Swedish University of Agricultural Sceince
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Livelihood and Transition to Certified Cacao Production in the Peruvian Amazonas

- Gendered Responsibilities in Irazola

Carin Emenius

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Abstract

Peru is recorded as the second largest organic *cacao* producer and the second largest *coca* producer in the world. Consequently, the demand has made cacao an important alternative crop for coca. Cacao can just be grown around the equator and is therefore an attractive cash-crop for export to countries in Europe and North America. Therefore governments, enterprises and non-governmental organisations are supporting organic cultivations of cacao.

This thesis has the objective to find out the situation of the livelihood of cacao producers in the process of becoming certified cacao producers. What challenges and which hopes were considered by the woman and man in the households? Would there be clear divides of work locations relating to gender, and who was responsible for making the decisions in the family?

By the use of semi-structured interviews and participating practical methods, ten families in the district of Irazola in the Peruvian Amazon were selected. The study proved customary roles of women in charge of domestic work, children and small animals while men were more often working in the fields and going to meetings. Off-farm work for women was found to be selling food on the main street, while men were driving taxis and worked as technicians. Decision and opinions were more similar within households than between women and men as a group. Although men often had the main responsibility over money and decision for instance to become part of the certification process. The farmers - women and men - wished to grow more cacao trees so they could afford education for their children, a better house, move to other places, start a restaurant or shop.

There have not been many studies of small-holding cacao producers in Latin America and therefore this study is useful to draw examples from without making any generalisations.

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Acronyms

ACATPA	Asociacion de Cacaoteros Tecnificados de Padre Abad[1]
APPCACAO	Asociacion Peruana Productores de Cacao
CIA	Central Intelligence Agency, United States
CIDRA	Asociación Centro de Investigación y Desarollo Rural Amazónico
CODESU	Consorcio para el Desarollo Sostenible de Ucayali
DED	Deutscher Entwicklungsdienst/German Development Service
FAO	Food and Agriculture Organization of the United Nations
FONDAM	Fondo de Los Americas
ICRAF LA	International Council for Research in Agroforestry (World Agroforestry Centre), Latin America
ICCO	International Cocoa Organization
IICA	Instituto Interamericano de Cooperación para la Agricultura
IFAD	International Fund for Agricultural Development
ILO	International Labour Office
INEI	Institutio Nacional de estadistica e informática, Peru
IPS	Institute for Policy Studies, US
LAINET	Laboratorio de Investigación en Estudios del Trabajo
MINAG	Ministero de Agricultura, Peru
NGO	Non-Governmental Organization
PROAMAZONÍA	Programa para el Desarrollo de la Amazonía
SIDA	Swedish International Development Cooperation Agency
UNED	United Nations Environment and Development Committee
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
UNRISD	United Nations Research Institute for Social Development
UNODC	United Nations Office on Drugs and Crime
US AID	United States Agency for International Development

Glossary

Chacra	-	small farm, often referring to the actual farming area
Cuy	-	guinea pig, bred in kitchen and used for eating (like the rabbit in old time Sweden)
Hija/o	-	Daughter, son
Hijos	-	childrens (sons)
Leña/o	-	branches and twigs for firewood, log
Monte	-	hills with forest and meadows, mostly waiting to become cultivation area
Motocar	-	three-wheeler/mobedbil
Mototaxista	-	one who works by driving peoples around in motocar
selva	-	jungle, referring to the rainforest area in Peru
señor	-	mister, refers to the father within the household
señora	-	missis, refers to the mother within the household
		cacao agricultures, course offered by municipality
Yuca	-	yucca, manioc root, cassava

[1] Within this study referred to as 'the cacao association'

1. Introduction

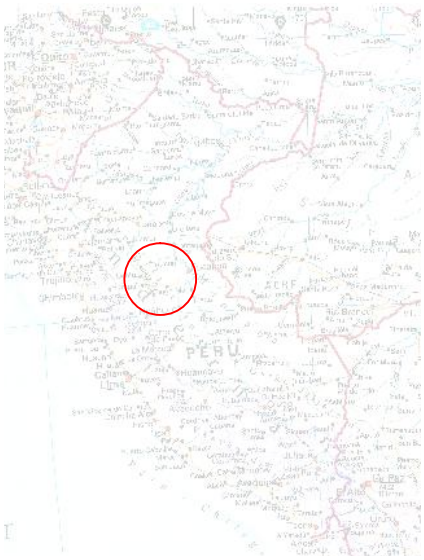

Figure 1: Geographical location in Peru (Norstedts 2010:84)

Peru is situated in South America, and as seen in figure 1, it is neighbouring Ecuador, Colombia, Brazil, Bolivia and Chile. Of the 29.4 million inhabitants in Peru (UNdata 2009), it is estimated that there are 30,000 Peruvian families cultivating cacao[2] (Anduaga 2009:9), mapped to exist in the poorest areas. The increase of Peruvian cacao production is due to a rising interest in the international market and also because it is promoted nationally as an alternative crop to coca cultivation. There are several NGO:s working with extension programs focusing on crops that could substitute coca as a cash crop for small scale farmers in the Amazon (Ministry of Foreign Trade and Tourism c.2008, Chauvin 2010, Aguaytía La Revista 2011:10, USAid/Peru 2011). Some of these farmers are growing organic certified cacao, and therefore belongs to the second largest community in the world which produces organic cacao (Ministero de Agricultura c.2009b:24). As a consequence of the increasing production and demand for organic cacao, there are many private enterprises searching for a direct collaboration with cacao producers so they can stabilise their market (Donovan 2006:1,6). Within the Amazonian region, cacao is important and interesting for several reasons. The cacao tree needs a climate that is neither too hot nor too damp so it therefore thrives around the equatorial line together with other crops. As it is produced in an agroforestry system together with other crops and trees, cacao is valuable from a long term sustainable agriculture perspective. The other fruit and timber yielding trees gives shadow to the cacao as well as contributing to improved soil fertility and soil moisture. The integrated character of the cacao production also gives the farmers an opportunity to incorporate other crops and fruit trees, vital for enhancing food security (see section,6.1, also Laird et. al. 2007:2402, UN 2010:20). Most of the exportation from Peru is shipped to countries in Europe and North America (Coordinator Cacao Association 2011, Ministry of Foreign Trade and Tourism c.2008).

[2] Within this thesis, the Spanish word for cacao will be used (instead of cocoa, which is close to coca, or coco as Spanish for cocoa-nut), furthermore, the word for cacao in Swedish is 'kakao'

2. Research Objectives

This study aspire to explore what happens when families certify its cacao production as organic, especially concerning the division and structure of production and reproduction activites are divided within the households and if there are clear divisions of work locations relating to gender. This has been done by using a gender and livelihood approach together with ethnographic methods. The objective of the thesis (figure 2) is to explore the gender division of livelihood responsibilitites within organic cacao farming in the district of Irazola, Peru (figure 1).

This study used a gender and livelihood approach, together with ethnographic methods. The study outlines two main and three minor research questions, shown below:

1. What are the households' livelihood strategies, do these strategies vary according to gender, and if this is the case, how are they articulated?

2. What socio-economic impacts does the transition to organic cacao production have on the households?

3. Is cacao grown only as a cash-crop or does it hold any other function within the homes?

4. Are there any spaces within the farm which are divided and interpreted according to gender distinctions?

5. How do the farmers perceive their livelihood and vision the future?

The focal points of this thesis could be seen in figure 2.

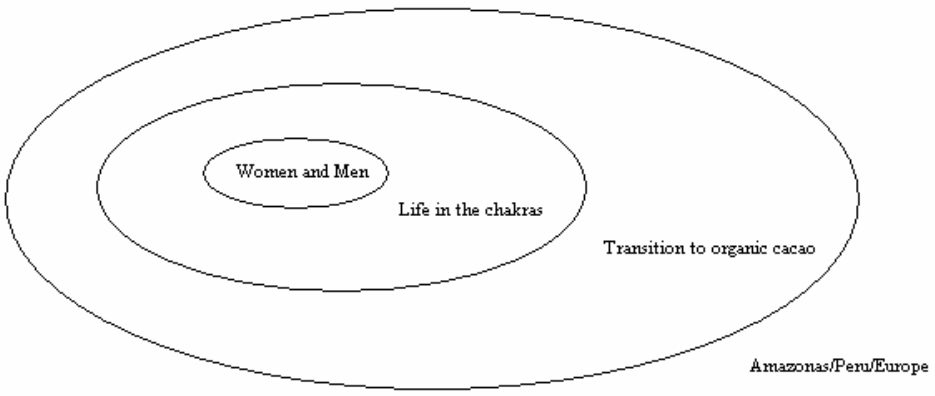

Figure 2: Focal point of study

3. Literature Review and Concepts

3.1 Livelihood Practice and Strategies

> *"The livelihood approach allows us to examine the complexity of multiple aspects of resources use, and the interrelated issues of gender. It can be argued that"livelihood," being a more human-activity-based frame, provides a broader framework for analyzing gender in relation to local contexts. The relevance of livelihood analyses to gender and geography is its ability to accommodate wider perspectives. The intra - and extra-household linkages that are inherent in livelihood studies are essential to reveal gender beyond the unit of household and beyond farm fences. …. Access to and use of resources under customarily recognized* de facto *rights is a key condition that contravenes gender-related subordination often associated with the distribution of private resources"* (Wickramasinghe 2005:437).

There are many challenges for a farmer living in a developing country[3] (Ellis 2000:40f). Their situation can quickly be changed by floods, droughts, diseases of animals and humans, pests as well as individual loss of land rights, deaths, illness and abandons of land (ibid.). And in the words of Christoplos; "*Preparedness for livelihood shocks is best facilitated by increasing awareness of the implications of disease, climate change and conflict"* (Christoplos 2002:10). The capability to survival of such shocks is called the '**livelihood strategy'**[4] which may contain other types of income generating work than farming (Ellis 2000:40f). Such activities can be employment outside farm, expanding or intensifying farming area with more crops and livestock (ibid. p.41, 107, 112). The potential to acclaim existing capitals, are essential for strengthen the people residing and deciding over the certain area, referred to as households (ibid. p.19). These capital[5] entail natural resources, technical assistance such as machines and irrigation, education and health, economical possess and the social network for aid and enforcement (ibid. p.8). Example of livelihood strategies that includes cacao production can be to combine cacao as cash crop with food crops. In a study of

[3]By the time of writing, Peru has been classified by the Worldbank as an upper-middle income country (Worldbank 2011). Together with low-income countries, this category also makes up for what often is referred to as a 'developing country' (ibid.). In 2011 Peru was ranked as one of the top most profitable developing countries for investments (Kearney 2011:1).

[4] A (livelihood) **strategy** could implict a challenge as a concept, since it could imply and reflect a sort of certainity and planned activity of a household where for instance the household unit has enough just to manage the day without planning for various vulnerabilities (Verner 2010:7), or is involved in neighbourhood activity - such as harvest - and therefore is not an isolated and constant unit, but varies according to season and need. Although, a livelihood strategy framework "*does not attempt to provide an exact representation of reality. Rather, it seeks to provide a way of thinking about the livelihoods of poor people that will stimulate debate and reflection about the many factors that affect livelihoods, the way they interact and their relative importance within a particular setting*" (IFAD c.2011, regarding the use of the 'sustainable livelihoods approach', see also Ashley and Carney 1999, Kidder 2004:64).

[5] "*These can include natural resources, technologies, their skills, knowledge and capacity, their health, access to education, sources of credit, or their networks of social support. The extent of their access to these assets is strongly influenced by their vulnerability context, which takes account of trends (for example, economic, political, technological), shocks (for example, epidemics, natural disasters, civil strife) and seasonality (for example, prices, production, employment opportunities). Access is also influenced by the prevailing social, institutional and political environment, which affects the ways in which people combine and use their assets to achieve their goals*." (IFAD c.2011)

small-holding cacao farms in Cameroon, more than half of the household income derived from cacao (Laird et. al. 2007:2405). The rest was made up by crops such as yuca (*Manihot esculenta*) and plantain (*Musa acuminata*) (ibid.). The income was used primarily for education, medicines, food and to upgrade the house and farming area (ibid. p.2409). Another example are the cacao producers in Irazola **(**this study), where livelihood strategies often included off-farm work for the cacao association, extra animal production of cows and chicken as well as hiring more labour during cultivation and harvest periods.

3.2 Gender and Rural Development

In all societies women and men are perceived according to distinct notions of femininity and masculinity, given by the society which they are part of (Momsen 2010:2, FAO 2009:1). As such it is not really just the difference of biological sex that makes out gender, nor is it just directed towards the situation of women, but the balance and roles that are carried out by what is socially regarded as a woman and a man (ibid., Moss 2002:21; Nelson & Seager 2005:7; Feldstein & Jiggins 1994:2; Edley & Wetherell 1996:106). McDowell explains it as "*what people believe to be appropriate behaviour and actions by men and women reflect and affect what they imagine a man or a woman to be and how they expect men and women to behave*" (McDowell 1999:7, also Kabeer 2003:59, Scott 1986:1067; Ritzer 2010:154f; Edley & Wetherell 1996:100). It has been explained by Collier that "*Gender roles are created when social expectations are imposed upon someone because of their biological sex"* (Collier 2007:8), or as Carver puts it about what makes up a man; "*men are not born, but made, and made in ways that are crucially relevant to feminist analysis*" (Carver 1996:21). This dialechtical constitution of men and women (Gutmann 1997, 1999 and de Barbieri 1996 in Vigoya 2003:52; Thorp 2009:6[6]) and their contextually different roles and power is this thesis focal point. As such it means that what a society perceives to be masculine, or feminine attributes differs between region and time-periods. A biological sex is naturally more consistent, even though Gens (2007:20) claims there could be up to 19 various sex types in the world. But a basic distinction between biological sex and gender is, for example, that women are biologically capable of giving birth, while the expected gender role of women might imply that they are to be restricted to the priavet sphere of the household dwelling; men, on their hand, may come and go as they please (Collier 2007:8). As such "*...sex is established in relation to visual criteria (breasts or beards, clitoris or penis), and gender roles (clothing, mannerisms, voice tone, jobs) are established on the basis of sex-identification*" (Elam 2000:175). Carver also states it to be difficult to make out

[6] where indigenious peoples in Peru also says that ethnicity and place is important for a persons identification

"how many genders there are, as the answer must vary according to what is assumed about sex and sexuality before any particular concept of gender is constructed" (1996:5). Therefore, gender roles are part of prevailing norms and attitudes of a society's history (Graham 2005:24; Tripp 2000:7) and are enforced through the practice of both men *and women* to a younger generation (Graham 2005:16, De Keijzer 2004:30, Rogers 2004:180f; De Keijzer 2004:35; Rogers 2004:193). These relations between gender formations are the source for creating inequality in societies (Molyneux 2000:38f). Gender equality does not significate an equal treatment or amount of men and women in any activity, but the *"equality of opportunity and a society which women and men are able to lead equally fulfilling lives"* (Momsen 2010:8 also FAO 2009:2). Since women tend to have less power of credibility and often lack the same access for such as education (see for instance Widmark 2002:73) and income generating work as men, gender studies tend to focus more on women (see for instance Kiptot & Franzel 2011:viii; Tilak 2002:18). Therefore, when given sufficient information regarding available options and their effects, decisionmaking can also be a way for empowering women (Mayoux 1995:253, also Enete et al. 2002 in Enete & Amusa 2010:3; Raju 2005:194).

When both women and men have the same opportunity to gain knowledge of inputs and new ways of cultivation, there is no evidence that any specific gender would be better equipped than another to gain a higher yield (Momsen 2010:141, 156) or managing soil fertility (Kiptot & Franzel 2011:17). Feldstein & Jiggins express that; *"….recognizing gender means recognizing that the households in farming systems are not solidary units with undifferentiated labour, resources, and incentives, but are in fact made up of women and men and children who may share, complement, differ or be in direct conflict in their need for interest in improved technologies. Understanding both women's and men's roles give a richer and more complete picture of a production system"* (Feldstein & Jiggins 1994:3). It would therefore not be enough to just focus on the women or improving the economy to erase poverty, but development projects also need to target and include *both women and men* to achieve a change (Momsen 2010:11f, 246; Chant 2006:94; Kabeer 2003:20; Deere 2005:8; Sen 2001:189; Ellis 2000:140; Mayoux 1995:235f, 242; Chant 2002:580; Enete & Amusa 2010:2; FAO 2009:8; Rojas 1998:16 also Scott 1986:1056). Still, Rocheleau were surprised to find a *"gendered denial…from local to international level, every kind of research and development program – across institutions – was working almost exclusively with men, focused on experiments with imported trees, crops, livestock, and ideas. Yet women were literally everywhere on the landscape"* (Rocheleau 2005:424). De Keijzer further points out that *"Though a significant proportion of feminists are ambivalent about the possibilities and results of working with men, a*

majority of women at community level ask for and support these intiatives" (2004:35). In a gender and participatory project in Zambia, Frischmuth (1998:8, 11[7]) pointed out that men easier changed behaviour and attitudes towards gendered norms of behaviour than women did.

3.2.1 Agriculture and Gender

Studies in Peru and Colombia have found agriculture to depend on everyone in the family for their production (Deere & Leal 1982 in Townsend 1995:41). From an early age, children are often part of the activities that have to be carried out on the farm (Townsend 1995:45). Girls of seven years have been found washing clothes and collecting water (ibid.). In the study of Colombia, *"girls learn their work in the house, boys in the field"* (ibid.). If the family can afford it, they may keep a house with latrine, electricity and running water close to school for their children to finish their first years (ibid. p.46). When girls' education is changed to household tasks it is *"restricting their development and notions of achievement"* (Townsend 1995:85; see also Narayan et. al. 2000b in Momsen 2010:239; Bartholdson 2002:10). As a consequent, women living in rural areas of Peru are almost 23% more common to be found illiterate than man living in rural areas (Low c.2009). And when the family is wealthy, the woman is less involved with the income generating works such as farming (Townsend 1995:41, Deere 1990:268). Chant explains *"that men in a variety of cultures are unwilling, for reasons of pride, honour[8], sexual jealousy, and so on, to let the female members of their households share in the work of generating income"* (Chant 2006:99, also Gill 1993:80, 99). But by limiting women to stay within, often unrecognized, work in homes denies their right to attain a financial independency (Sen 2001:115, also Lyon et. al. 2010:101). When being a part of the families' income, the voice and opinions of a woman will become stronger, since she would no longer be as dependent on her husbands' cash earning activities (ibid. p194; Gill 1993:76, Safa 1995 in Chant 2002:549). Thus she will be participating in economical growth for the family (Kiptot & Franzel 201:30) and in extension also to the rural areas (Ellis 2000:142).

In Peru, there have been organisations pointing out the unequal possibilities and treatments of women and men in the society, in favour of the male inhabitants. Women often lack the same credibility and power that men possess, becoming more vulnerable to financial change and violence in work and at home (Low c.2009, Páez 2006, Human Rights Watch in Collier 2007:27, Collier 2007:27f). This was shown in a road project covering half of Peru that aimed at work possibility for both men and women, by a *"macho behaviour, ignorance about women's opinions, lack of*

[7]Page number refers to page in chapter.
[8]Regarding honour; see Iranian and Kurdish Women's Rights Organisation in Collier 2007:24

information, shame and feminine modesty, and their lack of confidence" (Caballero & Alcahuasi 2007:2). To motivate the women to be engaged and stay in the project, the value of pre-discussions outside home and the ability of earning an individual income, was emphasised (ibid., see also Kiptot & Franzel 2011:xi). The obtained money enhanced the women's power of controlling the investments and expenditures of their families (Caballero & Alcahuasi 2007:2). Studies of rural areas in low-income countries over the last decades have made activities and works performed by women become more visible within academic research (Deere 2005:17). As such, women have been found to be much more involved now in such activities as marketing and farming when producing organic and fair-trade coffee in Guatemala and Mexico (Lyon et. al. 2010:93).

3.2.2 Occupation and Responsibilities within Households

In every country of the globe; "*women…balance a greater multiplicity of roles and responsibilities than male member of their households"* (Kabeer 2003:191). These extra responsibilites also means more time spent on such as household chores. For instance in Great Britain, the statistics for laundry was in average 25 minutes for women and 3 minutes for a man during a day in the mid 1990's (McDowell 1999:82). In Sweden, women are estimated spending 1-2 hours a day more on household and childcare, then men are doing (UN Department of Economic and Social Affairs 2010:17). Women may increase the hours in occupations of salary, while men would not put in more hours for household duties or child tending (ibid, also Chant 2002:550). This have been claimed to be caused by an effort of lingering on to what is believed to be a "masculinity identity" (Chant 2002:553). Although in Peru, some men have begun to change, and do no longer wish to identify themselves with machismo culture (De Keijzer 2004:40), a process also willingly aided by women (Padilla 2004:96). Contradicting this, Barker et. al. summarises Latin American studies in that "*...men sometimes pretend to change in terms of gender equality, but their actions suggest otherwise*" (Barker et. al. 2004:149). In a study of women in Lima, Padilla said that "*Women mentioned that their male counterparts tend to resist entering the domesticity of their homes and assuming domestic responsibilities. This implies that any change for women would require change and transformation for men as well. This is because both men and women share the home, the children, and have a relationship. Gender identity(ies), whether feminist or not, do not exist in a vacuum."* (Padilla 2004:109)

Although questioned of how much and how fast the Latin American – and thus the Peruvian - society is subject to change, it is recognised that specific gender spaces are becoming less strict defined to a certain embedded human role (see also Fuller 2003:145, Bartholdson et. al. 2002:39).

In rural areas of low-income countries, the amount of time put down for each household activity varies through the season as well as between men and women (Wickramasinghe 2005:436). As such it becomes visible that women in Sri Lanka lessened their hours for leisure and sleep during times of harvests (Momesn 2010:163), and in sub-saharan Africa, women put in extra time for collecting water during dry season (ibid.73). On the Andean slopes of Peru, "*Men take responsibilty for preparing the land and for harvesting, while women and children tend the livestock. When men migrate in search of seasonal employment, the women take over all farm activites*" (Olesen 2010:96). Latin American women in poor households, also needs to gain income to "*achieve acceptable living conditions"* (Valdés 2004:38) for the family. Still, gender spaces in Peru have been said to be located for men on the public, street and for women at home and the house (Bartholdson 2002:35, Fuller 2003:138,143). Thus having a work for a Peruvian man is vital to be socially considered as a responsible, capable and adult man (Fuller 2003:143, 150). When Peruvian women (often migrated down from the Andes) have found a need to improve their income (in the urban areas), they have begun cooking on the street. Creating "comedores" (community kitchens) together in many rural and suburban areas, will also build a plattform for an exchange of knowledge and at the same time provide food for their children (Pineau 2004:15f,18; Blondet 2004:114, 118, 126).

In the **organic and fair-trade** coffee plantations of Mexico and Guatemala, men were found responsible of cleaning fields, fertilising, pruning, trucking, constructing storehouses and roads while women were found in selecting beans, picking, drying and washing them (Lyon et. al. 2010:96). The later became a heighten burden for women after the transition from conventional farming, but the change to organic and fair-trade, was also recognised to improve credit and technical support used to enhance the facilities of their cooperatives (ibid. p.97). Studies of organic production (coffee, cacao, vanilla, pine-apple) in Tanzania and Uganda, illustrated an increase of work load for women to meet the higher demands of certification (Bolwig et al. 2007:2,7).

The domestic work of fetching water and firewood, doing laundry, cooking, caring for children and elders are essential in maintaining and sustaining both the nation and household (Momsen 2010:65f). These activities are important to incorporate when planning for a society (Tinker 1976 in Kabeer 2003:21, Enete & Amusa 2010:2).

3.2.3 The Impact of Europeans

In the 1970's Boserup were publishing her book about *Women's role in economic development* (Boserup 2007). She discussed previous European colonies, mainly in Africa, and the role of new technical equipment in agriculture during the 20th century (ibid. p.42f). As such, she stated that any new cultivation methods were directed towards men (ibid.). This was based upon the labour division in Europe, which regarded cultivation as a male task (ibid.). Scientific methods and power driven by machine or animal, was enforced and taught mainly to men (ibid.)[9]. When men migrated for off-farm work, women would be left alone and in charge of the farming chores (ibid. p.43f). When they had been neglected in the instructions of technical methods, this widened the earning gap between women and men (ibid). Women would continue using manual hand tools when men were learning to operate machines and animals (ibid.). These new cultivation methods resulted in a higher yield, aimed at cash crops, resulting in more income that could be used to further investments in production (ibid.). Together with the difference of knowledge and earnings, boys were advantaged in education, leaving more girls in rural areas illiterate (ibid.). These were all factors that led to a growing difference between the possibilities and view of woman and men in rural areas (ibid.). The women's right to land[10] was also reduced by the entrance of Europeans, leaving ex spouses without any cultivation areas for sustainment (ibid. p.48f also Momsen 2010:141, Lee-Smith, Hinchey Trujillo 2006:160, Ellis 2000:157).

In the case of ***Latin America***, the role of the state to target gender inequality has also been contested to be rooted back to the colonial times (Molyneux 2000:38, Guardia 2009:25, Chasteen 2003:75; Chasteen 2003:153). It has been said to be *"explicitly concerned to preserve and reproduce gender and ethnic inequalities as part of the system of rule"* (Molyneuz 2000:39). These ideas were emphasised in the Catholicism, where women and men were idealised in different spheres (ibid. p.44, 69). An Iberian heritage also recognises a male authority over women (Bartholdson 2002:29). It might be said that catholic norms be part of conducting femininity and masculinites, but the catholic church has also been contested of present time to be participating in projects (such as community kitchens) to mobilise poor people to gain power for a positive direction in society (Blondet 2004:118,120; Bartholdson et. al. 2002:30f).

[9] In Enete, Amusa 2010:5, one reason for limiting women's decision influence in today's cacao farms in Nigeria, were claimed to be *"unwillingness of women to invest in male dominated cocoa farming environment"* (ibid., also Boserup 2007:44), which may be a consequential rest lingering on from previous instruction-attitudes within agriculture.

[10] For more information regarding land ownership in Latin America at present time, see:
Deere, C. D., Leon, M. 2003. The Gender Asset Gap: Land in Latin America. *World Development.* **31** (6), pp. 925–947.

When the conquistadors encountered the Inca culture in the earlier 1500s, the Andean society was based upon that the world was created on a duality (Guardia 2009:25). Nothing could exist without balanced with its opposite (Pérez 2000 in Guardia 2009:25, Pape 2008:46). The Andean harmony might have been a romantic equality picture, since it in persisting (influenced) Andean rural societies are found defined roles of where woman and men should be and do (Pape 2008:47). Such is the case of the 'amor serrano' where traditionally women are beated as a sign of affection (Padilla 2004:106). Furthermore, men are generally the ones attending the community meetings, and if both are present, women are supposed to stay quiet and sit on the floor, while men do the most of the talking, sitting on benches (Pape 2008:48ff). Still, *"in the Andes female agricultural and household tasks have a high social and cultural value"* (Bartholdson 2002:31). Studies undertaken in rural Peru and in Andean communities often focuses on indigenious poor (see Bartholdson et. al. 2002:17, 43), but it is important to also note that not all poor people in rural areas would like to define themselves as indigenious, and that there exist different indigenious descendants in Peru (as for instance the Shipibos in Ucayali). Acknowledging an indigenious belonging, or heritage, also has to do with practising traditions and beliving in them (De la Cadena 2001:10f).

At the end of the nineteenth century, the flow of Europeans began to occupy their previous colonies in Latin America (Molyneux 2000:44). With them also came the first women movements (ibid, Chasteen 2003:217). In the beginning they used the *"domestic and maternal virtues as a basis for activism and to create ties of female solidarity"* (Molyneux 2000:45). Even if Latin American countries began to offer education and work also for women, they still were regulating their actions by law that entitled husbands and fathers legal authority over their heads (ibid.). In the beginning of the 20th century followed demonstrations for female workers rights of condition and pay (ibid. p.46, 49). During this time governments in Latin America; *"they increasingly recognized that a modern social order depended upon social integration and that states had some responsibility toward the people they governed"* (ibid. p.47). Still, the *"twentieth-century states acted in the main to retain a masculine bias in the organization of the societies over which they presided"* (ibid.p. 68). Molyneux continues by stating that *"even when laws did change, social relations and attitudes did not or did so only slowly…even a decade ago, courts could be sympathetic to murderous husbands who were seen as acting to defend their honor or as being justly provoked by the sexual insubordination of their wives"* (ibid. p.69, also Páez 2006, Momsen 2010:156, Lyon et. al. 2010:100, Valdés 2004:46).

3.2.4 Financing the Households[11]

When a woman earns money, she will often use this for household needs, in contrast to men who would use it more for private consumptions (Ellis 2000:146, also FAO 2009:5). Townsend found that in Mexico, there were different ways of handling the money (1995:111). Sometimes the woman were given money per week for household expenditures, other times the woman did not had any say or hold of it, some had different accounts and one were said to give a bit to her husband when he needed it (ibid. f). Men in urban Chile considered womens income as assistance, but not the main contribution (Olavarría 2003:336). In Kenya and Nigeria, women needed consents from their husbands before implementing any decision, relating to farming and household resources (Chavangi 1994 and Francis & Attah-Krah 1989 in Kiptot; Franzel 2011:5). A common safety net for household income has been to keep poultry. Studies in Colombia and Mexico, shows that poultry are often fed with food scrap and kept for house needs and *"acts as small walking banks of emergencies"* (ibid. p.44, 63 also Momsen 2010:145, FAO 2009:5).

4. Methodological Approach

The study can be considered as both inductive and deductive (see Gray 2009:14ff). It could be referred to as empirical inductive[12] because changes made in the research aim made the researcher focus on observing and noting as much as possible in the field stay, to afterwards organise and draw conclusions (Delanty 2005:19, also Bryman 2008:9ff). It could also be referred to as deductive, since the research still kept the overall aim of observing small-holding cacao producers in Latin America and therefore were able to use prior achieved literature and the intended data collecting methods.

The study used a gender and livelihood approach, together with several ethnographic methods. To explain and illustrate the informants' lives and activities the researcher used participatory methods. These illustrative practical methods also proved useful to cross any illiteracy or language barriers between the participant and the researcher[13]. Participatory rural appraisal (PRA) methods often

[11] Since the information regarding income responsibility in Peru has been difficult to find, this section will look at some examples of rural low-income regions in the world.

[12] In the footsteps of Merleu-Ponty 1999 and Spielberg 1960 in Kvale, Brinkmann 2009:42; not so much explaining or analysing, as to describing, without thinking, just observing.

[13] The researcher began learning Spanish in autumn 2010, and before knew Italian, but most Spanish was gained in Cusco a month before field study. Therefore spending intense time with farmers and locals who only spoke Spanish, using participatory methods and recording interviews was helpful when gaining and going through data. Also Pineau acknowledged that in his research *"The fact that the researcher's Spanish was imperfect was not a serious impediment to exchanges because many women in Laderas de Chillón are*

indicate an evolvement at an early phase. Thus giving the participant the opportunity to formulate and decide upon categories and select the most effective methods. The actual process of doing these methods includes participants to reflect and analyse the results. These action-leading discussions aim to appraise the rural capacity and involvement for specific needs that could be formulated into development projects. (Crawley 1998:1, Cornwall 1998:2, Herbold Green 1998:3, Protz 1998:5)[14]. Within this field study, participants depicted their livelihoods by using individual symbols and personal time use, but they still followed specific frameworks of daily/seasonal calendar, livelihood map and semi-structured interviews.[15] Therefore the information was gained from locals, extracted and used for a certain aim,[16] which in this case was in completing a master thesis (Bonita, Payuan 2001:90). Thus it could be referred to as rapid rural appraisal methods (RRA) (ibid.).

4.1 Selecting Informants

The field data was collected the 28 March 2011 to the 8th of May 2011. There were ten households and three key informants participating in the study. The households were selected according to the criteria that they;

1. …needed to be within a day's travel from San Alejandro, as seen in figure 3
2. …they should be made up of a wife and husband
3. …the household should contain children
4. …they should be part of the organic certification process of cacao

Each family was visited for one to three days, with some returns for additional interviews or information. The gatekeeper[17] on the cacao association assisted in the selection of participant households according to the above criteria's. Since he was also the technical coordinator of the association; seven of the families were all working directly with the cacao association as administrators or field technicians for new cacao farmers.

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from Peru's rural areas, where Spanish is the second language (Peru is a bilingual country Quechua-Spanish, with a 45% minority of Amerindians). ***People take time to listen and make the effort to understand***" (2004:13, bold added).

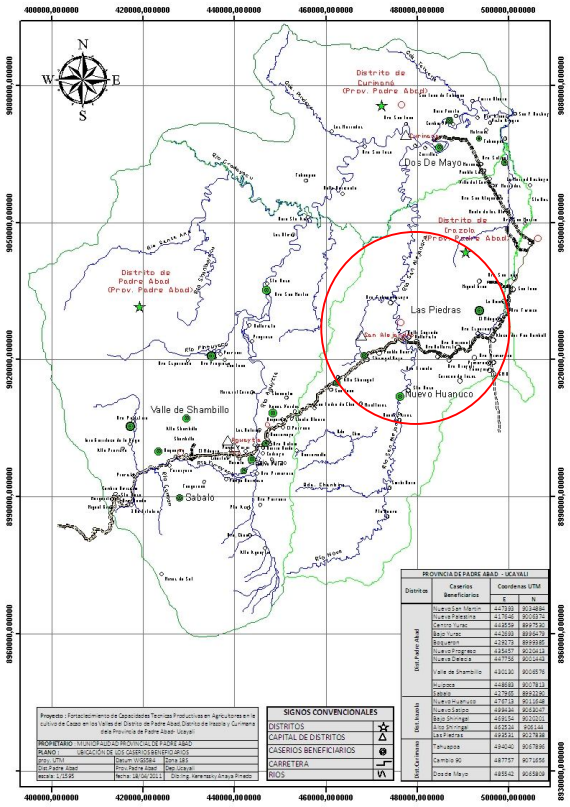
[14] References in within these brackets refers to page number in that chapter

[15] Using multi qualitative methods/mixed methods research and triangulation (Bryman 2008:379; Gray 2009:213 Hammersley, Atkinson 2009:183f)

[16] Understanding from the perspective of the participants experienced world (Ritzer 2010:42; Bryman 2008:385).

[17] For more information about the importance of a gatekeeper to gain access in a community, see Valentine 2005:116 and Atkinson 1981 b in Hammersley & Atkinson 2009:27

Figure 3: Study location (Provincial municipality of Padre Abad, see Appendix)



Seven of the participating families had an extra house in the village for their children to undertake their studies. Often this left the man on the chacra[18], hour's boat way apart without any mobile phone connection to be reached. The woman would then stay in the village to look after their children and carrying out some additional income generating activities, such as selling food on the town square. In one case, the Mrs. was left in charge for the cacao fields when her ex-husband died. She used to hire workers and had a small essential store in the village. The average age of the households participating wife were 39,2 years and for the husband 46, 8 years. Out of their approximated five children; three to four were estimated to be working out in the fields and at home, either full-time or during weekends and holidays. Those who did not were either too young or un-interested. There were ten children younger than 18 years old[19] participating in the study and additional four grown-up children older than 18 years. Regardless of age, they are all referred to as young Ms and young Mr. within this study. Most were attending school and therefore working on the farm during weekends and vacations. When there was time and possibility, the participants were asked to draw their daily activities and in some cases; the seasonal calendar and the livelihood map. Table 1 illustrates the used methods and age of participants.

Within this study the farmers' families will be referred to as T, Z, P, M, X, D, R, U, Q and Y. These letters has no relation to number or names of participants, but to keep a systematic reference within the data presentation to avoid recognition. The interviews in the households were always with the Mr. and the Mrs. of each household. Undertaking the interviews individually in undisturbed locations at home or in the chacra proved to make the participants much more talk-active. The total interviewees[20] reached up to 19 participants with three additional key-informants[21]. Two were encountered in the beginning of the field stay and these interviews followed a rather structured

[18] small farm, often referring to actual farming area
[19] See restrictions of intensive labour for children under 18 years in Peru in Villard 2010:2 and UNICEF 2011?.
[20] Mr. U was not part, since it was Mrs. U who owned and operated the cacao fields, which she had gained access to from a diseased ex husband.
[21] regarding the importance of key informants see Cook 2005:183, Bryman 2008:409

format with certain questions made out beforehand. These two key informants explained the organic certification, regional/international networks, cacao hybrids and foundation of a cacao association. Within the community of San Alejandro, the third informant was referred to as 'the oldest in the village' and as such a well-used resource to recount the local history. This interview was unstructured and did not had any questions set out previously. The aim of the interview with the elder was to understand how the village evolved with more settlers and its cultivation of coca and cacao production.

Participant	In the household				Daily activities			Seasonal Calendar	Liveli-hood map
Woman, age		Mrs.	Young Ms.	Grand-child	Dry season	Rain Season	other		
6			X						X
8				X					X
14			X		X	X			X
16			X		X	X			
16			X		X	X			
16			X		X	X			X
18			X		X	X		X	X
25		X			X	X		X	X
29		X			X	X		X	X
32		X			X	X			
34		X			X	X	X(house)	X	X
35		X			X				X
38		X			X	X		X	X
39		X			X	X		X	
49		X					X(house +chacra)		X
53		X			X	X			
58		X			X	X			X
Total	**9**		**5**	**2**	**14**	**13**	**3**	**6**	**12**
Man, age	In the household				Daily activities			Seasonal Calendar	Liveli-hood map
	Hired	Mr.	Young Mr.	Grand-child	Dry season	Rain Season			
6			X						X
7				X					X
7			X		X	X			
11			X		X	X			
12			X		X	X			
14			X		X				
22			X		X	X			X
25			X		X	X		X	X
25			X					X	
25		X			X	X			X
29		X			X	X		X	X
39		X			X	X		X	
40		X				X		X	X
41	X				X	X		(x)	X
55		X			X	X			
55		X			X	X		X	X
57		X			X	X			
61		X			X	X		X	X
61		X			X	X			
Total	**1**	**9**	**8**	**1**	**15**	**15**		**8**	**10**

Table 1: Used methods

4.2 Methods

Except for the following described methods, the data also includes three videos made in collaboration with participants and the cacao association. The videos illustrate weeding cacao plantations, the process of fermenting/drying the cacao beans, as well as the processing of cacao beans into different cacao products for certain occasions such as the chocolate festival or Christmas celebrations. Throughout the process was a constant updating and sampling of relevant maps, news papers articles in local press and online, scientific books, reports and academic articles.

4.2.1 Day 1 – Establishing a Common Ground

The first day was used to familiarise the participant and the researcher with each other. For the researcher to introduce onself (and the study) well in the beginning has been referred to establishing a "*commonality in difference…a contact zone"* (McKay 2002:187f), which aim to make the respondent feel more secure in the company of the researcher.

Together with participants, a **memory diagram** of the people living in the house was drawn out. The diagram illustrated how many children there were, in the household, how old they were, if they still lived at home and if they were married. The diagrams proved especially valid afterwards the field visit, but also for the discussions on site.

The next procedure was a **guided tour**[22] on the farm. During the tour the farmers would point out things such as what crops did the family grow, how did the family inter-crop other crops with trees, what varieties of cacao did the familiy grow, how did the familiy maintain their land, did the familiy have any animals, how were the animals kept and tended, forestry activities, field and farm boundaries, access to rivers and streams, what kind of houses there were at the farm, who lived and worked there, did they had hired labour and so on.[23] These guided tours included a lot of **discussions, explanations** and **photo**-taking[24] as well as notes taken in a **field book**[25]; one especially for each farm. The rest of the first day, was used for **participant observation**. By being

[22]Also see Lightfoot, C., Feldman, S., Abeding, M. Z. 1994:68. Incorporating Gender in Conceptual Diagrams of Households and Agroecosystems in Feldstein. H. S., Jiggins, J. eds. *Tools for the field – methodologies handbook for gender analysis in Agriculture.* p.66-70.
[23] Besides creating confidence and information, a guided farm tour could also be used to begin a discussion escalating in drawing out a "household agroecological system" (ibid.)
[24] Regarding photos as visual aid and illustrating a certain aspect, see Bryman 2008:519
[25] More about field book keeping and their use, see Cook 2005:180; Hammersley, Atkinson 2009:141f

involved in what needed to be done at the farm and in the household, like cooking, weeding, emptying cacao fruits of beans and picking fruits.[26]

4.2.2 Day 2 – Practical Methods

The second day **the daily activity calendar**[27]was used. With the daily activity calendar it was possible to make up who did what, when and how long. Symbols were drawn out individually for the rain and dry season. Momsen said that; *"Time use studies reveal daily, weekly and seasonal fluctuations in the demand for labour and clarify the trade-off between productive work, household maintenance and leisure at different times of the year and in various farming systems…They also make it possible to identify age, sex and season-specific labour constraints which may need to be overcome if a new project is to be successful"* (2010:161). To give some ideas for the participants of how to make their daily calendar, inspiration were given through one based upon the researchers' own day at the stay.

The second practical method used, was **the seasonal calendar**. The different activities throughout the year were drawn up using personal symbols. The various activities included were rain/dry season, income, expenditures, available water for home use, animal breed/availability, animal/family diseases, celebrations/vacations, cultivating cacao, harvest/selling cacao, other (crops). Except enforcing the explanation of daily activity calendars and further initiate discussions, it was also picturing the correlation of activities throughout the year. Because *"…each household's income is derived from a great variety of sources that constantly change in response to available opportunities according to the season, the state of the market, and even the time of the day – and includes the use of a changing mix of resources"* (Wickramasinghe 2005:436).

The last used method the second day was **the livelihood map**[28]. It was explained as 'imagine that I am to live at your house in the chacra for some months, and I have never been there. You are going away and will give me the key, as well of instruction of what needs to be done. This map will facilitate my understanding of what kind of crops you got, animals, houses, river, roads, trees and anything you feel is important for me to know'. Would there be any difference in concern of what men and woman were illustrating, the relation between them as well as details and size of the

[26] Participant observation, or more accurate "micro-ethnography" (Bryman 2008:403) because of time amount
[27] Also referred to as the 24 hour calendar and activity calendar
[28] Also see social and resource mapping in Buenavista, G., Flora, C. B. *Participatory Methodologies for analyzing household activities, resources, and benefits* p.36-44 in Feldstein, Jiggins 1994:39f.

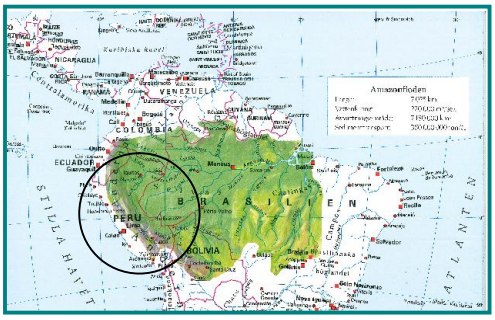
objects that were illustrated? This method also opened up for discussion, as well as explaining the different farmers' livelihoods.

4.2.3 Day 3 – Finishing up, Semi-Structured Interviews

The important focus during the third day was **participant observation** and especially the **semi-structured interviews**[29]. The questions included work responsibilities, farm activities, cacao use, the change and decision to organic certification as well as investments and future hopes. **Summarizing the field stay** and the given information, it would increase the data (Kvale & Brinkmann 2009:133) and be useful for references and additional expressions (see Bryman 2008:379 about triangulation).

Given the character of the interviews of main questions and space to expanding answers by following up questions, it resulted in a lot of additional data[30]. Respondents explained things such as chicken tending, the duties of a field assistant, how to graft, how to make chocolate, how to make cheese, worries of children and how to guide them right, importance of moon phase (*creciente y cuarto menguante*) for planting plantain and the economical impact of the extreme flooding the same year.[31] All interviews were voice recorded with mobile phone, quality checked and additional saved in computer directly upon returning to field base in San Alejandro. Together with interview notes, the recordings were transcribed and translated into specific sections to form illustrative diagrams for the study.

Figure 4: Amazon Basin (Norstedts 2010:87)



5. Background – Location and Cacao

As seen in figure 4, a major part of Peru makes up by the tropical forest of the Amazon. Here the annual rainfall is between 1000mm and 3 600mm (Day & Davies 1986, Goulding et al. 2003 in UNEP 2004:17) and the climate varies between 24-26 degrees Celsius (UNEP 2004:16). The ideal climate for cacao is with an annual rainfall between 1150mm and 2500mm with the temperature between 21-32 degrees Celsius (Artica 2008:10), thus the Amazona region is a good area for growing cacao.

[29] Regarding semi-structured interviews, see the explanation provided by Bryman 2008:438ff
[30] Rojas also highlighted the great use for participating methods to gain a lot of rural knowledge (1998:11).
[31] Kvale & Brinkmann (2009:48) argues that an interview can enrich and gain valuable life insights for the participants, just by having someone listening patiently, trying to understand an experience and opinion. This was also found by Arora-Jonson 2008:142.

5.1 Irazola

San Alejandro is the *major city* in the district of **Irazola**, which is one of three *districts* in the province of Padre Abad, the *department* of **Ucayali** (La Republica 2005:342f). Through Pucallpa runs the **river Ucayali** that connects to **river Aguyatia** and then **river San Alejandro** (ibid.). River Ucayali connects south to river Urubamba and north to the Amazonian river (ibid. p.6,7, 343 also UNEP 2004:16f). These relations can bee understood by observing figure 3 and 4. The river Ucayali was first marked on the map in 1557 by Juan Salinas de Loyola, who found indigenous settlements such as the Shipibo (still living) in the area (Maldonado & Sabino 2010:4). Many areas were then 'discovered' during missionary travels by Jesuits, Dominicans and Franciscans (ibid.). Settlers kept coming to Ucayali and in 1887, the city of Pucallpa were registered with 200 inhabitants (ibid. 7). In the end of 1990 the population in the department Ucayali was calculated to 388 600 peoples (INEI in La Republica 2005:349). The province of Padre Abad was estimated in 2004 to reach up to 64 653 peoples (ibid. p.347). Except for the gas and oil extraction, the area around Pucallpa today includes the financial activities such as fishing, logging, agriculture, hotel and industrial products (UNEP 2004:16, 17; UNED 2002:213).

Since it has been hard to find information regarding San Alejandros history, the following descriptions is a draft from a key interviewee, aged 97 years.[32]

> *"San Alejandro was first encountered by outsiders in 1936, with catholic priests. He went by the river that today has got his name. During the first years, there were just a few settlers in the area. Essentials as sugar, milk, soap, oil, biscuits were transported on the river. In the 1950's the bridge was built and with it the people started to come. They began growing plantain, maize, rice, yuca, as well as rather much meat from fish, they also had some timber. The 1970's had a hard time with the narcotraffics - impulsive killing just for the sake of it. Many people still grew coca, because it gave a lot of money. With a decision from the then president Fujimori, the area became calmer with the marine located on spot in 1994. It had military since 1940's in the area, but together with the police, they were collaborating with the coca production. There were no-one to be trusted. Military controlled every 10 kilometres between San Alejandro and Pucallpa. The coca came down with Peruvians from the mountain. The marine ended most coca and the government began to*

[32] Letting him speak also mirror Momsens (2010:19) argument about understanding areas through the stories told individually and locally.

support cacao, maize, plantain, pine-apple; all the things that you would need to have in all the spaces..." (San Alejandro May 2011).

5.2 From Coca to Cacao

Peru has been known for their vast production of coca leaves, the raw material for cocaine production. Peru was ranked to be the primer coca producer in the world, but since 1996 Colombia has a larger production (CIA 2011, UNODC 2008:115). In 2007 coca production increased with 4% in Peru in relation to previous years, but it is still less than in the beginning of the 1990's (UNODC 2008:115ff). What a certain coca field actually becomes in amount of the cocaine drug depends upon transformation facilities, available land as well as farming techniques (UNODC 2010:66, also UNODC 2011:99ff, 244ff, 252f). One of the reasons for the increasing coca production was said to be the absence of projects focusing on alternative development measures (ibid.). In Peru cacao production is promoted as one alternative to coca plantations (ibid., Aguaytía La Revista 2011:10, Ministry of Foreign Trade and Tourism c.2008), but there are also other crops promoted as an alternative for coca leaf productions such as palm oil, corn, coffee and cotton (USAid/Peru 2011). For example, USAid and the Alternative Development programme have been trying to make farmers in areas in the region of San Martin and Aguaytia to abandon their production of coca and instead start to produce cacao (ibid., USAid/Peru 2011). Except for cacao, alternative cultivation programmes also target the growth of palm oil, corn, coffee and cotton (USAid/Peru 2011). The cacao farmers in Irazola began with intensive cacao production[33] when a North American NGO arrived in 2000 (Coordinator Cacao Association 2011, interview).

Now "there is no use of the coca anymore, because it is illegal and at any time the police may come…but with the cacao you could be the whole day without anything happens...." (Mr. X April 2011). But "*some farmers believe that cacao not is as profitable as coca, so they say. For this reason, they do not want to talk to any NGO's that arrives*" (Mrs X April 2011). Mrs. Q said that "w*ith chicken and cacao it's more free. It's not controlled by anyone"* (May 2011). As such Mrs. X commented that *"I prefer sowing my cacao instead of my coca, and live more peacefully, with a good education for my children"* (April 2011).

[33] Ever since the cacao association ACATPA was created in 2000 in the province of Padre Abad, it has collaborated with various different organisations such as Winrock.org, CARE.org, CODESU, CHEMONISC.com and now latest corporations includes DED, the Swiss cacao buyer PRONATEC, CIDRA, ICRAF, FONDAM, and municipality of Aguatía where achieving the organic certification is a major target (Coordinator Cacao Association 2011). These coorporations might partly be the reason for the general good standard and knowledge of marketing, production and improving life with such as agroforestry, education and health. The cacao association provides their members with technical support and equipments, fermenting process, storing and measuring of beans, funds and information regarding education, loans, health, funeral expensives as well as the organic certification (ACATPA 2011).

"…you would not have any problems. It's easier to cultivate and for market, it's not dangerous" (Mrs. T March 2011). *"And who would like to buy that? When it also makes peoples sick? No it's no good… Mentally ill… Cacao is better. Yes, grow cacao, I trust in that. You will earn a lot in it, a lot…"* (Elder May 2011). *"no, I don't want to grow that. I don't have any coca. Cacao, and that's it"* (Mr. Q May 2011).

5.3 Cacao

Table 2: World exportation of cacao (from data in UN 2010:28)

Country	**Export 2005/06-2007/08**
1. Côte D'avoir	38,75%
2. Ghana	20,98%
3. Indonesia	16,36%
4. Nigeria	6,7%
5. Cameroon	5,29%
6. Ecuador	3,46%
7. Togo	2,71%
8. Papua New Guinea	1,55%
9.Dominican Republic	1,13%
10. Guinea	0,55%
11. Peru	**0,40%**
12. Brazil	0,37%

In the year of 2008, Côte D'avoir was ranked with highest exportation of cacao beans and products in the world with 38,75%, followed by Ghana, Indonesia, Nigeria, Cameroon, Ecuador, Togo, Papua New Guinea, Dominican Republic, Guinea, Peru and Brazil (UN 2010:28). The world exportation of cacao in 2010 is shown in table 2. Peruvian cacao is shipped for markets all around the world, but the majority is sold to Europe with Switzerland, France and Holland as largest buyers, followed by Venezuela and UK (Ministry of Foreign Trade and Tourism c.2008). Within the year of 2005-2008, Peru displayed an increase of 46% of cacao exportation (Ministero de Agricultura c.2009b:24). Peru is currently the second largest producer of organic cacao in the world, a market which is growing, with buyers from Switzerland, Holland, Italy, US and Germany (ibid.).

5.3.1 Cacao Production

Illustration 1: Hybrid

There are four different cacao (*Theobroma cacao)* types (Artica 2008:12). *Forastero* said to origin from upper Amazon, *criollo* from Central America, *Trinitario* devolved in Trinidad Islands as a mix between forastero and criollo and the *'cacao nacional'* from the Andes between Colombia and Ecuador (ibid.). In the area of Irazola, the cacao tree with *criollo* beans is used as the host tree for grafting on. The criollo beans are carefully selected and planted in plastic bags. When the shoot has grown strong enough for grafting, the hybrid is attached to the mother plant. One way of grafting is to make a clear cut in the stem of the host tree and attach the hybrid stick to the clear cut by wiring it

with plastic tape. When the shoot has adapted, the branches of the original plant are pruned away to give strenght to the hybrid (See Meza et. al. 2010:13-15, Artica 2008:59, Arce 2003:26-27, Mr. X April 2011). Around Tingo Maria and in Padre Abad, the hybrid CCN-51[34] is the most common variety (Ministero de Agricultura c.2009a:5, tables from PRO-Amazonia-MINAG in Anduaga 2009:38, Coordinator Cacao Association 2011). Sometimes there can be both cacao fruits from the hybrid and the host plant, resulting in different cacao fruits from diffrent varities on the same cacao plant as can bee seen in illustration 1, where the purple fruits are the hybrid.

If the cacao trees continues to grow without pruning it can become up to 15 metres high, but within plantations, it is normally kept between 4-6 metres (Bertha 2008:45). In one hectars it enters about 1 000 cacao trees (Mr. M April 2011). The planted cacao tree reaches an age of 30-40 years (Khodorowsky & Loisy 2005:32). The tree likes a steady climate with not too much fluctuation when it comes to rain and sun (ibid. p.40, Anduaga 2009:10). It is therefore suitable to combine cacao with various tree species in the field, a farming system which is called agroforestry. The trees in the cacao field shade the cacao tree from strong sunlight (as seen in illustration 2). The shade will also keep the soil more moist. It is important that the climate is not too damp or wet, since it may increase mould and fungus on the fruits that may develop into diseases, something that can be observed in illustration 3-5 (Bertha 2008:41, 49; Dafis 2004). If the cacao field is flooded, it can disturb the flowers from blooming and minimize the annual amount of yield (Mrs. U May 2011, Mr. Y May 2011). Other threats to the cacao harvest include animals, insects and sometimes yield theft from other humans (Khodorowsky, Loisy 2005:46ff, field study 2011).

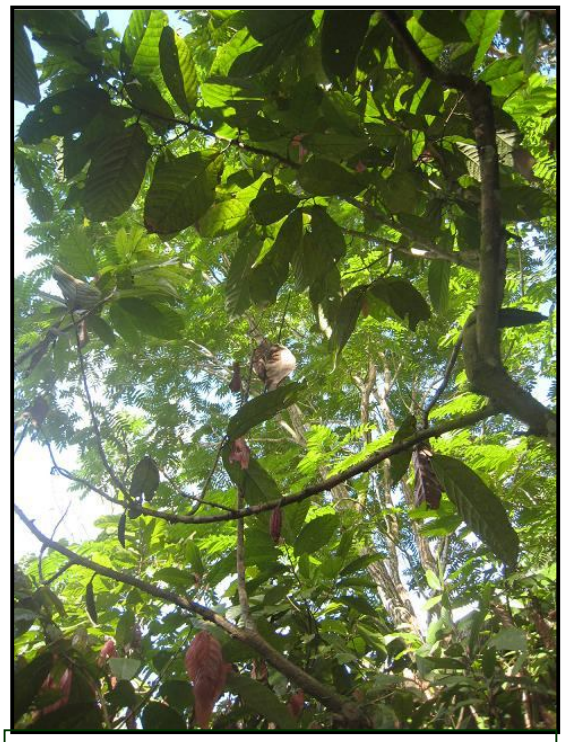


Illustration 2: Cedar tree – timber and shadow

[34]By mixing hybrids in the Ecuadorian city Naranjal, with best disease resistance and highest production, Homero Castro Zurita got satisfied with his 51st version (Amador 2004., Cheers 2007:450). It was named 'Collecion Castro Naranjal 51' (Amador 2004). The year was 1965 and the CCN-51 began to spread around on the cacao cultivations (ibid). With its beneficial resistance to diseases and the relative similair cultivation zone, it was brought to be used in the Peruvian Amazon (Cacao Coordinatior Association 2011).

The knowledge of intercropping cacao trees with other taller trees can be found even in literature dating back to the 1850's, where blackwood was encountered among the cacao (Olviedo in Steinbrenner 2006:259). Today there are two sorts of shadowing systems for the cacao trees; the temporal and the permanent. The temporal shadowing can bee seen in illustration 2, and is planted half a year before the cacao is planted, so that the recently growing trees will shadow the small cacao plants (Arctica 2008:68f, Meeza et. al 2010:18f, Arce 2003:35ff). In the Amazonas, the species used as temporal shade are for example the fast-growing yuca, papaya (*Carica papaya*) and plantain. For the permanent shade trees such as guaba (*Inga edulis)*, pijuayo (*Bactris gasipaes*), bolaina (*Guazuma crinita*), capirona (*Calycophyllum spruceanum*), marupa (*Simarouba amara*), caoba (*Swietenia macrophylla*) and shihuahuaco (*Dypteric ororata*) are used (ibid.).

5.3.2 Harvesting

It takes three years before the cacao tree starts flowering and give fruits (elder May 2011). Thereafter the cacao tree will bear fruit every 15/20th day during the whole year[35], with a major yield throughout the months of dry season. Every third or forth month a year a major weeding ("cultivo") takes place. The weeding is mostly done with a machete and a wooden stick, but some farmers referred to using a grass-cutter. Moulded or bad fruits are pruned away with secateurs or long pruning scissors. By taking away bad fruits and weeds around the cacao trees, it helps the trees to more efficiently take up nutrients from the ground and prevent spreading of diseases. By leaving the weeded weeds and the fallen leaves on the ground around the trees, it also keeps the soil moist.

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Illustration 3: Witches broom (*Crinipellis pernicosa*)

Illustration 4: Black pod (*Phytopthora pod rot*)

Illustration 5: Moulded cacao fruit

[35] Or atleast the CCN.51 does so, the Criollo just bears fruit once a year (Mrs. X April 2011).

[36] For more information regarding spread and isolation of the Witch's broom see;

Dongo, L. N. & Orisajo, S. B. 2007. Status of cocoa swollen shoot virus disease in Nigeria. *African Journal of Biotechnology.* 6 (17), p. 2054-2061.

Dzahini-Obiatey, H.; Ameyeaw, G. A.; Ollennu, L. A. 2006. Control of cocoa swollen shoot disease by eradicating infected trees in Ghana: A survey of treated and replanted areas. *Crop Protection*. 25, p.647-652.

Depending on the cacao variety, the cacao fruits may have different colours, become up to 25 centimetres in length and 10 centimetres in width, with a weight of 300-400 grams and contain 25-50 cacao beans (Meza et. al. 2010:5,6, Bertha 2008:53). The mature cacao fruits are collected and piled on a spot under the cacao trees. The fruits are opened up by a machete, separated from the pulp string and then emptied by hand into a bucket (as seen in illustration 6) or sacks. While the beans dry up, the sweet cacao juice is emerging in the bottom of the bucket. This juice can be used for making marmalade or just to drink as refreshment while working.

Illustration 6: Freshly opened cacao

The cacao beans are fermented in three different stages in wooden containers with two days in each, stirred a couple of times to get an equal fermentation, and then dried in the sun for around four days. Drying the cacao beans is sometimes made on a plastic shields directly on the ground, often on the warm asphalt - if there is a road outside the house. At the cacao association there are certain tables draped with chicken net and a protective plastic roof, where the cacao beans can respire while they are turned around with a rake each day. Since a year back the association can receive, ferment and dry beans so the farmers can leave both dried and fresh cacao beans directly to the association. However it is better to leave the beans moist so the fermentation process can be watched over thoroughly (Mrs. Z April 2011). When the cacao beans have become fermented and dried, they are stored in sacks and ready to be transported by boat, trucks and airplanes to chocolate factories. When the cacao beans arrives to the factory, the quality of the fermentation and drying process is checked and then begins the process of roasting and grinding, which transforms the cacao beans into chocolate.

Although there are different plant diseases that may threaten the cacao, as well as the sensitive growing criteria's, cacao is still a very attractive crop to grow. It has been known for being a valuable market product since the ancient time of the Mayans (Khodorowsky & Loisy 2005:27ff) and has since the colonisation time back in the 1550's been grown for export to meet the demand of primarily Europe and Northern America (Potter et. al. 2008:439, Fairtrade International 2011, ICCO 2008:30, UN 2010:30).

5.3.3 The Organic Certification

In San Alejandro during April of 2011, one kilo of uncertified cacao paid 0,70 soles/2,57 US dollar/18.03 SEK (CoinMill 2011, Forex 2011) less than the organic certified cacao, which means

that if a farmer would sell 1 000kg of cacao beans, the farmer would miss out on 700 soles/257,14 US dollar/1803,79 SEK (ibid., Coordinator Cacao Association 2011). By the time of this study, the cacao association in focus was in the midst of their process of receiving organic certification. This process derived from the European Unions regulations for organic production (organic adviser 2011). The European Unions regulations for organic production require that no genetically modified seeds for sowing are used; that farming practices should be conducted with the aim to promote biodiversity; to maintain the fertility of the soil; animal and plant waste should be recycled; the use of un-renewable resources should be avoided; animals and plants should be maintained in their natural habitats; intending to integrate crop and livestock production in order to facilitate the use of manure as a natural fertiliser; using organically produced seed for sowing; incorporating various crops throughout the year (Official Journal on the European Union 2007:1ff, 7,9). The organic production should be "*contributing to the protection of the environment and animal welfare, as well as to rural development*" (ibid. p.1). In European Unions regulations there are no mention of how labour division on the farm should or should not be carried out. However, there is another certification, which the targeted cacao association joined in 2010 called the UTZ certification (Coordinator Cacao Association 2011). Since the UTZ certification is more focused on a set of specific crops (coffee, cacao and tea), it also facilitates a more detailed approach to the farmers' occupation (UTZ c.2008). Notable is their points of guidelines in their certification about women's participation and child labour. It is outlined as following;

> *"128 There is an annual increase of overall female attendance to trainings.*
> *138… Women and men receive equal remuneration for work of equal value, equal access to training and benefits and equal opportunities for promotion and to fill all positions open*
> *146 The certificate holder organizes awareness raising meetings for producers and their families to inform them on…Child labour and the importance of education…..Equal rights and opportunities for women*
> *148 The certificate holder supports the improvement of literacy and numeracy skills for producers and their families. The certificate holder stimulates the participation of women in this training."*

*(*UTZ certified 2009:25ff)

There is a four year process of which the points of guidelines have to be increased (ibid. p.7).

6. Cacao Producers in Irazola

6.1 The Cacao Farms and Activities

Most of the respondents had lived 10-30 years in Irazola. Some did not answer the question of where they had lived before, but those who did came from Tingo Maria, Huanaco, Pucallpa, Trujillo and San Martin. Each had between 1-12 hectares of cacao, with an average of 6,3 hectares of cacao. If including other crops and forest areas, the farms reached a size from 5 hectares up to 95 hectares with an average of 31 hectares. The farmers grew local trees such as capirona, pijuayo and guaba. It was common to grow yuca, plantain and different sorts of oranges (*citric*). Some also had papaya, mango (*Mangifera indica*), avocado (*Persea americana*), sugar cane (*Saccharum*), coconut (*Cocos nucifera*), pineapple (*Ananas comosus*), maize (*Zea mays*) and carambola (*Averrhoa carambola*). Some grew wood trees such as caoba and bolaina as a financial back up as well as for the household's needs (Mr. Y May 2011). Mr. Q (Aprile 2011) and Mrs. T (March 2011) illustrated the use of the aguaje palm (*Mauritia flexuosa*) leaves for braiding strong house roofs. Examples of how farms could look like can be seen in the livelihood maps of illustration 7 and 8. The agricultures mainly grew the cacao hybrid NCC51. Other varieties encountered in their cacao fields included *criollo*, ICS96, ICS95, CCN69, CCN109 and PAO.

Illustration 7: Chacra depicted (Young Ms. May 2011)

Illustration 8: Chacra depicted (Mrs. May 2011)

The seasonal calendars (presented in table 3) showed that rice (*oryza*) was cultivated during rain seasons, maize was planted in May or September and that there was additional cotton (*gossypium*) and timber production within the farmers' production. Weeding cacao often took place extra much during every third or forth month and it was sold when harvest, which was every 15/20th day around the year, with extra loads of yield during the dry season.

Dogs were used as company and guards, cats were allowed inside the kitchen and kept as pets. Illustration 9 depicts kitten and guinea pigs living and bred in the kitchen. Chicken, hens and guinea pig[37] were used occasionally for home consumption, else held as a food security or bred for selling and gaining income. Cows were giving a bit of milk, but most kept as insurance for any unexpected expensive. The seasonal calendar showed that animals and pets more often got sick (cough, flu, pests/dengue) during wet seasons. One farmer said that their cows became sick during dry season because their fur did not handle the heat. Half of the families said that it was rarely that anyone in their family caught any diseases. But the other half of the respondents said that the children often got flu, cough, dengue and tummy pain during the rain season The answers seen in the seasonal calendar have been summarised in table 3, with an example shown as illustration 10.

Illustration 9: Kitten and cuy in kitchen.

[37] = "cuy", often bred in kitchen and used for consumption, sometimes to sell. Could be compared to the keeping of rabbit in old times Sweden.

6.2 Work Occupations and Responsibilities

The question of which tools men and women used in their work, where meant to see if there would be differences in the responds betwen the male and female farmers. The most preferred tools could imply the place and specific work activities which that person carried out. What could be seen were that all the respondents would answer the same, namely the machete. Additional tools mentioned were pruning shears (six respondents), telescopic pruning shears (one), saw (two), motor cutter (two) and spade (one).

Agr.	Mrs.	Mr.
T	all the same	
Z	in the chacra, resting in house	in the chacra, by the cacao
P	in the shadows of the flowering trees	In the fresh air under a tree
M	I like my kitchen, like breeding animals	Likes the house & special place in San Alejandro and in chacra
X	The chacra (feeling alive)	No, it's the same.
D	I don't have. The river is nice…	
R	Cacao trees, not as warm as in the maize field, and no flies as in the house, where I get bored.	In my house by the river.
U	To fish	
Q	My chacra (fresh and open instead of Pucallpa)	
Y	No.	Everything.

Table 4: Favourite place

Would there be such a place as one typical for women and one for men? The answers in table 4 indicate more similarities within each household than with each gender. Producers said that they enjoyed mostly being within their chacras, under a cooling tree or in the house.

Agr./Activity, month	Wet/Rain season	Dry/Hot Season	Income generating activities	Expenditure for household	Water
Young Ms. T	Oct-April	April-Oct.	Cacao; Apr-July, Sept-Nov.	Year around; food, natural fertilizers	Year around, more oct-apr.
Young Mr. T	Oct-April	March-Oct	Year around	Year around, more during	Year around (a well)
				Mar-Jan. while not in uni.	
Mr. T	Oct.-Jun.	Jun.-Oct.	Cacao, year around, more	April-July; for cacao cultiv.	Year around (a well)
			Apr.-Sept.	tools and fertilizers	
Mrs. Z	Nov-April	April-Aug.	Maize Jan-April, cacao	Food, school,	Year around (river)
			Year around, more in Apr-Aug.	gifts and dinner	more Aug-Apr.
Mr. Z					
Mrs. P	Oct-May	May-Oct.	Cacao, year around, more	Food year around	Year around (well)
			May-Oct.		
Mr. P	Dec-Jun.	Jun.-Oct.	Cacao; Feb-Jul, nov., dec.	Food, year around	No,
			Also work cop.		Lemons and Sugar cane
Mrs. M.	Jan-jun	jun-oct.	Cacao	For cultivation	Year around (river)
Mr. M.	Oct-May	May-Dec.	Cacao, year around, but more	Food year around, in march	Year around (river)
			May-Nov.	new machete, cacao bags, school	
Mrs. X					
Mr. X	Nov-Apr.	May-Sept.	During rain: Maize, rice, plantain	Sept-March; Timber for house	No drinking water.
			Cacao year around, more in Apr-Sept.	March: School, food for hens	Frying food.
Mrs. D.	Nov-Apr.	Apr-Nov	Year around plantain, jelly, cake, cacao	Food, school	Year around (river),
			More cacao during dry season		more during rain season
Mr. D					
Mrs. R.	Jan-Apr	Jul-Oct	Most days; Marciano, Fizzy drinks	Food year around, school, once a	Year around (river)
			May: Maize, May-Sept:Cacao (some in start of year)	month a new machete	
Mr. R	Nov-May	May-Nov	Jan-Apr: Plantain, Apr-May: Maize, hens	Water, electricity, petrol,	Year around (river),
			Year around cacao, more june-oct	food, school	more water during rain
Mrs. U. Mr. U					
Mrs. Q					
Young Mr. Q	Jan-May	Jun-Sept	Every second month: Chicken, cuy	Year around food, food for chicken	Year around
			Once a week cacao (more May-Aug)	Once a month salt for cows	(hand-made well)
			Mar-Apr: Maize, cows if emergency		
Mrs. Y					
Mr. Y	Nov-Apr	Apr-Nov	Cacao, year around, more may, jun, jul.	Every second week, food	Year around (river)
			20 days/month cop., 10 days/month chakra		Rises in Febr-May

Table 3: Seasonal calendar

Animals	Diseases animals/trees	family	Celebrations within family	Vacation
Hens; dec, jan, june slaugher during holidays	No	No	Navidad, New Year, San Juan	No
Hens, cuy Little year around	No	Little, year around	not discussed	Jan.-Apr. for uni.
Hens, cuy Little year around	May-Oct. Hens gets *Muguilla*	Year around	not discussed	Hijo dec-Mar, uni.
Hens, fish from river	Hens ; plague, flu during Sept-Apr	Oct-Apr.; flu, dengue	Carneval, Easter, Mothers Day, San Juan, Ind. Day, Santa Rosa, San Martin, Dia muertes, dia jesus	Dec-Mar hijos school, also half aug.
Chicken	During wet season	Jan-Mar; hijo gets flu	Village anniversary	Hijo dec-febr.
Hen, year around, but more Jun, Jul, Sept, Nov.- piglet jan.	Hens, febr, mar; flu, plague	Febr, Mar.	Carnival, Mothers Day, Navidad	
Hen, cuy	Hens get cough now and then	Jan-Febr, when rain, hijo gets cough and flu	Valentine, Mothers Day, Birthdays, San Juan, Dia Patria, Navidad	Hijo from school during Navidad, Dia Patria
Hens, cows slaugher hens in dec.	Cows, may-june, fur too hot	Little, year around	Mothers day, dia patria, Birthdays, Navidad	Dec, May, July
Oct-May hunting in the woods, fish in river one hours walk away	Jan-Febr, small chickens gets plague Nov-Febr: Cacao trees (broom, fitoctora)	Dec-Mar: cough, flu, dengue, tummy pain	Carneval, fiesta di diablo, San Juan, de cacao, santa rosita, los espiritos, navidad, nuevo ano	No, hijos dec-mar from school
Pig (consumed easter), goose, 13 hen (used in summer), cow for milk	Hen, plague in April	No	Village anniversary, San Juan, Dia Patria, Navidad	Dec, Jan, Aug, - Hijos free from school
Hens (consumed by feasts as Navidad)	Hens gets *viruella*; diarrea, plague during rain	No	Birthdays, Mothers Day	No (daughter goes to relatives during breaks)
Hens, shooting *anuje* once a month	No	No	No	No
Hens for home consumption, Chicken, cuy, cows for selling	Once a year, very rare	Rare	Carnival, Patrio, Navidad	Seldom
Hens 1-2 times/month, cuy 3-4/year	No	No	No	No

Water	*for drinking, cooking, bathing, washing clothes*			
Animals	*for drinking, cooking, bathing, washing clothes*			
Cultivating	*Mostly referring to weeding around the cacao trees*			
Food, ♀ mention;	*noodles, salt/noodles, oil, rice/rice, potatoes, beans, noodles, sugar, egg, meat,*			
	vegetables/, egg, carrot, tomatoes, garlic, pepper, onion, salt, chicken, rice/noodles, sugar, oil, salt			
Food, ♂ mention;	*rice, noodles, milk, oil, sugar, flour/noodles, rice, beans, sugar, oil/noodles, sugar, egg, milk, oil*			
School, ♀ mention;	*clothes (uniform), items/clothes in march/april after vaccation, pen, paper,*			
	internet café/mototaxista, internet café, drinks, photocopys			
School, ♂ mention;	*clothes (uniform), items/photocopies, internet café*			
Chakra=little farming area				
Navidad=Christmas				
cuy=guniea pig, breeded to eat and sell				
uni.=university				
ind=independence				
cop=cooperative for cacao				
Marciano=home-made ice-cooler, mainly done with cocoanut and milk				
Note: *Sometimes there are months lacking between sun and rain season, this is because respondents*				
illustrated both rain and sun, a cloudy, changing weather				

Cultivating	CACAO Harvest	Selling	Other (such as crops)
April, July, Oct.	Every 15 day, year around	When harvest	No
March, July, Oct.	More mar-oct. year around	When harvest	No
Year around	year around	Year around	No
Feb, May, Aug, Nov grafting during winter	Aug-Apr: Every 20th day Apr-Aug: Every 15h day	When harvest	Maize, sown may-june, sold mar-apr.
Febr, Jun, Oct, Dec.	Every 15th day	When harvest More during dry season	No
Jan, Apr, Dec. and pruning with motorsaw aug, sept	Year around, more in Febr-Jun, Nov-Dec.	When harvest	No
Mar, Jun, Aug, Dec.	Year around, more in Apr, May, Jun, Dec.	When harvest More during dry season	No
Jan, May, Aug, Dec.	Every 15th day, more in Apr-Dec.	When harvest, more when harvest is more	No
Mar-May: weeding Apr, Nov: pruning	Year around, more during dry season	When harvest. Oct-Mar selling moist beans, mar-oct dried	No
Year around	Every 15th day. More in may-aug.	When harvest	Maize, selling in Apr-May
Apr, Sept, Oct, Planting cacao in March	Year around, more in May-Nov.	When harvest	Maize, sown aug-sept, picked Mar-Jun. Rice, sown oct, picked febr, mar
Jan, May, Aug, Sept.	May-Jan, rest of time cacao is flowering	When harvest	Maize, sown Sept, picked mar-apr, plantain, Cotton, sown Nov, picked Sept.
Year around, more during Mar, Oct when pruning, weeding	May-Oct, mostly May	When harvest, both moist and dry beans	Maize, rice, sown in Sept, Oct.
Jan, May, Aug	Every month	When harvest	Timber for constructing house, grows in chakra

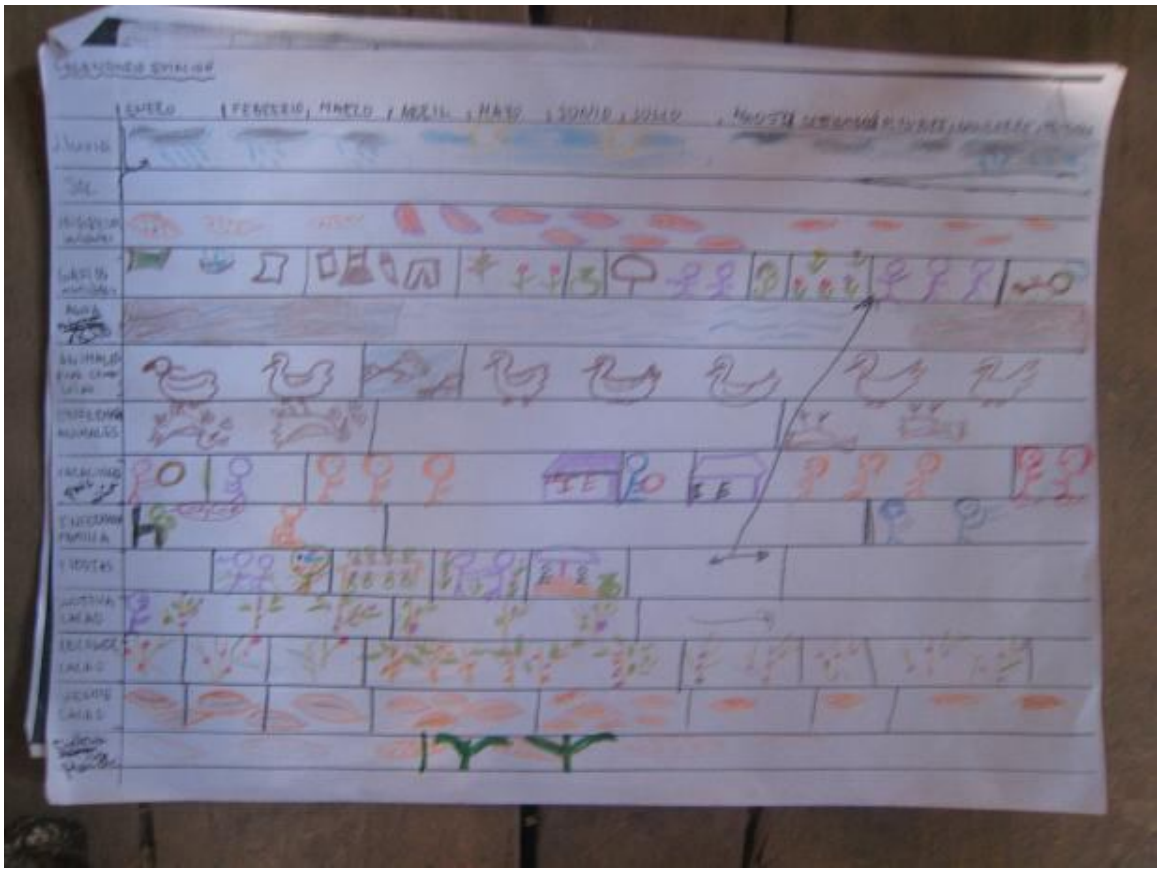


Illustration 10: Example seasonal

Annual happenings	**Month/Activity, item**
Rain:	November-April
Sun:	April-August (August-November just cloudy)
Income:	January-April; Maize April-August: Much cacao, Aug-Dec; less, but still cacao
Expenditures:	Food (such as noodles, salt), clothes and items for 'hijos' school attendance, Gifts and dinner typical for celebrations throughout the year
Water, home-use:	River throughout the year, more during August-April
Animal breed:	Hens (when big), fish from the river
Animals, diseases:	September-April: Hens always gets the plague (and flu), none dies during summer
Family diseases:	October-April: Flu, dengue (cured with pills and herbs from 'selva')
Family celebrations:	Feb-Mar: carnival Occasional days through the year: Easter, Mothers Day, San Juan, Independence, Santa Rosa, San Martin, Dia de muertes, Dia de Jesus
Vacations:	School vacation in December- March, 15 days in August, The rest of the year the 'hijos' goes to school
Cultivating cacao:	Every third month (Feb, May, Aug, Nov), shortening weed, more often when the plants are small when its less shadow. During winter, grafting.
Harvesting cacao:	Aug-April: every 20 day, April-Aug: every 15 day
Selling cacao:	Selling when harvesting
Other (ie. crops):	Maize (sowing in May, June and selling in March, April)

Comment/Reflection:

The illustrations for the expenditures were rather interlinked with the holidays, even though it also considered such as food for the household as well as clothes and material related to 'hijos' school work. Senora could really explain names, dates and the festive activities of those celebrations, for the interest of an ethnographer

In regard of **work responsibilities**, woman seemed to have double roles. Some said plainly "*…because I want to go and cultivate in my chacra, I go…. Because I get tired being in the house"* (Mrs. Q May 2011) or '*I get bored staying in the house alone'* (Mrs. P April 2011) and that, '*well you cannot cook the whole day'* (Mrs. U May 2011). As can be seen in table 5, many women would also be working in the fields. Mrs. M further pointed out that men often had two work responsibilities as well; both farming and off-farm work such as field technicians for the cacao association (April 2011).

In one of the families visited, there was a woman who had inherited her cacao land from her previous husband. She said that she '*preferred to hire male workers in her land instead of women'*; her explanation was that *'they lasted longer and just worked without preoccupying themselves with their children at home or go resting under a tree because it was too warm´* (Mrs. U May 2011). Mostly her temporal workers were alone in the fields, but when she was there, she used to look after them – cooking, fishing; working a bit but mainly see to that the work got done. Mrs. X and Mrs. U were main responsible for looking after the hired field workers, since their husbands had other works or they were the owners of the cacao fields.

Mrs. X used to cook for her husband and children and bring the food down to him in the fields when they were working. During dry season, some women used to cook in the morning, then work in the chacra, return back home to cook and bring the food to the field. One woman explained that;

> *"Mostly I am going out farming, because my daughter* (who is 16) *is preparing the food and washes up, sometimes she also helps out in the farm. Why we do this, because it's good to learn to do both things. Its not good to just know how* (and) *what to do in the house, it could be one time or situation where she needs to go to the fields, and what would she do if she just know how to cook, but we are teaching our daughters how to use the machete and work in the fields so they would know these things also in the future.…Men are also cultivating. They know how to cook, but they are normally just going to the field to work"* (Mrs. Z April 2011).

Mrs. Z stated a concern for her son that was under 15 and did not like to go to school, instead he insisted in working at the chacra (April 2011). This could be contrasted to that children under 15 are not supposed to work in Peru without permission (US Department of state in US Department of

labour c.2007:5). An eleven year old boy (hijo in tables) in another household also illustrated that during a sunny day he used to work at least eight hours in the fields.

Agr.	Mrs.		Mr.	
	woman	**men**	**men**	**woman**
T	the same			
	preparing food, tending animals, work in Chakra, washing	work in chakra, resting	work in chakra (some wash-up and look after babies, no laundry)	take care of house, work in chakra
Z				
	farming, daughters cook and goes to field	cultivating (knows how to cook, but mostly don't)	digging, cutting, cultivating	cooking, drying (cacao), harvesting
P				
	preparing food, help hijo with homework, looking after animals, cleaning house cultivating	works in chakra	working in their parcels the whole day	look after hijo, cook and sometimes brings it to the field, work in field when needed
M	We all do everything in the chakra, the same for woman and men		No different responsibilities.	
	cooks, working in chakra, look after animals, cultivating, harvest	working in the fields, some have other works	going to work	looks after hijo
X	Not a lot of differences.		We are used to work equally in the selva, we work together.	
		Men can have heavier work load.	(if the woman wants to rest, men cook)	Cooking, cultivating, harvest
D	The same, hijos help - cultivate, harvest.		Everyone has their responsibilities.	
	I sell jelly, popcorn (and cake on the streets), do laundry (for family and others), cook. My daughters cooks and wash in the house.	My sons cultivate.	While I am in working in the chakra.	My woman is cooking, staying with hijos, in the house
R	Equal responsibilities.			
	Supporting the man, hijo, house, cooking, working (in chakra)	Tend to that hijos and wife has what they need. Just in chakra.	I am working in the chakra (3 hours away).	My woman looks after the daughter in the village.
U				
	Preparing food, washing-up, monitoring the field workers, working, sometimes fishing			
Q	raising small animals, supporting husbands with dinner, laundry, giving cows salt	cultivating cacao, working with maize, plantain, yucca Feeding cows with pasture	Work in the chakra,	Cook in kitchen tending small animals (cuy, chicken, hens, piglets)
Y			Decide together about investments.	
	sometimes working in fields, during wet; resting, cooking, cleaning, reading		planting, pruning	in the house, taking care of animals, daughter also studies

Table 5: Work responsibilities

Table 6 shows the maps of the families' livelihood (for example of these, see previous illustration 7 and 8). It could be seen that roads were more common illustrated by the participating men than by the participating women. The men drew a river, whereas the women were found to also draw streams, a well and a boat. It was a bit more common that the men illustrated people, which almost half of all participants drew. All the participating farmers pointed out their main house and more of half the participants also illustrated the kitchen. It was more common for women to draw a ladder up to the second floor (often used to sleep at), as well as the poultry house. One woman drew the association house, including with storage and drying section. The spot for keeping cacao beans in the chacra was more found in the illustrations by men. Toilets were more commonly drawn by men, while women were illustrated a larger variety of tree species, many which were also fruit giving trees. Cats and geese were more found on maps done by women, while men more often illustrated dogs, guinea pig and hens.

Women	Paved Road	Pebbled Road	River	Flooded river	Draining streams	Well	boat	Peoples	Houses Sleeping	ladder	kitchen	hens	Other	Cacao collections	Cooperative	with house
Total depicted	4	9	8	1	1	2	3	5	12	2	7	3	2	1	3	4
Percentage	33%	75%	67%	8%	8%	17%	25%	42%	100%	17%	58%	25%	17%	8%	25%	33%

Land for Monte	Random trees	Pasture	Cattle yard	Animals cats	dogs	cuy	hens	goose	cows	Cultivating cacao	other	forest
8	chipote, pijajo, mango, noni, guava,	3	1	2	2	0	5	1	1	11	plantain, yuca, maize,	capirona, cedar,
67%	orange, lemon, cocoa nut, pandisho	25%	8%	17%	17%	0%	42%	8%	8%	92%	rize, cotton	bolaina
	papaya, guava, yuca, plantain											
	pine-apple, pomorosa, taperiba											

Reading the
Livelihood map

Peoples - living, working
Other houses - garage/for dog/compost/storehouse
Cacao collections - storing fruits under shelter for emptying beans/drying place as on plastic under sun/also maize storage
Cooperative - beans for fermentation, drying, storing and selling on cooperative house,
Monte - unused land, often hills and woods (directly translated, mountain (area))
Cultivating forest - grown for timber to sell or for constructing house
cuy - guinea-pig, used for food and sometimes to sell
Cultivating other - when there is a parcel made out for this other cultivation

Men	Paved Road	Pebbled Road	River	Flooded river	Draining streams	Well	boat	Peoples	Houses Sleeping	ladder	kitchen	hens	Other	Cacao collections	Cooperative	with house
Total depicted	7	10	10	0	0	0	0	5	10	1	6	1	2	2	0	5
Percentage	70%	100%	100%	0%	0%	0%	0%	50%	100%	10%	60%	10%	20%	20%	0%	50%

Land for Monte	Random trees	Pasture	Cattle yard	Animals cats	dogs	cuy	hens	goose	cows	Cultivating cacao	other	forest
8	papaya, cocoa-nut, mandarines,	2	1	1	3	2	4	0	1	9	plantain, maize, rice	timber, capirona,
80%	guaba, pijajo	20%	10%	10%	30%	20%	40%	0%	10%	90%	pijajo, pine-apples, yuca	bolayna, other

Table 6: Livelihood maps

Table 7: Daily activities rain/sun for women/men during a day, calculated in hours.

Activities/Season	Rain		Dry	
	Women	*Men*	*Women*	*Men*
Body care	0,69	0,86	0,76	1,34
Cooking	**2,92**	**0,2**	**2,53**	**0,46**
Eating	2,61	2,56	2,83	2,46
Cleaning	1	0	1,3	0
Laundry	0,19	0	0,96	0,06
Tending animals	0,3	0,03	0,8	0,16
Homework	0,57	0	0,7	0,13
Firewood	0,02	0	0,06	0,13
Tool care	0	0	0,13	0,06
Chacra work	**1,38**	**3,2**	**3,43**	**6,9**
Other work	0	1,3	0	1,8
Fishing	0	0	0,4	0
Games	0	0,26	0,13	0,06
Religious activities	0	0,23	0	0,23
Conversing	0,07	1,2	0,26	0,06
Telly, radio	0,76	1,2	0,93	0,53
Watching/ waiting for rain to pass	1	0,53	-	-
Resting	**11,31**	**11,37**	**8,53**	**9,75**

Table 7[38] summarise the farmers answer of time spent in different activities during the rainy and the dry season. On average men and women spent similar amount of time for resting during the rainy period, but during the dry season men slept/rested more than 1h more per day than women did. During the rainy season neither the women nor the men, illustrated activities such as tool care or fishing, something done by both groups during the dry season. Work in the chacra was two to three hours more for men than the women, regardless of season, although both women and men worked two to three hours more in the chacra during a sunny day than when it was raining. Time amount on eating was rather similar between women and men, but time on cooking was much less for men. Men did not show any hours for cleaning in either seasons, and laundry was just done by men during dry season. Conversing with neighbours and relatives was more for women on dry season and more for men during rain season.

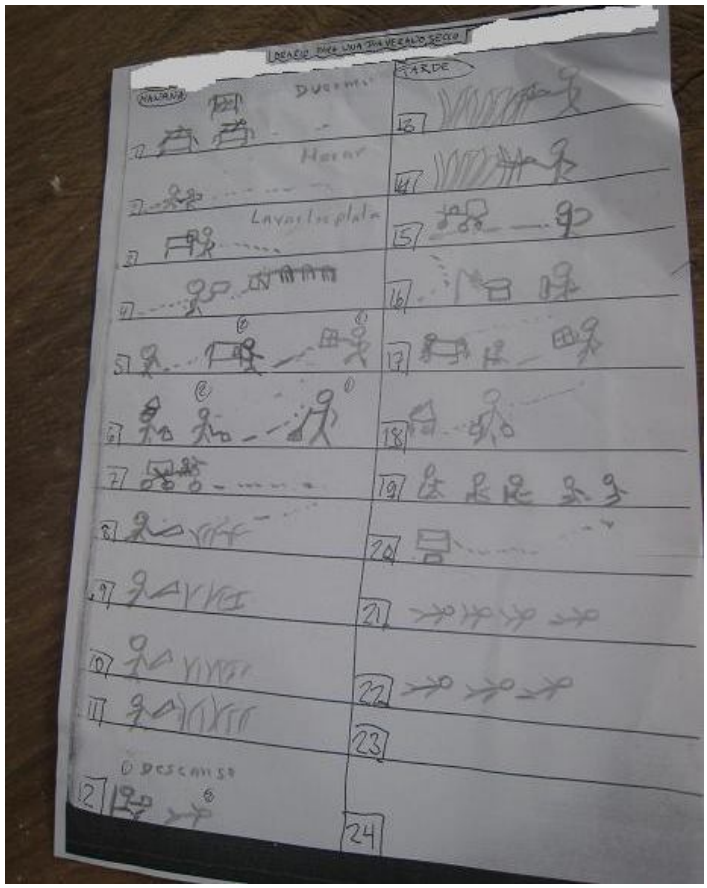
[38] **Body care** = teeth brush, washing face, shower, bathing in river/well, getting dressed; **Cooking** = preparing food, making food, heating food. picking yuca and plantain for cooking; **Eating** = eating breakfast, lunch, dinner; **Cleaning** = wash-up dishes, sweeping house, ironing, make the beds; **Laundry** = cleaning clothes in river or buckets; **Tending** = fetching grass for cuy, feeding hens, bringing water to hens, cleaning salt for cows, animals guarding hens from fox; **Homework** = helping children with homework, doing yourself (when hijo), walks children back/forth school, children bathing children, playing with sobrinos, organising my things (hija); **Fire**-wood = fetching lêno for the fire-place to cook, includes fetching water for house needs; **Tool care** = sharpening, cleaning knife, machete; **Chacra work** = cutting weeds around cacao, collecting fruits, emptying fruits from beans, check on cows, planting guaba trees for shadow, picking plantain, yuca, maize, cotton. Includes transport there and back. Preparing planting and sacks for cacao. Checking on cacao (when wet, takes away bad fruits and see so its not flooded). ; **Other work** = Instructing new agricultures in their fields, planning meetings with cacao cooperative, working as mototaxista, working on house (agr. P rain); **Rain** = watching, waiting, doing nothing, (agr. D) looks after boat so its not flooded; **Games** = playing football, volley-ball, casino, kiwi (local game); **Religious** = praying, attending meetings, reading holy scripts; **Conversing** = planning the day, conversing with workers, discussing with neighbours, visiting family; **Telly, radio** = watching noticias, novellas, listening to cumbia, news, reading books, magazines; **Rest** = sleeping, resting after lunch and between work, drinking breaks, shadow breaks. During rain season this also includes, waiting out rain/watching rain.

Following illustration 11-14 are examples of daily activity calendars.

Illustration 11: Daily activity man, dry season

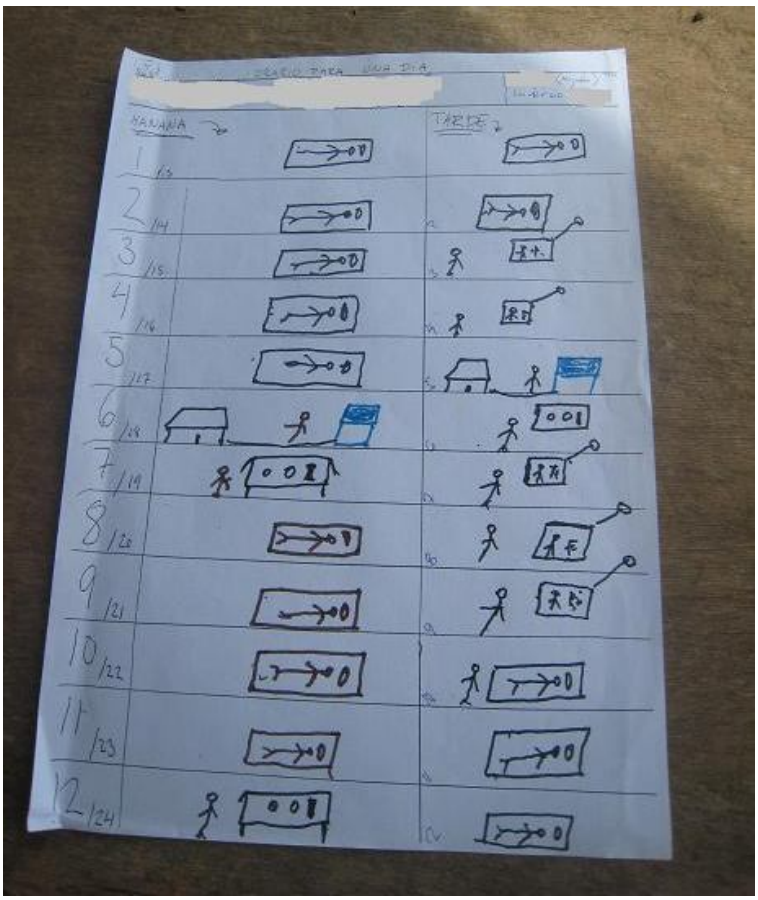
Activity	Time used	Clock
Sleeping	7h.	(22-5)
Picking cacao	2h.	(5-7)
Making breakfast	30min.	(7-8)
Eating breakfast	30min.	(7-8)
Getting ready, using bathroom	1h.	(8-9)
Picking cacao fruits	4h.	(9-13)
Eating lunch	1h.	(13-14)
Resting	1h.	(14-15)
Continues working, emptying morning Cacao fruit in buckets	1h.	(15-16)
Fermenting beans	1h.	(16-17)
Turning around beans	1h.	(17-18)
Washing myself and my clothes	1h.	(18-19)
Washing myself and my clothes	1h.	(18-19)
Returns to house, cook	1h.	(19-20)
Eating food,	1h.	(20-22)
Conversing, playing games (casino with 50cents)	1h.	(20-22)

Illustration 12: Daily activity woman, dry season



Activity	Time used	Clock
Sleeping	5h.	(21-2)
Getting up, planning day	1h.	(2-3)
Wash-up plates	1h.	(3-4)
Washing clothes	1h.	(4-5)
Making breakfast, wrap-it	1h.	(5-6)
Walking with food to family working at Acatpa	1h.	(6-7)
Going to chakra	1h.	(7-8)
Working in chakra	4h.	(8-12)
Resting, eating lunch	1h.	(12-13)
Continuing cutting weed	2h.	(13-15)
Returning home, with sack of cacao	1h.	(15-16)
Washing	1h.	(16-17)
Preparing dinner	1h.	(17-18)
Planning day with contracto	1h.	(17-18)
Brings food to family on Acatpa	1h.	(18-19)
Conversing with family, planning	1h.	(19-20)
Watching telly	1h.	(20-21)

Illustration 13: Daily activity man, rain season



Activity	Time used	Clock
Sleeping	8h.	(22-6)
Walks to wash, morning wash	1h.	(6-7)
Eating breakfast	1h.	(7-8)
Resting	4h.	(8-12)
Eating lunch	1h.	(12-13)
Resting	2h.	(13-15)
Watching telly	2h.	(15-17)
Walks to wash	1h.	(17-18)
Eating dinner	1h.	(18-19)
Watching telly	3h.	(19-22)

Illustration 14: Daily activity woman, rain season

Activity	Time used	Clock
Sleeping	12h.	(19.00-7.00)
Feeding the hen	1h.	(7-8)
Cooking	1h.	(8-9)
Eating breakfast	1h.	(9-10)
Resting	1h.	(10-11)
Checking the cacao	1h.	(11-12)
Cooking	1h.	(12-13)
Eating lunch	1h.	(13-14)
Cultivating (when a bit sun)	1h.	(14-15)
Feeding the hen	1h.	(15-16)
Bathing in the river	1h.	(16-17)
Cooking	1h.	(17-18)
Eating dinner	1h.	(18-19)

Upon observation on the farms when women and men where working as usual, the women mostly cooked, tended children, did laundry, feeded hens, picked fruits and cultivated. The men were cultivating in the chacra or worked off-farm as mototaxistas[39] or for the cacao association. In an overheard discussion about a job opportunity as a driver for the cacao association, it was mentioned

[39] taxi driving three-wheeler, very common in the area

that *"it is a lot of work, you have to work 7 days a week, often from very early and coming home very late"* (Irazola May 2011). There was one woman, who had been taught by her dad how to graft, but after she got pregnant and became a mother; her role was mostly in the home. She said that she did not wish to have any more children because she wanted to work more in her chacra (Mrs. M April 2011). A similar statement was made by Mrs. X who said that she loved her chacra, but also that she 'had responsibilities towards her family and therefore could not be there all the time' (Mrs. X April 2011).

6.3 Voices Regarding Money and Decision

One of the women was recounting how she had to face the responsibilities of life already at the age of five, when she was left without parents and any documents. Now she lived in a well-maintained and organised farm together with a husband that treated her very well (Mrs. Q May 2011). Upon the visit, she had recently got her identification card and was very proud of it.

> "Mrs. Q: - *Yes, I did not have any* (legal papers)*, I did not exist. Because when…if, you do not have any documents, you do not exists. You are just useful to serve your family in your house. Yes if you would like to travel, you can't…when you do not have any documents, you cannot. Of course, if you would like to be in Pucallpa, in San Alejandro* (you can go*) until Aguaytia, then its stop. They do not control, but further on than Aguatia* (there are controls*).*
> Interviewer: But if you did not had any documents, how did you get this land?
> Mrs. Q: - *Everything is in my husbands' name. Everything is, because I did not have any documents. But it's a good life, when you add it up."* (Mrs. Q May 2011).

Mrs. Q had never been taught how to read or write. Another one of the respondents, Mrs. T who also were illiterate, explained that 'when she was young, she really wanted to go to school and she thought that her parents were really mean to her and did not let her, when she was told to stay home to cook and look after the home' (March 2011).

While doing participant observation, helping to take out the cacao beans form the fruits with Mrs. M, the question of dreams were asked. If there would not be any hindrance by the reality of not enough money and customs here, what would she wish for? She said that 'women here cannot think like that, they just have to live their life like they are doing' (April 2011). Previous day, she had said that she 'wished her children to have a better life than her' (ibid.).

All methods were separately[40] done with each informant, but in some cases the men and women would be in the same place. Women would be seen helping children or husbands to carry out the participatory methods (as Mrs. D and Mrs. Z), but they could also be silenced by their husbands. An example of this was when Mrz Z were explaining one of her illustrations, whereby Mr. Z loses patience, interrupts and then takes over all talking space, leaving Mrs. Z looking down and quiet (observed April 2011).[41]

Regarding money care, Mrs. Z explained that:

> *- He controls the money…he asks me to make a list of what I will buy, then he does not give me more money than for that…in his case, he buys the clothes…some families coordinate these things (what to sell, invest in) together…I am selling, but giving the money to him. He looks after his money….sometimes there are women that administrate the money, when their men are drinking, but in his case, he does not drink, he does not smoke...when I was together with that (*other*) man (*that was drinking*), I was the one managing the money, but in the case of my current partner, he does not drink so he manage the money. But in a way it is a little bit of distrust. Because not all the children are his, /…/ it's a bit of distrust, asking me what I would do with the money, but I am no money-waster, I will not run and buy new clothes each moment, what I do is to look after so there will be efficient with food in the house,…I am selling the maize, plantain….but he is the one that guarding the money…"* (Mrs. Z April 2011).

Mr. Y said following regarding who was in control of the money;

> *-"We both. Me and my wife looks after it, no-one else…I'm confirming with my señora, every money, everything that I sell, I ask her about /…/ we both decide when its enough, we both decide about the expenditures, what we will make big investments in and if it goes well, good, if its goes bad…the same…Since its both that decides, no-one is to blame.*
>
> Interviewer: And who buys the necessities?
>
> Mr. Y: *- We both, sometimes she, sometimes she tells me to buy what she lacks, or when I'm not here, when its something, when I'm on a trip, she has money, if I'm here we both go,*

[40] The importance of separately interviews because of different roles, are also brought up by Garrett, P., Uquillas, J. E. *Structured Interviewing in Ecuador – Incorporating Gender into diagnostic field research* p.45-51 in Feldstein, Jiggins 1994:45

[41] This is not exceptional for the rural areas of Peru or a developing country, but may also be found in rural areas such as Sweden. In a research about forest management, a woman says that *"women are silent in gatherings. They don't get many chances of speaking at meetings"* (Arora-Jonsson 2008:137). It was further explained by another women *"that it was much more effective to discuss issues at the kitchen table, privately with friends and then try to influence the meetings through the men in their families. Most were of the opinion that to be active as a woman in the association needed much energy and time"* (ibid.p.138).

sometimes just me…What we have, is a relationship based upon us both. We are open with each others, to not have any problems" (Mr. Y May 2011).

6.4 Why Grow Cacao and Become Certified?

There were 70% of all household respondents answered why they cultivated cacao, the answer from everyone was to sell it. The income was used for food (rice, noodles, oil, potatoes, beans, sugar, egg, meat, vegetables, carrot, tomatoes, garlic, pepper, salt, chicken, milk, flour), school expenses for children (clothes, pen, paper, internet café, drink, mototaxista, photocopies), new tools such as machete, cacao bags, food for the hens and salt for cows, electricity (and observed gas for stove), petrol for the boat to chacra. The main income was generated by cacao, but some women also sold drinks and food (cake, popcorn, ice refresher made on cocoa nut and milk, jelly) on the streets or some men worked extra for the cacao association or as mototaxista.

Table 8: Reasons for organic certification

Agr.	Mrs.	Mr.
T		generate more money (8,5 instead of 7,5 soles/kilo)
Z	my husband decided	better price
P		
M	because they pay more	you improve your market
X	more profitable	More paid per kilo.
D	To have more income, get a better life	"Even if it costs a bit more, its still more profitable"
R	(to sell for a higher price)	
U	They will buy our products for more.	
Q	I don't know, ask my husband, he goes to meeting, I'm just here.	Expand, more to sell for just price.
Y		Better price.

Regarding the decision of becoming an organic certified producer, seven out of nine men had a clear responce. Most men were rather firm when they stated that it would expand and improve your market, sell for a better price, generate more money per kilo, as seen in table 8. Those women who responded, said similar reasons, such as it would be more profitable, giving a more income, since they (European Corporations) would pay more, it helped to improve their lives. Three women did not respond at all and two said that it was a decision made by their husbands.

Table 9 indicates similar responces of what it meant to grow organic; you could not use any chemicals, one should take care of the house, having a proper toilet, drinking water, separate

sewage systems, composting, clean field and one should ferment and dry the beans well. Furthermore one should select (separate big/small, good/bad) the cacao beans. In the end one would improve the conditions for selling more cacao beans which would offer a better life and facilitate education for the children.

Table 9: Changes needed for certification

Agr.	Mrs.	Mr.
T	no chemicals	separate big/small beans take care of house, proper toilet, shower, compost, clean field/house
Z	no chemicals, organic waste, drinkable water	no synthetic fertilizers, everything organic, well-kept land
P		regulate house, clean kitchen, toilett, compost, having water
M	no waste around cacao, no chemical weed-killers	no chemicals, everything organised
X	no chemicals, selecting beans	organise chacra, having a compost, latrine
D	Can sell more, have a better life, education for children	the conditions, the price
R	a separate kitchen, proper toilett, tidy chacra	
U	compost, toilett	
Q	No poision, just machete, compost, toilett	
Y	No waste, a compost, (no) chemicals, well-fermented, well-dried	toilett, compost, drinking well, no chemicals

Mrs. Z added that farming organic is more time-demanding since

> *"…you need to dedicate your time when growing organic…because when working for the cooperative, he will not have time to be there and work* (in the chacra)*…now he is just there once a week, every Sunday…Monday to Saturday he works for the cooperative…but you have to be there* (in the fields) *more to know where to throw away your waste, organic waste, having drinkable water…so its not getting contaminated…therefore you need to dedicate time for the transition"* (Mrs. Z April 2011).

It was also recognized by Mr. X that the cacao beans has to be more carefully selected and the fermentation needs to be controlled so the dried beans will not have any more humidification than seven percentages.

Table 10: Planned investments

Agr.	Mrs.	Mr.
T	Drinkable water, toilett, electricity for light, compost, improve house	
Z	a good house in chacra, animals, fish pond (aquaforestry)	improving the house, space for livestock, work with cacao, toilett, compost
P	separating waste, toilett	20 hectarees cacao, regulating house, making a kitchen, not much animals
M	well-maintained house, more cacao	making an enterprise, producing chocolate and cacao wine here
X	a big house, with garden	testing cacao aroma
D	a grass-cutter (cultivadora on gasoline that cut weeds)	
R	Change everything; machines, tools, a proper toilett	
U	A grass-cutter	
Q		Expand cacao, complete certification
Y		

Since all of the respondents were in the process of achieving the certification for organically produced cacao, answers in table 10 regarding planned investments reflects this. *Women* stated that their planned investments would be to get drinkable water, to make toilet, to get electricity for light, to make compost, to improve the house, get more animals, to make a fish pond, to arrange for separate waste, to make more cacao fields, to improve the garden, to buy a grass-cutter[42] and get more machines/tools. While *men* would answer that they would improve the house, make space for livestock, work with cacao/increase the cacao production, make a toilet, make a compost, make a kitchen, they did not wish to have many animals, starting an enterprise, start to produce chocolate and cacao wine, try to produce the cacao aroma, to complete the organic certification.

6.5 Hopes and Plans for the Future

The answers of hopes and those ones for the planned investments were sometimes very close to each others. Regarding certain hopes and wishes for the future, as seen in table 11, both women and men stated more land, cacao, health, cattle/cows, and money, education for children. Some women said that they wished for a calmer life with no chacra, to have more hens, get a big house, buy motocars[43], seeing other places, having a proper toilet. Additionally men would say that they wished to become an enterprise, export cacao, no poverty, that Peru will do well and develop all

[42] Using a grass cutter reduces the time amount of weeding, using one person for a day's work of three (Mrs. P April 2011; Mrs. X Aprile 2011).
[43] Three-wheeler, in Swedish 'mopedbil'

regions, taking care of children/that they can take care of chacra, improve house, move to the coast, get a shop/restaurant with/for my Mrs., cattle, factorising chocolate.

Agr.	Mrs.	Mr.
T	more land, education for children	no, hope daughter can study after son
Z	no more chacra, living calmly in village house	become an enterprise, export cacao, well economically, children study, 5 more hectarees cacao
P	tending house, live healthy, more cacao, more hens for home consumption	have good house, resting, spend more time with son
M	a big house, 2 more children, education and profession for them	improve our economy, that we are not poor, Peru is growing, all the regions have developed That I have a better economy, better income, more cacao
X	profession for children, a house, 3 motocars, more animals and cacao	7 more hectarees of cacao, taking care of children, that they will take care of parcels
D	More for children, I want them to be professionals.	Education for children, improve house, perhaps a store, a restaurant
R	Not as today.	Find a house in Trujillo, my senora gets a shop, my daughter a profession
U	2 more hectarees of cacao, Sport career for my daughters… just a profession.	
Q	Cows, cultivating cacao Money to invest, start a hotel in the village	The cacao, and cattle
Y	Growing more cacao. Seeing other places, cities. Having a house with proper toilett.	Having 20 hectarees of cacao, exporting direct, healthy life, factorising chocolate

Table 11: Hopes for future

6.6 Vulnerabilities

Regarding difficulties in life for the farmers and their aim in producing certified cacao, there were three clear areas mentioned. The first one regarded the *flooding* in 2011. The water then rised 15 metres during a couple of days with the result of destroying roads, trees and also hampering the flowering of cacao by breaking branches and leaves (Mr. Y May 2011). Some of these impacts can be seen in illustration 15 and 16. The flooding took place in February and the cacao would not begin bearing fruit until September or October (ibid.). When the cacao fields were located in higher situated areas (upland) and not along the river (as observed in agriculture Q); less was damaged.

But when the cacao fields close to rivers and streams were flooded, these households had to rely on other income generations for several months. Mrs. U relied upon a shop and her husbands income as a driver, stating the value of having several sources of income by saying that "*If you do not have any other* (income generating) *activities, how will I maintain my children?*" (Mrs. U May 2011). When the water was so high that even bridges had been torn apart as seen in illustration 17, it meant that farmers could not reach their fields. At some flooded farms, relatives had to come out to rescue when the families that were trapped on the second floor of their houses (Mr. Y May 2011). Then the social networks as well as mobile phone were advantageous to be found and remembered.

Illustration 17: River with temporary bridge

Illustration 15: Flooding impact on chacra.

Illustration 16: Two months after the flooding, landslide

Illustration 18: Waste damp

During rainy seasons participants also illustrated and explained that children and kept animals caught such as flu and cough when the weather was damp and colder. This could be added in the vulnerabilities in the life for a cacao farmer.

Illustration 19: Compost

As a certified organic cacao producer, the land needs to be kept *clean* and waste should be separated *and composted*. Households were observed to use food scraps for animals living at the farm, and garbage such as plastic and metal that needed to be recycled. Illustration 18 and 19 show examples of how compost and waste were handled at the time of observation. Plastic bottles and glass were returned to factories by collections outside houses in the village as well as in essential stores and restaurants in the area.

When cultivation expands, it does so by the impact of the farmers' available land around their chacras. Illustration 20 shows a photo of forest besides a chacra. The outsider might be concerned by the cultivations impact of *natural resources* (see for instance Townsend 1995:22), while the insider (farmer, land owner) might perceive it as expanding opportunities and increased incomes (Mrs. X, April 2011). The last one is accelerated by the increased demand from worldwide consumers of the available crop (as for cacao this has been outlined before to be in majority from Europe and North America).

Illustration 20: Rainforest beside chacra

7. Discussion

7.1 Livelihood Strengths

Regarding to the farmers livelihood strength, everyone within the study grew various food crops, fruit trees and timber trees for shadowing the cacao. These trees and crops also held the function of financial back-up as well as for home consumption. By incorporating crops such as plantain, yuca and maize, the farmers used the whole potential of their land to safeguard their livelihood. By using

an agroforestry system in this way, they improved their cash-crop production by shadowing and keeping the soil moist, as well as securing the food availability by the use of other crops and fruit trees. Timber was used for maintaining and constructing houses, and leaves from the palms inbetween the cacao trees were used for constructing the houseroof. When the livelihood strenght was threatened by such as flooding, the cacao farmers had to rely upon other vital income generating resources and food security. These included off-farm work in the village and breeding hens and cows. As seen in table 3, the poultry held by most farmers was mainly slaughtered for special occasions, but some were also sold for gaining an income. As recognized in the theory section, keeping poultry for this reason is common in rural areas of developing countries in the world.

During the time of flooding, some farmers were hindered to reach to their lands because of destroyed roads (also see Rossing and Rubin 2010:77) and bridges, and when they did, many cacao trees were hampered to bear fruit in half a year because of destroyed branches and flowers, as well as increasing fungus related diseases on the fruit. Within the seasonal calendars, health also reduced during rain season. It would be interesting to know more about the local sewage system (a challenge knowledged in Rossing and Rubin 2010:80, Andersen et. al. 2010:179), if that was part of increasing diseases during rain season or if it was just generally the damp climate that caused it. Either way, it was important to rely on other incomes, as well as help from family and kin to be collected from the flooded housing areas. Neighbours, which on some occasions also were relatives, were also part of helping to harvest (also described in Andean societies by Bartholdson 2002:28).

Off-farm work was seen by household U where the Mrs. held a shop in the village and her partner worked full-time as a governmental driver. This mirrored, especially in times of flooding or in loss of partner, Mosers statement that;*"Women increase their productive work by seeking alternative sources of income to compensate for declines in household income…"* (Moser 1992 in Momsen 2010:244). When the women were left alone in the village to look after their children during school, they often aimed at enhancing their economy by baking cakes, selling jelly, drinks and popcorn on the main street. By living in the village, they were also closer to health centres and available pharmacies. One man worked as a mototaxista and another participant male within this study, did some off-farm work for the association. Since most of the male participants also worked for the association as field technicians, it further generated more income. When the cacao yielded more

during the summer months, this extra money could be used to hire additional field labour. Else it meant that the women had to work more with the harvesting and emptying cacao fruits.

7.2 Work Responsibilities

When it comes to the different work responsibilities, the most common responce by both women and men was that men goes to work in the fields while women stays at home tending to animals, children, cook and clean. Some respondents stated that they were equally involved within the responsibilities to uphold their lives in the chacra. In regard to that livelihood incorporated both off-farm and household chores, all these jobs are important considerations to account. In such regards, it appears like everyone performed a vital activity complementing to uphold their living. Often the chacras were situated hours away from the village and therefore it was common that men lived and worked alone on their lands, especially in peaks of harvests, while women tended to children and their education in town. During rainy seasons some chacras was very hard to get to because of the bad roads and flooded rivers, then the men lived in the village with their family. On those occasions, the same house chores were done by men, although with less time amount spent on it than women used.

There were no observed differences in what men and woman would physically be able to undertake as field work, even though it was stated that men would be preferable hired as workers. The female respondent of this statement considered male workers to work harder and lasted longer without any preoccupation thoughts of their children. Regarding off farm work, women sold food on the main street, while men were working as field technicians or drivers in the village.

Within the livelihood maps, men more often illustrated people, cacao collections and income generating animals as hens and guinea pigs. Men would also illustrate dogs, which were used as guardians and companies when working in the fields. All these were important for cash cropping and connected to enterprises and associations stretching outward from the farm. Women more often illustrated minor water links, used for cleaning and cooking. They furthermore drew various tree species, often used for their quality of fruits. They illustrated cats that were companies in the kitchen and gooses used for food back-up.

Some families had a joint discussion at home regarding investments and participation of projects such as the organic certification, but it was more common that men were heard while both were

present. Mrs. Q stated that all documents and land-owning was in her husbands name since she did not have any legal identification (Mrs. Q May 2011). Adding that Mrs. Q could not read or write, she used to stay at home and in the chacra, leaving her husband to attend any external meetings. Mrs. Q was raised to take care of home and children and the access to literacy knowledge was thus hindered by historical perceptions of what a woman was supposed to accomplish. Arguing for equal literacy rate, Tilak stated that *"...with the same level of education, he or she is also able to read, write, communicate and argue with others, is able to choose among different alternatives in a more informed way, is taken more seriously by others, and so on. All these aspects represent a higher standard and quality of life"* (Tilak 2002:16).

The participating households showed and talked about a strong concern about the importance of education for all their children. It might be questioned if they said so because of "lip service" or "enhancing one's status" (Widmark 2002:73, 77). And within the field visits of this study, daughters were generally more taught household chores than boys seemed to be. Still the author would like to believe in the sincerity of the interview answers and as such consider the gender situation as slowly subject to change (which is also stated in Buvinic and Roza 2004:194).

In regard to money, the theory outlined different situations. The two examples made out within the data, showed a similar situation. It could be concluded that in both cases the men were the main responsible for the money, but in one case the woman seemed to be more involved within the investment discussion. Within the other case, the woman were more strictly held when it came to expenditures, in spite of the fact that the Mrs. was the one selling fruits and crops from the farm on the market. The roles of decision making and money control could be perceived to be based upon presumptions of what a man and a woman were supposed to be doing, entailed within the historical practice of the prevailing society.

7.3 Future and Prospects

Education was also such an issue which both men and women were found to wish for their children, so that they would be able to have a profession in the future (as in Widmark 2002:72). Many stated that they wanted a better income and more cacao fields, which is related to each others in this context. Their improved field investments were in much correlating to the certification project with waste handling and a cleaner field.

7.4 Implications of Organic Certification

The additional work to achieve the certification for organic production was recognised within the farmers' answers. As such the farmers had acknowledged the increased organisation of waste and sewage system that was an important part of becoming certificated producers. Composts[44] were emerging and planned investments would include new improved toilets. Food left over's were seen given away to hens, dogs and guinea pigs (as observed for instance at agriculture T, illustration 9). Cacao beans were carefully sorted and the fermentation process could be thoroughly watched over using the facilities of the associations centre. Natural fertilizers of green manure were recognized and other crops were intercropped together with the cacao, which would help to maintain a certain level of biodiversity and soil stability.

It should be acknowledged that the association in subject was aiming for the organic certification standards made out primarily for products in Europe. Therefore it can be difficult for a developing country to fulfil the criteria set out without any further infrastructure systems made out by the local municipality. From the observations made concerning waste handling in the area, this is something that needs to be improved. Additionally, concerning sewage systems, compost, clean water and waste handling is not just a few scattered cacao farmers that have to be informed about, but these kinds of infrastructures has to be offered by the local municipality and in the extension offered by the national government (also in Rossing et. al. 2010:297). Transnational Corporations (TNC) with their consumers demand could assist the local government more within this context (also in Rossing 2010:52). The situation and development of such available facilities would be interesting for further study and projects.

> *"…it was the colonial encounter which introduced many new crops, primarily directed at export, and forced the commodification of land and labour in the rural areas of the developing world. Such crops included cotton, sugar, coffee, cocoa, tea, sisal and groundnuts"* (Potter et. al. 2004:439).

The increased demand for cacao in the world has implications for the areas where cacao is produced. This is not directly related to organic certified cacao, but for any crop that is threatening to expand into such areas as rainforest. Forest areas are often locally important for expanding the production of cash crops such as for instance organic cacao and by that increasing the income for the households working and living there. Such an increase in income could be used to educate children and to improve the living standard of houses. The initial expenditures for example to build

[44] Farmers could also become inspired by the detailed description of composting in the technical cacao manual for the association (Meza et. Al. 2010:21ff).

a separated and improved toilet or the extra time-consumption for implementing the use of composting, was in the long-run considered by the farmers to be worthwhile for the improved cacao price. The farmers' investments of grass cutters could also reduce the time spent for weeding and save expenditures of extra labour. The saved time could be used by the organic producers to do a more careful sorting of the cacao beans according to the quality and size.

In Irazola cacao was mainly cultivated as a cash crop. It was also useful within agroforestry systems and therefore an important strategy to enhance food security by growing crops and fruit and wood trees. For governments and international projects, cacao was one of the alternative crops to be introduced to combat the vast coca production. In Peru coca leaves are also used for making a herbal tea or chewed to treat such as altitude sickness.[45] But when it is added chemicals and transformed into a drug, it looses its qualities as such (Elder May 2011). Even if Peru has lessened its coca production and is since 1996 not the world's first exporter anymore, coca cultivation has been increasing again. Therefore NGOs and international projects could be helpful in supporting alternative crop programmes. These programs support farmers with information, technical advices and market connections in order to promote farmers to begin growing other crops than coca. Being an organic certified producer will profile and strengthen the farmers cacao production in Irazola on the global market. Although the increased cultivation of cacao hybrids, might tighten the market way into ecological chocolate, since the demand is higher on the aromatic criollo bean (as encountered with new possible collaborations with ecological cacao factories, Coordinator Cacao Association 2011). Still, the associations were beginning to try out new cacao varieties (for instance Mrs. X was bringing up a few Criollo plants); therefore the future of success is still unwritten. Additionally, since cacao originates from southern America it could further add to the market strategy and increase the demand from international buyers. Even if it takes three years from planting to bearing fruit, cacao is for these reasons still increasing rapidly as a valuable crop in Peru.

8. Conclusion

1. What are the households' livelihood strategies, do these strategies vary according to gender, and if this is the case, how are they articulated?

As a livelihood strategy includes household chores, child-care and off-farm works everyone was doing their part of upholding the family and farming system. Both women and men were observed

[45] see Torchetti 1994 and Allen 1981 for the various cultural use and health effects of coca leaves in the Andean highlands of Peru and Bolivia

and stated by the participants to be able to do any work within their cacao chacras. But there was also certain and specific tasks mainly carried out by either the man or the woman. Women often took care of the children, the hens, the guinea pigs, did the laundry, cleaning, used more time to cook, and prepared food for the street market. In contrast, men would mainly be working in the fields but would also be found doing extra income work off-farm. Even though decisions regarding participation and investment could priory been discussed at home, the men were the ones most seen and heard with contacts from outside the home and in public meetings (noted and encountered whitin this study).

2. What socio-economic impacts does the transition to organic cacao production have on the households?

It is too early to say what the change to organic production actually did brought; now it is just stated what has to be fulfilled and the challenges to do that. But the transition process includes new working routines, since there is an increased requirement of sorting waste and handling sewage. It also meant a more detailed work of selecting cacao beans and careful fermentation. With the possibility to do this at the association and to get technical support from field technicians, the process was facilitated. The author recognises the importance for corporation and aim by the local municipality to improve the sewage system for all their residents with possibility to recycle materials such as metal and plastic.

3. Is cacao grown only as a cash-crop or does it hold any other functions within the homes?

Even if cacao was found to be used for refreshments and on certain holidays such as during Christmas, cacao was also transformed into chocolate. The process of transforming cacao into chocolate was time-consuming and not yet habitual. It was therefore mainly produced to heighten the household income. As such, cacao was grown as a cash-crop. Although cacao was useful in an agroforestry system, and therefore could be argued to indirectly also heighten the food security by implementing other crops and fruit trees, as well as offering wood and palmleaves for house construction.

4. Are there any spaces within the farm which are divided and interpreted according to gender distinctions?

This is an explatory study and should not be considered as a generalisation of every small holding cacao farmer in Irazola or elsewhere in Peru. The details of the livelihood maps could be considered

to as examples of the roles of women and men in Irazola. However neither these maps nor the interviews proved any specific place relating to gender. Even though the details and activities of the illustration pointed to that women would be seen in more places during a day then a man would.

5. How do the farmers perceive their livelihood and vision the future?

After certification, income would improve for the cacao producers and these money might be used for installing a toilet and afford the extra expenses for educating the children. This was also targeted within the certification as well as connected to the wishes of the families. More certified cacao would yield more income, used for expanding fields, generating more income. Houses like the one on illustration 21 could be maintained easier and food availability could be enhanced. Although more cash crops could improve the lives for the families in Irazola, it also means an increased cutting of trees in the rainforest. The notion to also rest upon other income generations and food productions such as cattle, poultry, other crops and agroforesty system with fruit trees, will aim to maintain a good life and home for the cacao farmers.

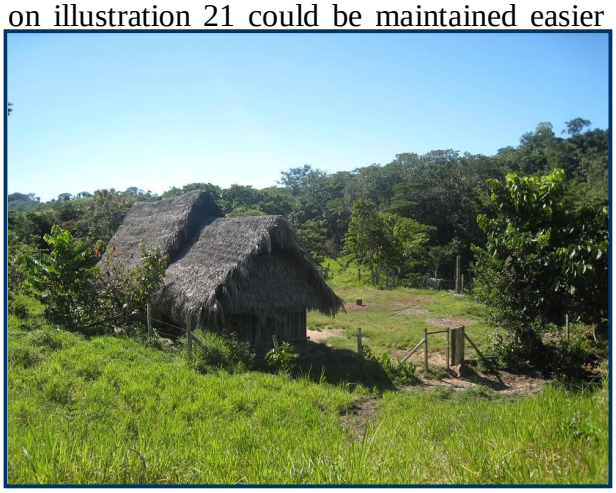


Illustration 21: House in chacra

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9. Recommendations for Future Projects

Possible suggestion for further projects would be to target elder women and men to learn how to read and write. A future investment or project for outsiders to the cacao association would be to use the existing knowledge kept by some women of how to transform cacao beans into chocolate, mousse, marmalade, juice and liquor. Involving an enterprise that has the experience and machines for transforming the cacao beans and collaborating with the local bakery could be a project. Instead of the women preparing popcorn, jelly and cakes to sell on the local market, it might be worth to discuss the potential to instead use this time and market to sell locally produced ecological cacao products.

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ANNEX - Certificate to use map of Padre Abad

"MUNICIPALIDAD PROVINCIAL DE PADRE ABAD"
= AGUAYTIA=
GERENCIA DE DESARROLLO ECONOMICO Y SOCIAL
"Año del Centenario de Machu Picchu para el Mundo"

CERTIFICADO

La Municipalidad Provincial de Padre Abad - Ucayali, en coordinación con la Gerencia de Desarrollo Económico y Social, autoriza hacer uso del mapa geopolítico de la Provincia de Padre Abad a la Srta.: **CARIN EMENIUS**, estudiante de la Maestría ***"Rural Development & Natural Resource Management"***. De la Universidad de UPPSALA del país de Suecia, para realizar trabajos de Investigación de su tesis de maestría en el tema: Diferentes Responsabilidades de las familias que cultivan cacao en el distrito de Irazola.