *tranquilidad*. When living in a rural area, someone has to feel *tranquilo*, otherwise it makes no sense living in an isolated community. This is why households have been able to survive past shocks, such as the rubber collapse in 1992. In the next chapter I will present what kind of problems the households have to deal nowadays.

8. Living in an unstable environment



Figure 17 Indicating the recent water level
Source: Simone Weert

'When the road was build a couple of years ago, some families left, as if they finally could leave, now the road was there!'

-Alvaro, Molienda, October 2008

'The last three years we had every year a flood, in 2006 we even lost hens and pigs'

-Rafael, Palacio, April 2008

In the previous chapter I elaborated on how the households in two communities construct their livelihoods. This chapter will focus on the second sub question; *What do the households perceive as major risks to livelihood security?* In the theoretical framework (chapter two), I already identified three kind of external factors that could be of influence of household livelihoods in the Northern Bolivian Amazon. These were climate change and natural hazards, political and organizational struggles and economy and the global market. In identifying main problems the communities were struggling with, all three types of factors play to a certain extent a role.

8.1 Major risks

Going back to CARE's livelihood model, we see that livelihoods are constructed within a certain context. This context can refer to structural processes, but also by certain shocks such as floods. Below I will present the most important structural processes and shocks which influence how households in Molienda and Palacio construct their livelihoods. These processes and shocks are identified by households in the two communities. Although the two communities can be comparable in many ways, in both communities different problems were identified. In Palacio the main problem were floods (8.1.1) in Molienda the lack of infrastructure (8.1.2) and lack of organisation (8.1.3). Furthermore in both communities problems the lack of fixed jobs (8.1.4) was identified as a problem, in Palacio as well a lack of knowledge (8.1.5). I will also shortly reflect on recent temporal struggles (8.1.6).

8.1.1 Floods

Both communities are located within the same distance of the river Tahuamanu (approx. twenty minute walk). Both communities also count on a lake close to many of the houses. In Palacio this lake is very visible and people make use of it a lot for swimming, fishing, washing etcetera. In Molienda this lake is smaller and more covered and people do not make a lot of use of it. In Molienda people wash and fish in one of the streams. As people in Molienda do not have boats, they do not make a lot of use of the river anymore. In the past however the river was used extensively for transport of rubber.

Households in Palacio identify the risk of floods as the main problem in the community. During a participatory workshop from CIPCA, this was also the outcome; main problem of Palacio is the floods. Households identify that every four to five years there is a heavy flood. People however could not find reasons for this periodical cycle: *'it's the nature'*. This 3/4 years cyclic period (result of El Niño) however make it possible for people to predict the next heavy flood. The last three years however people encountered every year a flood (table 3). People as well do not have a reason for this: *'sometimes there is more rain, sometimes less, that's nature and 'it's the will of God'*.

Table 3 Recent flooding in Palacio

Year	Amount of days water
2006	six weeks
2007	two weeks
2008	one week

As both communities are located within the same distance from the same river, Molienda also should have problems with floods. Floods are indeed identified by the community members, but no household identified it as a main problem. There are also floods every three to four years and the lower part of the community gets flooded as well. The community's *chacos* however are located higher and often people do not encounter problems with water entering their *chacos*. For agro-extravists, a *chaco* with products is central in their livelihoods. Everything that would destroy the crops the households have would be a major problem for people's livelihoods. That fact that the households in Molienda sometimes get wet feed does not bother them. Actually the houses are build high enough. People would only get wet feet when wandering around.

8.1.2 Lack of good infrastructure

Whereas floods have been identified as the main problem of Palacio, the lack of infrastructure was the main problem identified by the different households in Molienda. This problem however developed recently. About a year ago, a project of the *prefectura* supported the community members in selling their products in Cobija. The community could count on a van with a driver and every weekend the *comunarios* loaded their products into the van and sold their products on the farmers market in Cobija. For unknown reasons this project however stopped and now the *comunarios* can no longer sell their products in a communal way. Now people make arrangements

individually. Raphaela has the luck that her brother who lives in neighbouring Vera Cruz has a van. The others can only incidentally hire a van, when for example a lot of *comunarios* have harvest. This however does not occur on a regular basis and not all *comunarios* participate in this. Another infrastructural problem of Molienda is the bad road. During the dry season there is no problem, but only after one rainfall the road gets pretty 'dirty'. This isolates the community. The road was only established a couple of years ago. Many *comunarios* know how it was to live without the road.

8.1.3 Lack of organisation

Although the study of local organisations and institutions was not a major part of my research, the lack of organisation among *campesinos* was abundant. Palacio and Molienda are isolated communities. Both communities however do have linkages with other communities, usually the ones most close by. Visits to other close by communities, which are also small communities, are made with various purposes. An important motive for a visit is to exchange information. This can be about problems regarding floods²⁹ but also on all other events that are happening in the communities. Another motive for visiting other communities is to visit friends and for leisure, such as playing a soccer game. Households of the two communities only go to the bigger communities to make use of certain services such as healthcare, telephone, shops etcetera. Usually this is a long walk. In the Northern Bolivian Amazon local formal institutions (such as credit unions and cooperatives) are weak (Henkemans 2001) due to the rubber past. The most successful formal institution however is COINACAPA which is able to sustain good linkages with various actors in the chain. Harder to identify however are the informal ways in which people organize themselves (Nuijten 1999). In isolated communities, these informal 'organisations' are executed only within the communities.

People are not able to organise themselves in a good manner outside their own communities. As I have showed in section 6.1.3, within the communities several groups are established. It depends however on the community whether these groups function or not. In Palacio the different groups seem to function quite good. In Molienda however, some groups are established but only on paper. Members are not actively engaged. Molienda lacks a certain organisational spirit. When talking to household members individually all complain about the lack of organisation, but somehow the community members are not able to unite. As described above, there is a lack of transport, which was identified as the main problem in Molienda by households. Members are not able to arrange their own van such as happened in the community of Tres Arroyos.

When asking what could be the reasons why people did not organize communal transport, household members often said: 'the people don't want to' referring to the other members of the community. But all were complaining they could not sell their products in Cobija anymore. Why are people in Tres Arroyos able to organise communal transport and in Molienda they are not? The next chapter will provide an answer on this question.

8.1.4 Lack of fixed jobs

The second main problem which was identified in both communities was the lack of fixed jobs. At the moment only in Palacio the 'cleaning-or-the-road' project serves as wage labour opportunity in the community. Continuity of this project is however not secured. Several households underlined the idea of the establishment of an 'industrial' in the communities. This however are only ideas of different households and not (yet) put into practice. In Palacio, José thought about a 'sewing industry' where the community's woman could make their own clothes, but also make and sell clothes. Another idea which is also encouraged by the municipality is the turning of Palacio into a tourist attraction. As described before the community is located on a beautiful spot which could attract eco-tourism. Ideas of José included the stay in typical palm roof top houses,

²⁹ i.e. people in the community of Florida knew how high the water was in neighbouring Palacio when I visited Florida in April 2008.

eating, fishing trips, maybe even hunting trips. He even thought about a hotel and restaurant³⁰. Now only small scale 'tourism' takes place, as sometimes people from Puerto Rico come to the community to fish in the lake. They can use one of the community's canoes, but have to give a part of their catch to the 'owners' Jorge and Maria.

In Molienda there used to be a Brazil Nut crack industry. A couple of years ago this was dismantled however, as these kind of works are now executed by COINACAPA in Porvenir or in the processing plant in Riberalta. Valeria emphasizes that she would like to have a fabric to make shoes or bags, main motive is however to 'give the forest some rest' and secondly to earn some money.

8.1.5 Lack of knowledge

A problem mainly identified in Palacio was people's lack of knowledge on agriculture. I asked why they would not try to cultivate products which could stand the water a bit more, as the case with rice, which can stand water much more than manioc. This question was often answered with, 'we don't know' or 'we are accustomed to this'. When other products were introduced by for example CIPCA, households would however engage in the project, but only after clear instruction of CIPCA's engineer otherwise they would not know what to do with the new product. As said before this lack of knowledge on agriculture can be explained by the *Cambas* rubber past. Maybe it is for this reason that Rafaela and the community of Tres Arroyos do know how to cultivate a wide variety of products *and* to make a profit out of it.

8.1.6 Recent temporal struggles

During my second fieldwork period, both communities had to deal with some temporary struggles due to the political problems. These problems were probably not lasting, but gave a good insight in how the people deal with these rather small, temporary problems. As noted before, the state of siege prevented the households from having formal meetings and the use of their weapons for killing animals was limited. This however did not pose major threats to households livelihoods. One outcome of the political struggle was however the limited amount of fuel available in the Northern Bolivian Amazon. It was said that Evo Morales did not allow the transport of fuel to Pando because of its resistance and quest for autonomy. Whatever the reason, it was very clear that in October, there was hardly any fuel in Pando. Long rows of about 100 motorcyclists where waiting for hours and hours to get just some fuel. People with cars did not even bother and often went to Brazil, where the fuel prices were of course much higher.

For people in isolated communities it was hardly possible to obtain some fuel. In Palacio, the usual nearest place to get fuel was Puerto Rico. In Puerto Rico there was however only fuel available in very limited amounts, people asking skyrocketing prices³¹. this resulted for the households in Palacio that the potable-water facility could not function anymore, as it was running on fuel. Luckily the community counted on the manual pump, implemented by the municipal government. Furthermore they could not use their boats. Some households complained that the doctor wasn't coming anymore and even that when there was an emergency with Mariana, Marcelo's wife, who was pregnant, the ambulance did not come due to the lack of fuel.

³⁰ I however emphasized that eco-tourists would be more interested in eating with community members.

³¹ It was normal that 30 bs. were asked for just one liter of petrol. This used to be less than 10 bs.

8.2 Concluding remarks

To what extent is an environment unstable? For one household, the lack of organisation is a major problem for the community, another household may like its independency and does not want to engage in communal groups. It is thus hard to identify main problems within communities. In the introduction of this research I presented floods and bushfires as main hazards small communities in the Northern Bolivian Amazon had to deal with. Bushfires were not identified as a major threat to the household members. It does occur that the fire gets close to the communities and sometimes even a house burns down. This however occurs only once in the ten to twenty years in both communities. The problems which are presented in the preceding sections are identified by several households. The problem of flooding in Palacio was even identified during a CIPCA workshop. Other problems include the lack of fixed jobs and infrastructure. Problems households have to deal with on a daily or weekly basis. Also lack of knowledge was identified by households, but mainly in Palacio. Finally temporal struggles may make it temporarily harder for households to sustain their livelihoods, but do not pose a direct threat. In the following chapter I will present the different strategies the households have to deal with the above mentioned problems.

9. Decision-making and livelihood strategies



Figure 17 Jorge at work in Palacio

Source: Simone Weert

'Only lazy people suffer. It depends on people themselves. One has to sow in order to get food, when one works every day, there will be no problems.'

- Marcelo, 27, Palacio, October 2008

'If you work you don't have problems.'

-Jorge, 80, Palacio, October 2008

This chapter will present the answer on the last sub question: *What strategies do households use in securing their livelihoods?* In the following sections I will elaborate on how people deal with the problems presented above. It is thus the combination of people's livelihood construction presented in chapter six and the context presented in chapter eight. I will start with how households make decisions. In section 9.2 I then present the livelihood strategies households have in securing their livelihoods and how households react to a shock. Section 9.3 focuses on underlying factors of livelihood strategies, namely motives and risk perceptions.

9.1 Decision-making

Before turning to the household livelihood strategies it is useful to elaborate on the concept of decision-making. It is important to identify how households make decisions, especially in an unstable environment. Important in decision-making is the agency-structure debate. To what extent have individuals, or in this research, households, agency, are they able to make their own choices or are they limited or influenced by factors such as class, ethnicity, gender religion etcetera, so called structures. Bourdieu published a great number of articles on the understanding of the relation between actor and structure.

9.1.2 *Habitus* in the Northern Bolivian Amazon

People's actions and strategies and decisions are related to their history. This 'embodied history'; is what Bourdieu calls *habitus*. Actors unconsciously develop a certain *habitus* which is a product of history. The product produces individual and collective practices in accordance with the schemes generated by history. In the Northern Bolivian context, the past influences how people think and how they act nowadays. People make decisions within their *habitus* (unconsciously!) based on their own past. The former rubber tappers nowadays still make decisions based on their past. As they lived their whole life in the forest, they will make other decisions than people who just entered the area. The household members of the community Palacio are all in the same *habitus*, although generational differences they all share the same past, strengthened by family connections. It is thus not a surprise to see no members are better off than others. Of course there are differences such as Rafael who has 30 pigs and his son has none. But these differences are more likely to be generated by generational characteristics. Roman his brothers and sisters have the opportunity to breed pigs as well, but have reasons not to do so: 'I don't like pigs', 'Too much hassle to take care of them'. Following this argument, the differences between the households in Molienda can thus be explained by the differencing *habitus* the community members have. As the members do not share a same past, they are more likely to engage in activities individually and for example are not able to organize communal transport to Cobija to sell their products.

According to Ghorashi (2003: 28) 'this 'embodied history' in the form of *habitus* gives the process of identity formation a certain amount of continuity or 'permanence in change.' *habitus* thus adds to the construction and continuity of identity. As presented in chapter seven, identity is important in livelihood construction. In the construction of identity, consciousness is an important aspect. 'The practice of individuals is shaped through reaction to situations which are not always based on consciously made decisions, but is also based on common sense' (Ghorashi 2003: 28), or as Giddens (1984) calls it 'practical consciousness'. Households often do not really think about their actions, but have 'tacit knowledge' on how to 'go on', without having explicit knowledge on their actions (discursive consciousness). This can be particularly applicated to the households which reside for a long time in the Northern Bolivian Amazon. Households cultivate four different products but do not know why they cultivate these products, only that their ancestors did the same. New visitors to the communities have a more open view and are more likely to cultivate other products as well, such as Rafaela and Valeria in Molienda. In Palacio there are however no new visitors, as everybody was born into the community.

As presented above, households make decisions based on past and present experiences. This is thus a structure and it can be said that households are somehow trapped in this 'embodied history', as if households are not able to make other decisions, because what they do and think is part of the structure. Human agency is not very visible in this notion of *habitus*. Agency however plays an important role in decision-making, according to Long (1990: 21): 'social actors are not

simply seen as disembodied social categories (based on class or some other classificatory criteria) or passive recipients of intervention, but active participants who process information and strategize in their dealings with various local actors as well as with outside institutions and personnel'. These seemingly contrasting notions are however both at play in the two communities in the Northern Bolivian Amazon. I agree that people have agency and are not mere victims of the structures around them. With this idea I went into the field. Some remarks however of households make me think about the idea that people indeed are caught in structures:

'We don't have the knowledge, we don't know how to cultivate other products'

-José, Palacio, April 2008

'We are only farmers, we don't know about those things'

-José, Palacio, April 2008

'People don't want to, people don't have the courage (to organise)'

-Valeria, Molienda, October 2008

-Rafaela, Molienda, October 2008

Households thus refer to their lack of knowledge or courage to actively change the situation they are in, this refers more to their 'embodied history', because they used to be rubber tappers, they don't know a lot about the cultivation of other products, or changing the crop calendar, not will they experiment with it. Only when a NGO (CIPCA) implements a new crop people would engage in it, but more passively than actively. This however was more abundant in Palacio (households with the same *habitus*) than in Molienda, where households were more eager to cultivate a wider variation of products, such as Rafaela who cultivated next to the usual rice, plantains, maize and manioc also cotton, mandarin, orange, pineapple and *copoazu* or Valeria who had her *huerta* with tomatoes, and cucumber.

Households have agency, households decisions are however made within a bounded structure, the *habitus*. In this situated agency, households will not suddenly decide to cultivate a whole new range of products, only those who have experience with other products (such as Rafaela, the *Kolla* woman) will cultivate them. The past however showed that people have agency, when livelihoods are threatened, as after the rubber collapse in 1992, some households left the communities while other stayed. Now we know how households make decisions it is time to focus on household livelihood strategies.

9.2 Livelihood strategies

I identified the characteristics of household livelihoods in the Northern Bolivian Amazon and elaborated on the main problems, the unstable environment, in which these households try to pursue sustainable livelihoods. In the preceding chapter, household-decision-making is presented. In this chapter I will focus on how these households sustain their livelihood in an unstable environment, making use of different decisions. I thus present household livelihood strategies. Mainly all the strategies can be classified under the header 'livelihood diversification' (9.2.1). The strategies referring to a certain shock are presented in section 9.2.2.

9.2.1 Livelihood diversification

The most abundant livelihood strategy of the households of Molienda and Palacio is livelihood diversification. Ellis (1998:4) defines livelihood diversification as: *'the process by which rural families construct a diverse portfolio of activities and social support capabilities in order to survive and to improve their standards of living'*. This has many similarities with adaptation, in diversity however attention is explicitly drawn on a variety of income sources as its main characteristic. This can be one outcome of adaptation, but not the only one, as new ways in trying to sustain

existing income opportunities are also forms of adaptation (Ellis 1998: 15). Ellis underlines that livelihood diversification does not mean that people search for different activities to generate an income, also social institutions, gender relations and property rights are important in livelihood diversification. This *diverse portfolio of activities and social support capabilities* becomes visible in many ways in the communities of Palacio and Molienda. Whether these strategies are used in order to *survive or to improve standards of living* will be presented in section 8.3.1

First people engage in income diversification by practising semi-subsistence farming, animal husbandry, seasonal out-migration for wage labour or working for a patron in the Brazil Nut collection. During the day, *comunarios* are particularly engaged in farming³² (sowing, weeding, harvesting, walking to the *chaco*, carrying products etcetera). Small-scale farming is something every household is engaged in. To a lesser extent the products are sold, this only happens when there is of course availability of transport and when people can miss some products, as the products in first instance are for the own household. There are however no households who are only engaged in small-scale farming. All interviewed household engage, or did engage in the past in a certain form of wage labour, such as construction work in more urban areas or collection of Brazil Nuts for a patron. With no exception all households engage in a form of animal husbandry including poultry. Some households are actively engaged in animal husbandry, such as Rafael with his pigs and Alvaro and Patricia with their cattle. For them this is an active source of income. It is obvious that the younger generation is more likely to engage in wage-labour, for them it seems to be easier to leave their house and *chaco* and engage in construction or Brazil Nut collection. In Molienda, people don't leave the community for Brazil Nut collection as all households have Brazil Nut trees on their property. Another important income source of the households in Molienda is to let other people (from other communities) work on their property to collect the Brazil Nuts. Usually they can ask 50 per cent of the income of the collection of the Brazil Nuts. I however did not encounter a household in Molienda who practised it, it was however proposed as an opportunity, when someone does not have time to do it themselves and need the money.

A second livelihood diversification strategy is crop diversification. All households cultivate a number of crops. Especially in Palacio all households cultivate rice, manioc, plantains and maize. A usual meal thus consists of rice, a piece of manioc or fried plantain and meat or fish. From corn also *chicha* is made. To a lesser extent beans are cultivated and some households have a *huerta* with tomatoes, cucumber and onions. This however depends on a large extent whether there are seeds available for these products. Households only cultivate these products when introduced by NGOs such as CIPCA. This is also the case with the cultivation of cacao. Many households had small cacao plants in their house (from CIPCA), but did not really know what to do with it. They are thus highly dependent on NGOs when it come to the introduction of new products. This engagement with organisations and municipal government is thus another livelihood strategy.

Households actively engage in the projects proposed by municipal government or NGOs. These products can be about crop diversification (see above) but also on the construction of latrines and potable water facility (CARE), communal projects (Municipal government of Bella Flor) or individual products such as Brazil Nut selling opportunities (COINACAPA) or new opportunities for the small scale rubber extraction (COINACAPA). These products not always directly refer to an increase of income, but also on well-being or on flora and fauna conservation (turtle conservation). It seems that households usually participate in all the projects presented. The outcome however may have different effects. The workshop of CARE on risk reduction in Palacio only had effect on how people burn their *chaco* (after the workshop communally, to prevent the fire from pass over to the forest). Formally a 'risk committee' was organised, but in practice this group did not do anything.

Livelihood strategies refer to a differing environment (political, environmental, economic) and thus to structural processes. They can however be of great importance when facing a shock. People may go to the urban area to engage in wage labour when faced with a sudden decline of

³² Even the community school teacher Patricia in Molienda worked on her *chaco* in the afternoons when school was over. Her primary income however was derived from her teacher's income.

food. There are however certain strategies which can only be related to certain shocks. In the following section these specific strategies are presented, in relation to a flood.

9.2.2 Strategies in relation to a shock: flood

Households in Palacio identified flooding as main problem. Especially now when the last three years the households had to cope with floods. All the different households however have a lot of knowledge on the community and its problems. They thus have adapted to floods and coping strategies when their livelihood security is at stake. From October/November it starts to rain in the Northern Bolivian Amazon. Floods are likely to start from December. Households know there will be a flood when they hear it from José the community leader, who listens regularly on his radio during this time. Households also know they will get trouble when there is just a lot of rain. When José has the idea that the community will get into trouble he will warn the municipal government, prefecture and Civil Defence. He sends out a request for help, such as food, medicine or other resources. And then the different households start waiting. Although it may take a couple of days, eventually the community will get the help.

The first adaptation is a very visible one and is actually practised over the whole world. Households build their houses on poles. This prevents them from wet feet. This however seems not the only reason, as also houses on the plateaus also are built on poles. Households having a house on the ground risk the entrance of many (dangerous) animals, including dogs who are usually not allowed into the house. Furthermore it is easier to make an even floor, as the grounds are often not that evened. Houses of brick are not build on poles. This means that the community school in Palacio is flooded every time. The wet season is however also the holiday season and children do not have to go to school.

Actually no one moves when there is a flood. People stay in their houses and only move away to go to the toilet or talk to another household and to take care of the animals. When a flood is there for a couple of days or even more, people need food and go to the shed where rice is stored. Sometimes short visits are made to the *chacos*, to see whether there is food. When they know there will be a flood in advance (lots of rain, information of the radio) they will quickly harvest what can be harvested, manioc in particular as this gets destroyed easily by floods). During the flood in April:

'I called on the radio for help to the prefecture and the Civil Defence, but they did not come, you are the first to come, please help us'. (When leaving Palacio, the Civil defence arrived in the community with medication and food)

-José, Palacio, April 2008

In Palacio I however encountered also other things on poles, such as the onions on poles (figure 18). Maria was cultivating her onions in here, it was invented a long time ago. It is however not only against floods, but it also prevents the animals from eating the onions.

'I am never short on onions'

-Maria, Palacio, April 2008



Figure 18 Maria's onions on poles in Palacio

Another adaptation manner is to move away from the lake as Rafael practised. In general households reactions to floods are the same; taking care of animals, waiting, talking to each other. For households which leave the community to *castañar*, it is always a surprise how the community will look like after a flood. It however does not matter a lot for the *chaco* when households are in the community or not, a flood will destroy crops anyway, no human can stop that.

9.3 Underlying factors for livelihood strategies

Above livelihood diversification and strategies related to a particular shock are presented. I already showed how household decision-making looks like, but above strategies do not say anything about why these strategies are made. What is the underlying rationality? In this section, different motives for diversification are presented (9.3.1) and an elaboration on risk perception and acceptance is given in 9.3.2 as well as a reflection on the main differences in strategies between households (9.3.3)

9.3.1 Survival or improvement of livelihood?

Above the main household strategy to structural processes is presented: livelihood diversification. Also strategies referring to a particular shock (flooding in Palacio) are presented. When we know that households diversify their livelihoods, an important question comes to mind; are these strategies used in order to survive or to improve one's livelihood? Are they thus voluntary or not? In the literature both options are reviewed by Ellis (1998: 7). Strategies for survival are born out of desperation (poverty, lack of assets, vulnerability and disasters), while by contract diversification can also be a matter of choice and opportunity, involving proactive

households strategies for improving living standards. Hart (1994: 48) contrasts 'diversification for survival' with diversification for accumulation'.

To survive, the households in the two communities in the Northern Bolivian Amazon would have enough of the products on their *chaco*. As mentioned before, livelihoods of the households do not only exist of semi subsistence farming. Part of their livelihoods is diversification, This is what they are used to, as in the rubber past, people also had a little *chaco* to work on next to rubber tapping activities. Also crop diversification seems a strategy, but is also practical, as households produce for their own consumption, who would want to eat **only** rice or **only** manioc every day? While manioc keeps on being destroyed when there is a flood, people keep on cultivating it, while rice would be a better option, as this is not destroyed so easily during a flood. Engaging in projects from organisations and municipal government is another way in which livelihoods are accumulated. When in Palacio this cleaning-of-the-road project wasn't there, people would go to Puerto Rico or Cobija more often to engage in wage labour or work in Brazil Nut collection. Before the project the households were able to survive. The project only makes their stay in the Palacio a bit easier as they don't have to travel in order to work. I can thus say that livelihood diversification is mainly used in order to improve the livelihoods.

It is another question when talking about shocks. Floods present a major problem to the households of Palacio. When a major part of their crops are destroyed due to floods, peoples strategies may be strategies for survival. This is because subsistence agriculture is a major part of households livelihoods. Every threat to people's crops has devastating effects to livelihoods. When at such a moment people leave the community temporarily to earn money or set claims on their social network, this would be a survival strategy. As without the amount of money or crops from their social network they will not be able to survive. In this light, certain coping behaviour are survival strategies. Coping thus refers here to the involuntary response to disaster or unanticipated failure in major sources of survival (Ellis 1998: 13). It is however important to note that household members in Palacio are highly conscious about the fact that they will receive aid when there is a flood. When the community fills with water, the community leader calls for help through his radio and the different household members just wait in their houses. In this way the community is dependent on aid.

'I hear on the radio that Bolivia receives a lot of money from foreign governments and organisations, to help people who are affected by floods. Where does that money go? We did not receive anything this year'.

-José, Palacio, April 2008

Community leader José Andrade thus feels his community is entitled to the money Bolivia receives for communities in need. He does not seem to assess whether the community really needs the aid. This idea is strengthened by Roberto from CARE in answering my question why the community members of Palacio would not leave their community in search for a better location:

'The people of Palacio do not leave their community, because they know they will receive aid anyway'

-Roberto, April 2008

To call for aid thus proves to be an important strategy in sustaining livelihoods. It is however hard to judge whether the community members really need the aid, or that they are able to survive without the food and medicine they receive.

To conclude we can say that main motive for livelihood diversification is to improve one's livelihoods. Households in the Northern Bolivian Amazon are used to engage in different activities and it does not cost them a lot of effort to execute different activities. It is a normal procedure for them. In the past however, rubber tappers started to engage in subsistence farming to have something to eat, to survive. Main motive for strategies around shocks however relate to survival. In this the dependence on external institutes proves to be essential. In both livelihood diversification and coping mechanisms the concept of risk plays a major part.

9.3.2 Risk perceptions and acceptance

In the literature, risk is often cited as the main motive for income diversification (Bryceson 1996 in Ellis 1998: 12). Above I however already showed that diversification is not always the product of risk. Maybe it was initially in the rubber tap history, when people lived so isolated they just had to cultivate something in order to survive. Nowadays people engage in different activities to improve their livelihoods. In the case of a risky situation i.e. a shock, it is easier for people to engage in one of the other activities (selling livestock, work in wage-labour) as they have experience in this and 'know their way around'.

Risk perception however does play a major role in livelihood security. Box 13 gives an insight in how I encountered different perceptions of risk during the fieldwork. The examples given are a good example of different risk perceptions. Risk means different things to different people. There can thus not be one truth about risk. I thus agree with Slovic (1987: 285) when he says: *'lay people sometimes lack certain information about hazards. However, their basic conceptualization of risk is much richer than that of the experts and reflects legitimate concerns that are typically omitted from expert risk assessment'*.

Box 13 Risk perceptions in the field

For the DIPECHO project, CARE staff executed various workshops on risk reduction in communities identified by CARE who were supposed to be affected by floods or drought. One of these communities was Las Abejas, in the municipality of Bella Flor. A community along a road, not so isolated as the communities I focused on. As this community was situated higher than Palacio and not near a river it was identified as a community which had to cope with drought. In Las Abejas various participatory exercises were done. Community members had to draw their own community and identify where the risky areas were located. Also past shocks had to be identified. All community members were actively participating in the exercise.

After the exercise a community elder came to me. He said that this community did not need this workshop, that the CARE staff had better gone to other communities who needed their expertise more. According to the man, Las Abejas had no problems with drought. I was wondering, who told the truth? The CARE staff who with their expertise should be able to identify problems in communities, or the community elder who lived his whole life in Las Abejas, but did not encounter real drought problems, or at least did not identify the drought they had as a problem. Was there a truth?

Another example I encountered in Palacio. Rafael told me he used to live closer to the lake before. He however had to move a couple of meters backwards, as the ground under his house was disappearing. I could easily see that erosion of the ground next to the lake was a problem and that this probably would not stop, a pretty risky situation as you never know how quick something like that will happen, especially after a flood. I guessed that Rafael had to move his house again within five to ten years. Although we were joking about it, Rafael did not seem to have a problem with it, if that was the case he would move again. When there was no risk in his eyes, who would I be to tell him about the dangers? Didn't he know the lake better than I as he had lived there his whole life? Besides, did he have any choice?

Roumasset et al. (1979 in Ellis 1998: 13) state that households are prepared to accept lower income for greater security. And thus that risk spreading involves a fall in income. In the two communities in the Northern Bolivian Amazon this is partly true. One could engage in the Brazil Nut harvest only. There are households who have the Brazil Nut collection as a sole income. It is possible to work very hard during the Brazil Nut collection and earn enough to 'do nothing' the rest of the year, it is possible for these people to earn about 400 Bs a day (12 hour nut collection), of course depending on the price³³. As this activity would generate a lot of income, it would be risky as with a low Brazil Nut price people would earn substantially less. In this light it is indeed

³³ Pers. communication acting mayor of Puerto Rico.

seems that people engage in different activities to spread risk. Also no household is only engaged in subsistence farming, all have something 'on the side'. Another important aspect is that people in Palacio for example don't want to work very hard in the Brazil Nuts, they only work in it when they need the money. Most important for the people seems to be their feeling of *tranquilidad*, people would not feel *tranquilo* when working hard in another area.

Another interesting aspect of risk introduced by Slovic and Starr (Slovic 1987: 283) is that people are willing to tolerate higher risks from activities seen as highly beneficial. In the case of Palacio this is so abundant, households have a love-hate relationship with the lake. They need the lake for securing their livelihoods, but it also poses threats to livelihood security. Households however do not think about leaving the community, and of course other aspects are at play such as 'the land of my (grand)father'. Households still enjoy to a large extent living in Palacio and the benefits seem to weigh up to the risks.

In light of climate change, current predictions of future weather are important in how households perceive risks related to climatic changes. All households have seen that the last three years there was every year a heavy flood. Household members don't find this disturbing, but just point to '*changes of weather*'. Household members are not aware of climate change. Climate change is however likely to change rainfall patterns and may cause more and severe floods. This will have devastating effects on the lives of household members in both Molienda and Palacio. Now they are able to stay in their houses on poles, which are build just high enough. With more severe floods, the houses will probably not be high enough, causing continuous wet feet and accompanying diseases. In this sense, both communities would become more dependent on external aid.

9.2.3 Differences in strategies

In this section I highlight the main differences in strategies among the investigated households, these are engagement in the *zafra*, engagement in live stock breeding and the engagement with outside organisations. First, eighteen percent of the interviewed households engages in Brazil Nut collection on their own parcel. Forty five percent of the households engages in Brazil nut collection outside the community. Main reason to work on the own parcel is because these households have a parcel of 500 h, which makes it possible to *castañar*. Parcels of 50 h are not big enough. Furthermore, in Palacio are no Brazil Nut trees, which makes it impossible to collect the nuts inside the community. When looking at Palacio, only two households engage in Brazil Nut collection. The other households have as reasons that the *zafra* is in the same time as the extensive taking care of the *chaco* (drive out animals) and the harvest of maize and rice. Marcelo in Palacio however argues that he can plan his trip to the *barraca* between the sowing and harvesting of the rice and maize. He asks other *comunarios* to take care of his *chaco* in exchange for goods or crops. In the Julia's household, only her husband leaves the community, so she can take care of the *chaco*, leaving her children with other *comunarios*, as it is the holiday season for the children. Another reason put forward by the *comunarios* is that it is hard work in the Brazil Nut collection.

Another difference between the households in the two communities is the breeding of live stock. I already highlighted this subject in the section on financial/economic capital, as it is an important saving for many households. Reasons for breeding pigs or not depend on a variety of factors, a household needs to love pigs, needs some kind of investment to buy two pigs and also needs the space to have pigs. In Palacio only one household fulfils this criterion. In Molienda, three households. Two of these households however also have cows. Having pigs is not a major saving and primarily is used for the pork. Cows are a solid saving. All households would have cows if they had the space and more important the money.

A final difference between households is their engagement in projects of outside organisations. In Palacio there are no differences as all households engage in a project or none, this is all arranged communally by the community leader. In Molienda however this is different. Household can participate in various projects from outside organisations on an individual basis. Although it has to be noted that with reference to the potable water system, all *comunarios* were engaged, as this is only a short term project benefiting the community children. In Molienda,

Alvaro is engaged in many projects, where as Rafaela is not engaged in any project. Some households see the projects as help and have the opinion that they don't need this help and are perfectly able to 'survive' without such as Rafaela. Others such as Alvaro take every opportunity to engage in different activities, he just likes to do a lot of things. In Molienda it is obvious that households which have resided for a long time in the community are more likely to engage in projects than households which only recently came to the community. Maybe this is because the 'new' households had the possibility to think about living in the community, while the older households are used to take every opportunity they have to engage in projects because of their rubber past in which the households also had to be flexible.

9.3 Concluding remarks

In this chapter I tried to present the complex reality of household decision-making. Households make their own decisions and thus have agency but are conditioned by structures made out of past and present social frameworks, the *habitus*. Differences between households can be explained by differencing *habitus*. That's why households in Molienda are more heterogeneous than households in Palacio, consisting of just one family. Households in Molienda are more likely to have different strategies with respect to each other than the households of Palacio. When there is a flood, households in Palacio have the same reaction. All households of the two communities share however a livelihood that is diversified, all engage in different activities, primarily to improve livelihoods and to a lesser extent based on survival. The fact that households engage in different activities however gives them room for survival when a sudden shock may pose a threat to livelihood security. To conclude, households have different risk perceptions, especially in relation to 'risk-experts' from outside the community. The concept of risk is important in livelihood strategies as different income activities may spread risk and in the case of Palacio, people are more willing to tolerate a higher risk from activities seen as highly beneficial such as everything that has to do with the lake.

10. Conclusion

With the information of the preceding four chapters in which livelihood construction and identity was elaborated upon, the unstable environment identified and household decision-making and strategies were presented, I am now able to give the conclusion of the research And an answer on the main research question: *How do households of isolated communities in the Northern Bolivian Amazon maintain livelihood security in an unstable environment?*

I will start on reflecting on the unstable environment the households of Palacio and Molienda deal with in securing their livelihoods. Households in the Northern Bolivian Amazon are constrained by various problems, which constitute their unstable environment. Floods have always been part of the Northern Bolivian Amazon, but may become more severe in light of climate change, in fact households already see changes the last three years. This leads to uncertainty and present-day strategies may no longer be sufficient. The lack of transport, lack of organisation and lack of knowledge can be devoted to political-historical processes in which the rubber tapping past plays a major part. From many households, a kind of homesickness to the rubber past can be sensed (figure 19). Although it was hard work, people felt proud and sometimes literally had to fight the forest with all its dangers. Beside rubber tapping, households have had their little agricultural field to work on, as this was their major food source, up till now, households are still actively engaged in a wide variety of livelihood activities.

Main strategy of households to secure their livelihoods is to engage in different livelihood activities. Main activity of the households nowadays is working on and preparing the small agricultural field, the *chaco*. Households however do not engage actively in selling their crops, as they are constrained by infrastructural and organisational problems, some households however don't like selling their crops. Major activity next to the *chaco* activities is working in the Brazil Nut collection. This work provides the households with cash which is needed to buy necessary goods such as sugar, oil, soap and fuel. It is however hard work and not without consequences. The majority of the households has to leave the community to *castañar*, which means that they have to leave their *chaco* and live stock. Another option is that only the men of the households leave the community to *castañar*, putting more pressure on their wives to take care of the *chaco* and children. Another activity in which households or household members engage is wage labour in the city. This activity is often only executed when a household needs money, for example to buy a chainsaw. It is thus not a major part of households livelihoods, but serves as an important 'escape route' to earn some money in a relative short period. Another important aspect is that household members year round can engage in wage labour, while Brazil Nut collection is only possible from November till February.

Various organisations support households in Palacio and Molienda. Projects focus on health improvement and income-generating activities. While most projects are received enthusiastically by the different households, continuity of projects is very important. Households keep on needing an additional source of income, as subsistence farming does not provide in a secure livelihood. Organisations and cooperatives such as COINACAPA provide the access to the (Brazil Nut) markets the households need. Furthermore, organisations and institutions provide aid when there is a flood. This aid has created dependency in Palacio, as at the moment the community fills with water the community leader calls for help. When hearing that Bolivia receives emergency aid, the community leader just wants to receive his share, no matter how the situation is in his community. Households need the projects as well in another way, as social institutions are weak in the Northern Bolivian Amazon and most of the households are not able to organise themselves. Social cohesion is low and households usually have little power to develop a group spirit³⁴, resulting in an independent lifestyle which is strengthened by people's expression of *tranquilidad*.

Households are only able to sustain their livelihoods when members feel *tranquilo* in the forest. One has to love the forest in order to survive in it. Households who were not able to

³⁴ In Molienda in particular.

survive the difficult period just after the rubber market collapse in 1992, already left the forest in search for better income-opportunities. The ones who stayed in the communities were ready to fight for their existence in the forest. New households are even entering the communities, proving that life is not that bad in the communities, they state that life in urban centres such as Cobija is not so *tranquilo*, as one has to pay for everything there. *Tranquilidad* however does not refer to just chatting all day with family and friends and relaxing in the hammock, as is often a stereotype of *Camba* culture. It refers also to hard work. Household members have to work hard in order to feel *tranquilo*; 'if you work, you don't have problems'. Households of isolated communities in the Northern Bolivian Amazon can only secure their livelihoods when they keep on searching for their feelings of *tranquilidad*.



Figure 19 Rafael pointing to old rubber lines in the *siringa* tree

11. Discussion

In this chapter I will present a short discussion in which I reflect on the theory and the practice. I will start with the CARE livelihood model. The model proved to be a successful starting point in analysing livelihood decisions. The five capitals are useful stepping stones in which the different assets can be identified. I however gave the notion of identity, which is presented as human capital, more importance in the research. I would argue that the way people feel about the place they live in (shaped by history) is a very important asset but also not based on rationale as people have 'embodied histories' that influences their decision-making. In total this presents the pathways the household members traverse during their lifetime. The CARE model is limited in some ways as no attention is paid to political capital. Political processes are only presented as a context in which households try to secure their livelihoods. As something from outside. Households however can also actively engage in the socio-political processes in the community, or between different households, resulting in different power relations. In the Northern Bolivian Amazon however, social coherence is very weak and households have a high level of independency. Adding to this is the fact that I focused on the five capitals and saw political processes as something external which did not seem to have a huge influence on the different households.

Another factor I would like to highlight is that I think that livelihoods in an unstable environment can only be studied when taking other households who left the unstable environment also into account. Now I only have a one-side picture of the ones who are able to secure their livelihoods. The ones who were not able to secure their livelihoods, or not willing to change their livelihoods when the rubber market came to an end, left the communities and went to live in the *barrios marginales* in for example Cobija. When taking this full size picture I would be able to compare between the different household and present a complete picture why the households in the communities are able to secure their livelihoods.

To conclude this discussion I will reflect on the assumptions made in section 3.5.1; firstly I assumed that households try to pursue a sustainable livelihood. Although households are not aware of all the outcomes of their actions, I think that the people in the communities do have future visions. They rationally want to stay in the communities. For households members it would however be hard to sustain their livelihoods individually, they often need the help from outside institutions to generate an income. Secondly I assumed that livelihood strategies are not always based on rational decision-making. I found this true in the two studied communities. Household members do what they do, but are not always aware of their actions. I also assumed that people are agents and not merely victims of the structural processes. I found that household members do have agency, as they are able to make changes in their livelihood, members are however also constrained by what I called 'embodied history' in that it is legitimized to say that one does not have knowledge on agricultural practices, because agriculture has not been a long tradition in the Northern Bolivian Amazon. The final assumption I made was that the households live in an unstable environment. The notion of unstable environment is however a bit vague as it does not say anything about the amount of 'unstability'. Household members however state that there are problems and their daily activities refer to constantly securing their livelihoods. Households thus secure their livelihoods through livelihood diversification, with the support of organizations, and to engage in activities that will make the members feel *tranquilo*.

I would recommend the staff of CARE Bolivia and in particular staff in the office in Cobija to continue with their program. I found the PAT program in which different income-generating activities are searched together with COINACAPA a very useful project. Especially the new plans to open up a small market for rubber extraction, this plan was received enthusiastically by different community members. I found the DIPECHO project interesting, but of lesser importance to Palacio (Molienda was not included in the project). Community members are aware of floods and bushfires as these have been part of their livelihoods. More important is that people gain more knowledge of different agricultural products and practices. For example to change the crop calendar.

12. Reflection on the research

I look back at a research in which I was engaged for almost a year due to several 'shocks'. The first fieldwork opportunity took part in spring 2008, here I focused mainly on households strategies in relation to (frequent) flooding and climate change. When I left the Northern Bolivian Amazon however I found that floods were a major threat in Palacio, households also had to deal with other problems which were also interesting to take into account. The focus on floods alone was too narrow. With a renewed conceptual framework I started the research again in Autumn 2008. With a new focus, but heavily constrained by lack of time I was unable to cover all the aspects of households livelihoods. Considering that I only had five actual fieldwork weeks in the communities, I am astounded with the amount of data I have been able to produce in this research. I think that I used the proper methods to gain the information. When looking back, I obtained a lot of information from the informal chit-chats I had with different people in Palacio. These give the data more depth and provide a better insight in people's thoughts. I however underline that analysis of the different households livelihoods is far from complete. I wonder if staying for a year in the communities would be sufficient to completely understand how people live and why they make certain decisions. For the interviewed households, some decisions seem so normal and may be part of their *Camba* culture and identity, making it more harder to understand as I had to know something about *Camba* culture as well.

To conclude I look back at a very interesting experience, executed on just a marvellous spot. It was a research in which I learned a lot; having patience, but also being assertive as nothing happens without asking for it at least three times. I learned that people no matter how poor they are, can be happy as well. Not to idealise the picture, but when I look back I do not consider the interviewed households as really poor, as they seemed to have enough. Poverty can be measured objectively, but some households in the Northern Bolivian Amazon, choose to live from their own food, instead of buying everything on the market in Cobija. In comparison with my life in the Netherlands, which I discussed with the different households, I had a stressful, hurried lifestyle in which working and studying was an important good and meetings with family members of lesser importance. This and the fact that I had to buy all the food in a supermarket seemed to frighten the people in Palacio. Nonetheless I do not think I would survive in the Northern Bolivian Amazon, but living a couple of weeks with the different families in complete nature, thought me to respect nature a little bit more and also the wealth we live in.

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Annex 1: Topic lists

Topic list as used during interviews/conversations

Family characteristics

- Name
- Age
- Place of birth
- Religion
- Family composition
- Education
- Health
- Type of house

Chaco/food

- Size
- Location
- Products
- Chemicals/fertilizers
- Years in possession
- How obtained
- How often buying food
- How often crops destroyed
- Problems

Possessions

- Livestock
- Car/motor/boat
- Rifle
- Other

Activities

- Work
- Gifts (food, money) from others
- Fishing/hunting (boat, which species, where, frequency, when, family/selling, how often)
- Products from the forest
- credit, borrowing money
- project organisations

The past

- Rubber
- Work ancestors
- Activities 15 years ago
- Problems

Today

- Description of life
- Problems
- Dealing with problems
- Rural or urban?

Future

- Change
- Improvement in own life/life in community

Annex 2: Characteristics interviewed households

Molienda:

	Name	Sex	Age	Education (grade)	Household composition	Years in community	Hectare of parcel	Hectare of chaco	Cultivated products	Economic activities	Live stock	Main assets of household	Other characteristics
1	Carlos	M	+ / 50	6 th	1 child (21)	35 y	500 h	1,5	P,r,y,m close to house: l, d, g, a, pa, z	Working on <i>chaco</i> , seasonal <i>castañar</i> on own parcel, hunting fishing	5 hens	chainsaw, rifle, Experience: rubber extraction	Building a 'kitchen' in his house, wife passed away due to illness, blind son
2	Patricia	F	40	Teaching school	1 child (7), husband	Born into, now lives for 3 y	500 h	3,5	p,r,m on parcel: c,o,pi,d	Teaching, working on <i>chaco</i> Husband: hunting, fishing	130 hens, 50 cows, pair of ducks	motor, rifle Experience: teaching	Building a new house on her parcel, has a second house in Cobija
3	Alvaro	M	+ / 50	6 th	9 children (5-16), wife	30 y	500 h	2 h	R,y,p, b on parcel: l,d	Working on <i>chaco</i> , constructing <i>payol</i> , seasonal <i>castañar</i> on own parcel, hunting fishing	16 cows, 5 pigs, 8 ducks	Two houses, rifle, oldest son has a motor, chainsaw Experience: rubber extraction, wood construction, artisan	One house in 'centre' one on parcel (more isolated)

4	Valeria	F	38	6 th	1 child (5), husband	3 y	50 h	1,5	R,m,y,p,t, on, cu close to house: l,d,g,a,pa, z	Husband seasonal wage labour and <i>castañar</i> outside comm. Selling hens and crops, hunting, fishing	58 hens	Rifle Experience: Construction and plumbing (husband), generosity ³⁵	Building a new house. Child at school in exchange for 50 h
5	Rafaela	F	+ / 40	5 th	3 children (12-16), husband	4 y	50 h	4 h	R,m,y,p,x On parcel: co, o, m, pi	Selling crops and live stock, hunting fishing, <i>castañar</i> outside comm..	75 hens, 10 pigs	Rifle Strong working attitude, brother with van in Vera Cruz	Use of pesticides, no direct neighbours
6	Gabriela	F	24	College	2 children (3-5), husband	Born into, now lives 1 y	50 h	1 h	R,m,y,p, pi Close to house: l,d,g,a,pa, z	Working on <i>chaco</i> . Fishing and hunting, <i>castañar</i> outside comm. working on other <i>chacos</i>	15 hens	Rifle, family in community	Has lived in Cobija, but returned to 'her land', did not like Cobija

³⁵ I mention generosity for this particular household, as their generosity towards outsiders is an asset. After inviting my driver and me for lunch: we gave them presents, clothes and my driver bought three hens. Furthermore, by inviting three plumbers in their house for two weeks, the household receives enough food to cook for them and the own family.

Palacio:

	Name	Sex	Age	Education (grade)	Household composition	Years in community	Hectare of parcel	Hectare of chaco	Cultivated products	Economic activities	Live stock	Main assets of household	Other characteristics
1	Paola	F	+/ 55	5th	5 children (13-20), husband	Whole life	1,5 h	2 h	R,m,p,y	Working on <i>chaco</i> , PLANE project, selling crops incidentally, hunting fishing	40 hens	Son has motor. Husband experience in rubber tapping, rifle	Used to <i>castañar</i> in the past, now however prefers to work on <i>chaco</i> (harvest). Cannot afford children to study in PR
2	Marcelo	M	27	College	6 children (0,3 -10), wife	Born into, three y in Florida (comm.) , 1 y in Palacio	1,5 h	1,5 h	R,m,p,y, Close by: g, z, o	Working on <i>chaco</i> , PLANE project, <i>castañar</i> outside comm. (whole family) Hunting, fishing	6 hens	Rifle	Lived for 8 months in <i>sede</i> , recently build a new house, walls are still missing
3	Rafael	M	+/ 60	5 th	9 children (5-27), wife	Whole life	2 h	2 h	R,m,p,y, close by: Mo, x	Working on <i>chaco</i> , selling pigs, PLANE project, hunting fishing	30 pigs, 15 hens	Rifle, experience in rubber tapping	Was forced to relocate his house due to erosion
4	Sandra	F	+/ 30	5 th	3 children (2-10), husband	Whole life	1 h	1 h	R,m,p,y, close by: mo, x	Working on <i>chaco</i> , PLANE project, incidentally sell crops, hunting, fishing	30 hens, 1 pig	Rifle,	Husband from Florida (comm.)

5	Julia	F	36	5 th	5 children (3-13), pregnant, husband	Whole life	1,5 h	1,5 h	R, m, p, y, b	Working on <i>chaco</i> , PLANE project, hunting, fishing, <i>castañar</i> outside comm. (husband)	25 hens, pair of ducks	Rifle	The family recently constructed a new house, walls are still missing
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Crop codes:

Vegetables	Fruits	Cereal grain	Other
y= manioc, <i>yuca</i>	co = cupuaçu, <i>copoazu</i>	r = rice, <i>arroz</i>	ca = cacao
b= brown beans, <i>frejol</i>	o = orange, <i>naranja</i>	m = maize, <i>maíz</i>	X = cotton, <i>coton</i>
t = tomato, <i>tomate</i>	m = mandarin, <i>mandarino</i>		
c = cucumber, <i>pepino</i>	pi = pineapple, <i>piña</i>		
on = onion, <i>cebolla</i>	g = grapefruit, <i>toronja</i>		
	L = sweet lemon, <i>limón dulce</i>		
	a = avocado, <i>aguacate</i>		
	pa = papaya		
	z = mango, <i>manga</i>		
	Mo = <i>motacú</i>		

Annex 3: Seasonal/crop calendar

	Jan.	Febr.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Rice												
Plantain ³⁶												
Maize												
Manioc ³⁷												
Wet season												
Dry season												
Brazil Nut												
Activity												
Harvest												
Sow												
Harvest and sow												
Activity												
Take care and weed												
Burn												

³⁶ Plantains can be grown and harvested whole year round

³⁷ Manioc can be planted and harvested whole year round

