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# **Women's Practices in Confronting Endemic Climate Variability in the Central Highlands of Bolivia**

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**MSc Development and Rural Innovation**

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# **Women's Practices in Confronting Endemic Climate Variability in the Central Highlands of Bolivia**

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## ABSTRACT

Continually exposed to severe weather variability and extreme events characteristic of the highland of Central Bolivia, over generations of trial and error Andean farmers have developed highly resilient and robust agricultural systems. Locally evolved practices have developed under prevailing constraints at household- and community-level in the context of continual risk. Therefore, their dissemination potential is often higher than that of other externally developed practices promoted by the often failed exogenous transfer-of-technology model, which ostensibly are not developed under the same challenging conditions, proving to be less tested and robust than traditional farming practices. Nevertheless, it an attempt to place women in the pathway of Agriculture Research for development industry social interfaces emerges creating potential linkages and confrontation.

The objective of this proposed research is to identify women's contribution in confronting climate variability in the Central Highlands of Bolivia that would support adaptation in the Central Highlands of Bolivia and to find out how women experience climate variability and how this knowledge is expressed in their daily activities.

## PREFACE

### Life's Little Surprises

Upon embarking on this internship/thesis/project, life surprised me with one of a marvellous unexpected gift. I realized a beautiful tinny beat was pulsing and rushing to grow inside of me. A Bolivian-Ecuadorian baby, joined me in my belly during my fieldwork, and soon-to-be father, Hernán, joined us in our adventure. Our lives were transformed with the birth of Taira Isabela, and soon we started building together an unexpected, but lovely “little” family (I call it “little” as I still want to have five kids).

It all started in Wageningen. I chose the Management of Agro-ecological Knowledge and Social Change (MAKs) Programme largely because the website informed that the programme promoted research in your own country. There were many personal reasons why I wanted to do my research in Bolivia: my grandma was ageing and I wanted to spend as much time as possible with her in her final years; Jean Pierre, my ten year old brother, was studying in an English school which was very hard for him, and my protective instinct wanted to be close to him to help him with his homework. Finally, I had that inexplicable idealism of doing something for my people: Bolivia, my God how I love it!

In Wageningen I discovered that the easiest way to do your research in a particular country was to find a teacher who had a project running there or some standing interest in the country of your choice. So, I started searching. I had a background in biology (specialization in botany), and this was my first time in the world of the Social Sciences. As I got to know more about the Social world, I realized that pure social research, like pure natural science research, was not for me. I felt the academic world was too much disconnected from the local reality. So, my search was not only for a supervisor who had an interest in Bolivia, but also someone interested in research for development.

I was very lucky in meeting Stephen Sherwood. The first time we met, Steve gave a presentation on his experiences in the North of Potosi – a remote region of the Central Highlands of Bolivia. It was research on the existence of well nourished, healthy children in the context of harsh environmental conditions and extreme poverty, as an inspiration for new possibilities. They worked with mothers to describe and understand alternative practices and spread them among families facing malnutrition. He introduced me to Action Research that was what I was looking for, but unfortunately such activity was long-term and I only would have a brief three-month period in the field for MSc. Besides that, he no longer was working in Bolivia and was concentrating his efforts in Ecuador in the northern Andes – over thousand kilometres away. He offered me a research opportunity in Ecuador but blind to my inevitable destiny there, I insisted on Bolivia. So, Steve offered to help me make contact with his former colleagues there.

That is how I met Anne Piepenstock from *Fundación Agrecol Andes* (AGRECOL). AGRECOL had a small, but highly interesting project on Communal Agriculture Risk Management (GRAC) in the Province of Tapacarí in the Department of Cochabamba. While I was from the nearby city of Cochabamba, I had never been to Tapacarí. I knew it was one of the poorest provinces in Bolivia, so I was enthusiastic that my research might contribute to the well-being of the people there. After reviewing my curriculum, Anne offered me an opportunity to conduct research in collaboration with their project. The only problem was, she was excited about my background in botany and suggested that I help them study the plants that women used in coping with climatic risks.

I didn't want to get only into plants again, so with Steve we proposed Anne to combine the internship and the thesis and to make a broaden research. It was an alternative which didn't limit my research to plants, but enclosed a broaden field of women strategies to face climate vulnerability. Anne accepted, so I flew to Bolivia and worked in my internship and thesis with the GRAC team from the 15<sup>th</sup> of July 2010 to the 15<sup>th</sup> of February 2011.

When I arrived to *AGRECOL* Anne gave us my next surprise. She informed the team that she was leaving the institution as she found a better job. It was a splash of cold water for me, because she was the one with whom I had all the agreements. Anyways, I came to be in charge of the project coordinator of GRAC, Pepe, and we made new agreements. The internship and thesis were not really combined anymore. I was going to make a part time support of the GRAC team in all their activities, because they were short of personnel and the other part time I was going to make my research. During the internship *AGRECOL* was the institution whit which I departure, but for the thesis I coordinated and worked with local NGOs<sup>1</sup> that run development projects with women and climate change in the Ayllu Urinsaya. Unfortunately, there was a misunderstanding with *AGRECOL* and the local NGOs at the end of my time in Bolivia. In the internship contract, Steve asked me for a technical report, but he referred to the thesis report. Unfortunately, I thought it was an internship report and the NGOs too. So, in the end I had to make a very long report reporting all the activities I had in the 7 months with *AGRECOL* and the local NGOs, which was not really needed to get a mark for the internship at Wageningen. It took me a lot of time that I spent instead of spending it on my thesis report.

Settled in Bolivia, with my adventure of a new relationship with Herman, my pregnancy, importing my Ecuadorian to Bolivia, in multiple ways I was beginning more than mere MSc research. I was embarking on a completely new life, moving out from my parents' house and starting to build my own family, I started my thesis and internship in with *AGRECOL* and the local NGOs.

The urgency of my pregnancy pushed me to go to the field as SOON as possible and to spend as much there as possible, as I really wanted to finish all my data collection and internship before our

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<sup>1</sup> For ethical reasons I decided to leave the name of the local NGOs and their projects anonymous to protect their image and interests. Therefore I'll only name *Fundación Agrecol Andes* which has given the permission to be mentioned.

baby arrived. And like a guardian angel, my baby accompanied through the arduous journey of my field research. I was AGRECOL's first thesis researcher, so the team, as well as the people in the communities where I worked, did not know exactly what to expect. Prior to my arrival, AGRECOL had already worked with the Ayllu Urinsaya for a year as a development interventionist institution. Nevertheless, the GRAC included a research component that was yet to be introduced in the project. With my arrival, we introduced the role of research in the development process in the communities, which was far from straightforward or easy.

While I had previously conducted plant research with lowland communities in the Amazon lowlands, I had no experience in social research and in working with highland communities, where the landscape is barren and endlessly extensive and the culture seemed remote and unreachable. The communities also took some time to understand this second component: research that didn't prioritize change or that did not demand tangible outcomes. With the help of the AGRECOL team, we struggled to understand how to separate the capacity-building activities of the internship with the more descriptive and exploratory activities of the research. For example, the idea of participant observations (i.e., just hanging out with people during their daily activities) was a foreign concept for all the villagers, the AGRECOL team and the local NGOs.

With the team we started discovering the unwritten 'rules of the game' for entering a research project in the community. This included respect for formality in modern Quechua culture, such as the importance of explicit introduction of the people to the authorities of the communities in the general monthly meetings, the formal petition of permission required to work with families and then the formality to ask for permission to husbands to work with women.

So my experience in the field started with a very slow impulse that took me around three months until the people got to know me during the internship workshops with AGRECOL's activities and reiterative introductions of myself and my topic of research. At around mid October, I finally got in touch with women; I was approved by communal authorities, I got in touch with the local NGOs working with women and climate change so I quick off with my research selecting my cases. A big percentage of the women couldn't speak Spanish and I couldn't speak their native language, Quechua, so my presence in the community collecting data from women was very difficult and sometimes limited.

First I was accepted by the village authorities, who are almost exclusively men. Then, they asked women to allow me visiting them at their houses. This was sometimes uncomfortable, especially at the beginning (before Taira Isabela had established our special connection). Women felt forced to receive me in their homes. Sometimes they went to great lengths to make me feel comfortable or well treated. My presence in the community sometimes generated especial treatment: during meetings and in houses, my food was often served on plates instead of in the plastic bags used by the rest of the people or in common pots from which five to ten people would eat. Even if I wanted to pass unnoticed in a public meeting or event, inevitably, someone would notice me and feel the need to stop the goings on to formally introduce me to participants. The same happened in the families that I visited. They tended to provide me with the best seat of the house, the largest

and best portion of a meal; the mother would argue “Since you are here, we will cook something special”; etc. Because I didn't speak Quechua, people felt inclined to translate their conversations with others so that I wouldn't feel excluded, or they'd speak slower and use simple language, so that I could understand. I guess that type of treatment was also induced due to them seeing me as a white woman, who in addition dressed in pants and moreover as a pregnant woman walking around in a place far away from her husband, that would be doing different things compared to the women of the community (like interviewing, walking around trying to get to know people and how women live).

Sometimes the behaviour of the people also changed in the presence of my recorder and camera. Even if I'd explain that it was only to understand the Quechua translating it afterwards, they seemed to control their conversations. This became apparent when I turned off and put away my device, followed by an entirely different dynamic. For example, previously shy and reticent women would start talking fluently and freely and show an entirely different side of their personality. This led me to rely more heavily on direct observations and field notes.

Nevertheless, little by little, through sharing everyday life in the kitchen homes and fields of women, I managed to win over people's trust and, in a number of cases, I feel I developed friendships. I was requested for giving advice, to provide help and support for the farmer's union, writing communal letters or giving motivation workshops. I was invited to various parties (even after I finished my fieldwork), and even called to my cell phone by some of my community friends to ask me how the pregnancy was going and to keep in touch. I am very grateful about how things developed and fully thankful with Chuñuchuñuni families and authorities.

Despite my coming from the city and a Spanish-speaking culture, little Taira Isabela provided the bridge that enabled me to connect with Quechua women from a very different reality. She was the reason why the women quickly accepted me into their homes and why they opened up and shared with me their very personal experiences and advice on pregnancy and motherhood. Just a small, growing embryo in my stomach, Taira Isabela was already connecting me with people and, through them, to new ways of seeing, thinking and being. But let's go together through my notes while I hope you'll come to appreciate the rich experience that Taira Isabela and I shared with the infinitely diverse lives of five women and families, learning to cope with rising climate uncertainty in the remote highland village of Chuñuchuñuni.

## CHAPTER 1. INTRODUCTION

### 1.1 Background

Climate variability in the Central Highlands of Bolivia was my point of departure in this study. The context of inherent climate uncertainty and risk summarized in Perez et al. (2010) describes deglaciation, changes in hydrology, soil and pest and disease populations affecting agriculture in the high Andes (above 2500 m.a.s.l.). For example, they showed that in the last 30 years 30% of ice mass of glaciers retreated; temperature and rainfall changed unpredictably leading to extreme events of liquid and solid rain, changing air humidity, frost frequencies severity and duration; and geographic and temporal variation in pest and disease pressure and soils inherent fertility and runoff- erosion behaviour changed.

The Central Highlands of Bolivia is a unique region belonging to the arid to semi-arid mountainous highlands. The climate is characteristically cold with regular frosts (up to 180 days a year) and winds. The appearance of the surface is described as isolated small communities with reduced adobe, stone and straw houses, surrounded by grass and straws with some bushes, cactus and short trees close to the slopes and streams, and crops and grazing animals adapted to the coolest climatic zones at high elevations as potatoes, quinoa, llamas, alpacas and sheep (Quispe et al. 2010). Extreme events in the Central Highlands of Bolivia are associated to extreme atmospheric conditions leading to climate variability due to the entrance of cold winds producing frost, rain with severe hails, or strong draught periods, making impossible the predict of their annual frequency, quantity and seasons (GRAC, 2009). Despite adverse conditions Andean agriculture emerged with systems resulting from a slow but progressive evolution of knowledge based on over 3,500 years of empirical experience – trial and error in the context of continual change and surprise where farmers continually adapted and created new strategies at household- and community-level to reduce risk (Perez et al. 2010).

Sherwood (2009:61) describes that the agrarian reform in Bolivia generated land distribution, but it happened that the original large landholders kept the most fertile lands while the less quality land of the mountainsides was distributed among small farmers and ex workers of the hacienda system. Nevertheless, in mountainous areas belonging to the highland Andes the greatest genetic diversity among cultivated and wild potatoes (*Solanum tuberosum* L.) can be found and Andean farmers grow about 500 of such cultivars (Sherwood, 2009:25). It's not of a surprise then to see that potato is the base of the diet of the people from the Central Highlands of Bolivia. Besides the cultivation of potato, Andean agriculture in the Central Highlands of Bolivia depends on the possession of livestock and the consumption of their meat and the use of their sub-products (Equinos fair, Lacoconi, November, 2010).n

The institution with which I started my research was Fundación Agrecol Andes (AGRECOL), an institution which services are directed to the agro-ecological knowledge management in order to contribute to the improvement of the living conditions of the Andean rural societies. During its

years of activity, AGRECOL has coordinated work with farmers groups and organizations, public and private institutions and international cooperation programmes in the Andean region. Its work is sponsored by different donors such as COSUDE, DED, ICCO, PRODEM, and MISEREOR; and it is articulated with different platforms and organization nets in order to collaborate with the sustainable local development (AGRECOL, 2011). Furthermore I contacted local NGOs<sup>2</sup> that worked with women and climate change to coordinate activities and workshops directed to women's development.

My internship and research took off within AGRECOL's Communal Agricultural Risk Management (GRAC) project they leaded in association with the Centro de Estudios Superiores Universitarios (CESU) in the Central Highlands of Bolivia. The four year action research project is presently sponsored by the Collaborative Crop Research Program (CCRP) of the McKnight Foundation, which aim is the increase in the food security in developing countries by supporting agricultural research related to food production improvements and the nutritional content of different crops with high importance for developing countries (McKnight Foundation, 2011).

The GRAC project is being implemented in Challa, one of the Counties of Tapacarí Province of Cochabamaba. My research was conducted in the sede of one of the *Ayllus* of the Challa County: Chuñuchuñuni community of the Urinsaya *Ayllu*. An *Ayllu* is a traditional indigenous group of communities that share common ancestry and consanguinity linkages, and a farmers union and traditional authorities. The political organization of the *Ayllu* includes a farmers union and a traditional organization which their characteristics will be further developed in Chapter two.

The original GRAC concept is based on a methodology developed to help rural people cope with risks, an idea previously developed by AGRECOL in association with PROSUKO (PROSUKO, 2006; PROSUKO was the previous associated NGO that worked with AGRECOL in the project of Risk for Disasters Prevention financed by COSUDE). In this previous experience the GRAC methodology included approaching the organization (farmer's union and traditional organization). The original project involved interactive analysis of available natural resources, building risk maps, forecasting the weather reading bio-indicators, building strategies to reduce risk, documenting all the process, evaluating and comparing yields, and disseminating the experiences in private and public spaces (Canaviri, 2010).

This led to the development of a capacity building curriculum and the training of a selected group of outstanding farmers based on their application of agro-ecology on their farms. AGRECOL and PROSUKO denominated the graduates as *Yapuchiris*, which is the Aymara word for farmer, but as used by Spanish speaking development professionals in Bolivia is intended to acknowledge their traditional knowledge and ancestral wisdom to distinguish them from the rest of the farmers. AGRECOL utilizes the word to refer to farmer leaders committed with their communities that

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<sup>2</sup> As earlier mentioned, I decided to leave the name o protect the image and interests of the local NGOs, their names and descriptions of their projects have been removed. I only name Fundación Agrecol Andes and its GRAC project which has given the permission to be mentioned.

generate learning, search for alternative practices to solve their production problems and socialize and teach their results to the rest of the commoners. Yapuchiris intended to represent male and female individuals, but assumed to be head of household and in-charge of farm decision making and production, almost all of the selected were men. By design, the Yapuchiris were charged as local observers and promoters of what they became to know as “the GRAC plan” for enabling rural families and their communities to adapt to the risks of climate variability and impending climate change.

## 1.2 The Problem

One of the GRAC project assumptions was that people from the area of research were very vulnerable due to the climate conditions with regard to: economic potential (as they tend to be resource poor and limited savings capacity), technological issues (low access to the alternatives offered through access information and technology to mitigate or to reduce climate risks), socio-cultural issues (as the social organization is disconnected to traditional knowledge, for example weather prediction, which could help them to prevent, reduce or mitigate climatic risks), and finally, to environmental and ecological issues that lead to a gradual an irreversible deterioration of their natural resources (Proyecto GRAC, 2009).

I chose to work with women because they were the hidden voice of the GRAC project, in particular and development policy in general in Bolivia (Oxfam. 2011). I worked with women from Chuñuchuñuni, a remote community from the Central Highlands of Bolivia Working with them was a challenge and an opportunity. The challenge was communicating with them, because the majority spoke very little Spanish, and as I spoke just few words in Quechua my legacy was ought to be very tough. It took me sometime to approach women, to gain their confidence and trust and to convince them to allow me spending some days with them. At the beginning I had to ask for permissions and to make appointments with community leaders, husbands and women themselves, but finally I managed to gain their trust and spend entire days sharing with them and joining all their activities. The great opportunity to work with them was to hear Chuñuchuñuni’s women untapped and silent voice in the context of climate change policy in Bolivia.

Understanding the gender component of my research I’d like to quote Zabalaga (2005) that explained how the concept of gender, as well as the concept of development, can provoke multiple and sometimes contradictory interpretations. A broad definition explains that each social and cultural human group construct female and male characteristics socially and historically. An example about this is given by Mendoza (2004) when she explains that the activities that are socially allowed to women in Latin America are not necessary the same activities for women in Afghanistan as being a woman in different countries have different connotations. Female and male characteristics are also constructed along the history as for example, hundred years ago it was not easy to conceive that a woman would go to University, but now it’s changed.

Therefore, social roles are related to gender constructed differences shaped by social and cultural behaviour of men and women. Social roles are implicit agreements attached to tradition, culture

and the knowhow of the different families and communities. In this sense, sometimes neighbours and families – husbands, wives, children, etc. develop and shape social control, judgements and punishments for women or men that escape to the general pattern (Zabalaga, 2005). From the ability to gestate, conceive, birthing and breastfeeding, society naturally constructed sexual division of work assigning women all the reproductive work within the household. As this reproductive work is inherent to women society didn't recognize it and took all its social prestige. In the other hand, public space remained for men where decisions are taken, value and prestige are generated and it is the space where the rights and citizenship are exercised (Matamala, 1996).

While studying women's practices in the context of climate variability, the GRAC project intended to include women in *Yapuchiris'* courses that were organized in public spaces, or to make them part of the project in a different way. Besides the GRAC project, the local NGOs run projects to develop some of the people skills and to include women in economic, technical and political activities as an alternative to agricultural activities that will be affected with climate change. This interaction brought the necessity to shed light on the social processes of women and politics involved in professional-led, project-based responses to the growing public concern over climate change. In order to examine these interrelations I used 'social interface' analysis as Long (2001) suggests to find points of linkage and confrontation, where interests, interpretations, knowledge and power are negotiated, transformed and maintained, where socially constituted behaviour continually takes root and life-worlds emerge.

As my interests lay in learning about the needs of women in the Central Highlands of Bolivia, and AGRECOL was under pressing to implement its project on enabling locally based responses to growing climate risks, we came to an agreement to study women's practices in confronting endemic climate variability. I didn't focused on 'climate change', per se, because it was not an expressed concern of my population. Women may have heard of the concept, but they have not yet explicitly appropriated climate change in their language or daily practices. It is just part of the highly variable climatic context in which their daily lives and cultures have continually lived.

Rather than adopt a rigid definition on climate change, climate variability, risk or vulnerability, I preferred to position myself in localities and discover how women experienced climate and how they dealt with it in their daily practices. Vulnerability for women seemed to be such a part of daily life that it was a seamless part of surviving in the Central Highlands. Nevertheless, the resilience of endogenous practices appears to be eroding as a result of modernization, changes in relationships and communities, environmental degradation, and perhaps increasing rates of climate variability. Therefore, only after understanding women's logic, roles and daily activities based on more holistic concepts, I was going to be able to begin to understand how they confront and live climate variation.

### 1.3 Research Questions

Under the previous background I formulated the following general research question:

How do women from the Central Highlands of Bolivia experience climate variability and how is this knowledge expressed in their daily activities?

Following, the sub-questions I choose helped me to, first, understand women's daily activities, second, the practices they've developed in a context of endemic climate variability and the ongoing process generated when exposed them into a pathway of Agriculture Research for development project:

1. What are women's roles and activities in the family and in the community?
2. What practices do they have in confronting climate variability?
3. What implications do women's unique experiences and perspectives have for project-based development intervention?

## 1.4 Central Concepts

The central concept utilized included:

- Climate variability referred the idea that Andean agriculture exist in the endless context of climate uncertainty and risk
- Risk as an implicit concept which is a element of daily life for the people living in the Central Highlands of Bolivia
- Rural women belonging to the farming family enterprise
- Actor-oriented perspective that assume that women are not passive, but rather active agents who creatively open up spaces of expression and innovation
- Practices as the actions and activities of everyday life

The analytical lens through which I observed women was studying agriculture as a situated action in which, as Crane et al. (2011) explained, to understand women's practices, "how they are embedded in intertwined social, technical and ecological contexts", and to make their "skills, behaviours, and innovations empirically researchable".

Long (2001:241) defines practices as activities "by which individuals and groups strive to make a living, meet their consumption necessities, cope with adversities and uncertainties, engage with new opportunities, protect existing or pursue new lifestyles and cultural identifications, and fulfil their social obligations". Practices can also be seen as a public demonstration of what is possible and what is desirable.

## 1.5 Methods

In these sense, I followed an ethnographic actor oriented approach to dive deep into women's lives. An actor oriented approach which recognize the heterogeneity of social life, how such differences are produced, reproduced, consolidated and transformed, that actors have agency, that social actions are immersed in networks of relations (with human and non-human

components), where domains, arenas and fields are context-specific, meanings culturally constructed, a process in a scale that interpenetrate various social, symbolic and geographical spaces, and social interfaces as critical points of linkages or confrontation, which take shape under specific conditions and in relation to past configurations (Long, 2001: 49 y 50).

A situated analysis led me to study women in real-time, during their daily activities, interactions with family, other women, men, and children in the community, as well as outsiders. I sought a balanced analysis of five life histories and extended case studies. While making ethnography (Hammersley and Atkinson, 2007) in a exploratory research (Moll and Southwold, 2002), I kept record of scientific descriptions of my observations, exposed myself to a context, iteratively examining my experience, focusing my observations and systematically working towards key concepts, operational terms and then going back and re-analyzing my data and research questions.

How did I select the case study sites (communities) and the women/families I worked with? The Ayllu was selected by AGRECOL. The Ayllu organization is resistant to the arrival of outsiders, so I had to present my proposed research and request permission several times. The leadership committee evaluated my proposal and consulted its community base. Initially three communities agreed so I began the research in all of them. Nevertheless, in the process two were eliminated due to disinterest of the women (they did not take part in meetings) and a problem that I had with a translator (she did not have experience in translation so she used to skip what she felt wasn't relevant). In the end, the remaining community agreed to work with me and the logistics allowed my in-depth presence. In practice, I later learned that this community was the only one with previous researchers, and based on that experience, their potential fears were assuaged.

As Groot A. & M. Maarleveld (2000) explain how the appearance of gatekeepers facilitate the entrance to a community, at the beginning Don Fortunato, the head leader of the Ayllu and Don Patricio the president of the artisans' association open for me the doors to Chuñuchuni. Later on, Doña Virginia (Don Patricio's wife) in combination of a big three days weeding celebration in the community was the final gatekeeper that provided me the final access to women of the community. She introduced me to various women of the community during the celebration and invited me to private spaces where only women attended: peeling potatoes for the buffet, baking bread for the bride, etc. In that space women got relaxed with my presence and treated me as one of them.

Due to time limitations and my need to conduct in-depth participant observation, I chose to work with five families. I looked for families that were open to working with an outside research and that were suitably diverse in age, social status, type of family composition (Aguilar, 1997), economic status, production system, conditions of life and type of income generating and daily activities, to be able to include a degree of heterogeneity in my analysis of the local dynamics. I selected them through snowball sampling (Vaux, 2006; Green and Thorogood, 2009) starting with Doña Virginia that connected me to the rest of my cases.

To assure credibility to my analysis and rigour with transparency, validity, reliability, comparison, reflexivity, and representation, the quality of my analysis included: transparent and explicit methods and approach outlined in the following report; valid, reliable and accurate measuring logic as I strategically looked for women of diverse age groups, social status, economic status, production system, etc.; reliable and repeated interpretations leading to similar conclusions if research is repeated and using raw data in my final analysis; using comparisons of different cases to examine contextual meanings; being reflexive and aware about my own biases in the production of data being a women, urban, *mestiza*, biologist, with a feminist perspective, pregnant woman, etc. I always tried to be explicit to my thoughts and interventions apologizing whenever I couldn't understand a social context due to my pre existing paradigms and open to merge into any social activity, setting or eventuality.

Nevertheless, it is very likely that my understandings could respond to my background, because as Long (2001:50) explains, meanings values and interpretations are culturally constructed, but they can be reinterpreted and differentially applied as long as my own behaviour could change circumstances. In my attempt to become an 'insider' the attitude that helped me the most was making people feel they didn't need an "extra" time to be with me, but that they needn't interrupt their daily activities which I could even be of some help alleviating their work while sharing it.

Besides the ethnography of five women's life-worlds I used some other sources of information and methods of data generation: two focus group discussions, open in depth interviews with the nurse of the community, community leaders, *Yapuchiris* and artisans, documents and analysis of artefacts, narratives and underlying discourse.

## 1.6 Organization of the Thesis

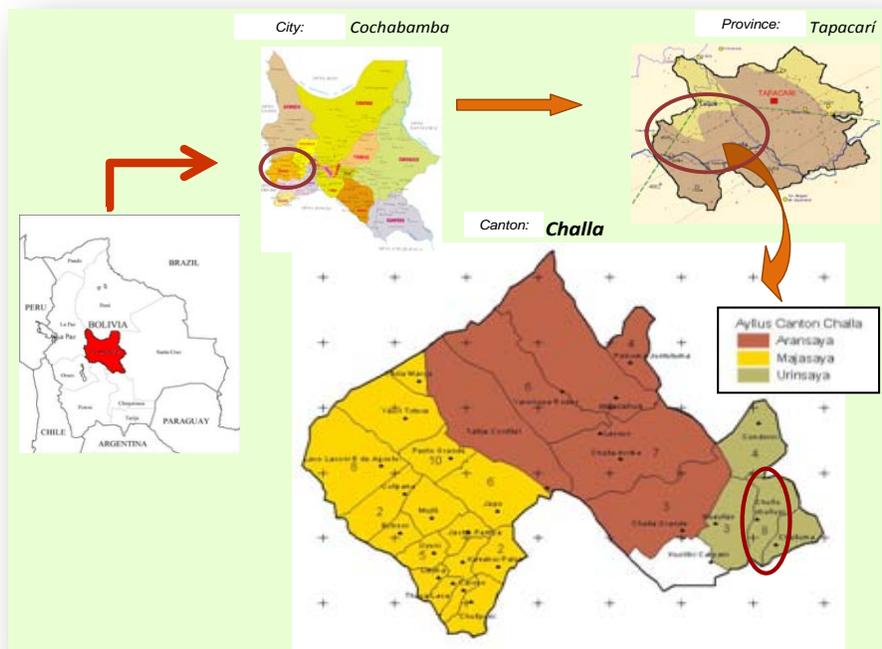
In the following chapters you'll find an overview of the location of the study: Chuñuchuñuni and its characteristics. Following, in Chapter two I'll describe women's roles and activities in a Chuñuchuñuni's family. In chapter three five women and their unique life-worlds will be described in order to introduce the five case studies and at the end of that chapter I'll give a brief description of the focus groups discussions. Chapter four will focus in women's practices in a context of high climate uncertainty, which were categorized taking into account the same activities that women follow within their gender roles. Chapter five will show what happens when women are included in a development project, the social discontinuities and transformations that emerge in an interface between the GRAC project, women's development projects and the community members of Chuñuchuñuni. Finally, the conclusions will be developed in chapter six and some personal learning from the thesis experience.

## CHAPTER 2. AN OVERVIEW OF WOMEN'S ROLES AND ACTIVITIES IN A CHUÑUCHUÑUNI'S FAMILY

Before entering my ethnographic study, in this Chapter I provide an overview of women's roles and activities in the family and community. I collected this information during my part time internship with AGRECOL, which involved background studies, twenty visits to community, and the facilitation of two exploratory, interactive workshops with GRAG project participants between July 2010 and February 2011. These workshops centred on themes of climate and risk, but also on family health and nutrition, with special attention to local practices. Here I provide a summary of the broader contextual environment of the research site of this study, the socio-technical processes being addressed by AGRECOL and the local leaders, the *Yapuchiris*, and my observations of the local NGOs meetings, of men, women and children of Chuñuchuñuni's families.

### 2.1 General description of the Ayllu Urinsaya and the community of Chuñuchuñuni

I carried out my research in the County of Challa, Province of Tapacarí -- one of the poorest provinces of Bolivia. Challa is composed by three traditional indigenous groups of communities known in Quechua as *ayllus*: Majasaya, Aransaya and Urinsaya. The Ayllu Urinsaya has five communities (Chuñuchuñuni, Condoriri, Huayllas, Challuma and Kusilliri-Carpani). My research focused on the *sede* of the Ayllu Urinsaya: Chuñuchuñuni (see Map 2.1).



Map 2.1 Location of the research: Modified from Quispe, et al 2010:29

According to the Bolivian National Statistics Institute's Social Statistics and Analysis Unit (UDAPSO-INE) Tapacarí belongs to one of the poorest provinces of Bolivia. The poverty level of the inhabitants of Tapacarí reaches 90%, in part due to water services and small households (usually one room that is used as sleeping room, storage room, handcrafts room, etc).

Challa has an area of 435 Km<sup>2</sup>. The region is located in the Central Highlands of Bolivia, a region classified by Navarro and Maldonado (2002) as belonging to the dry highlands known as the "Puna Peruana Eco-region". The region is mountainous, with deep slopes and outcrops in a process of irreversible erosion. The climate is characteristically cold, with an average annual temperature of 6.5° C. It has strong cold winds, regular frosts from April to November and occasionally in the raining season (leading to crop damages in potato, oat and barley). The strongest frosts occur in May and June, when communities elaborate freeze dried potato, known as *chuño* (Quispe, et al. 2010:29 and 30).

The region is arid to semi-arid, with annual precipitations between 300 and 600 mm, distributed during the four-month raining season between the months of November and March. The evapotranspiration rate is around 1400 and 1500 mm annually, leading to a net sum of desiccation and the formation of expansive deserts. Some years drought is a serious limitation for agriculture. There are sometimes snow and hail, in particular at the beginning and end of the raining season, with severe damage to vegetation and crops (Quispe, et al. 2010: 30).

The landscape vegetation is mostly grass and straws. Close to the slopes and rivers there are also shrubberies, bushes, cactus, and short trees, such as quehuiñas (*Polylepis spp*). In lower areas *Eucalyptus sp.* and *Pinus sp.* have been introduced. Fauna include wetlands frogs (*Bufo sp.*) and viscacha (*Lagidium viscacia*); in the slopes foxes (*Pseudalopex culpaeus*), skunks (*Conepatus chinga*), and wild guinea pigs (*Galea musteloides*); close to the rivers there are gophers (*Ctenomys opimus*). Birds include sparrows (*Paser sp.*) and falcons (*Falco sparverius*). The most common domesticated animals are sheep (*Ovis aries*), llamas (*Lama glama*), donkeys (*Equus asinus*) and cattle (*Bos Taurus*) (Quispe, et al. 2010: 34).

The land is mostly used for shepherding and grazing of sheep, llamas, donkeys and bulls. Land near settlements is cultivated in traditional Andean crops, including potato (*Solanum sp. and S. acaule*), yellow potato, *papa lisa* or melloco (*Ullucus tuberosum*) as well as the exotic European grains wheat (*Triticum aestivum*), oat (*Avena sativa*), and barley (*Hordeum vulgare*) (Quispe, et al. 2010: 34).

Chuñuchuñuni is reached via the main highway between Cochabamba and Oruro. Turning off at to the town of Pongo, located at Km 90; one travels ten kilometres by a dirt rural road in direction to the town of Independencia and five extra by a deviation up the hill. During dry season it takes about half an hour to get from Pongo to Chuñuchuñuni, but in the raining season it can take from 1 to 2 hours (as the road is from red clay and becomes very slippery).

The 2001 census reported 292 inhabitants (147 men, 145 women) living in 68 households in Chuñuchuñuni. Nevertheless, during the time of the research, AGRECOL conducted its own study which found the following:

**Table 2.1 Chuñuchuñuni Census based on data collected on December 2010 by the FFA**

| People Affiliated | Population | Men            | Women          | Working Population <sup>3</sup> | Children and elderly people <sup>4</sup> | Children at school age <sup>5</sup> | Migration |
|-------------------|------------|----------------|----------------|---------------------------------|------------------------------------------|-------------------------------------|-----------|
| 73                | 337        | 163<br>(48,4%) | 174<br>(51,6%) | 209                             | 93                                       | 114                                 | 10,4%     |

Drawing on these data, the growth rate of Chuñuchuñuni over the last decade is about 15.4%, representing an average annual growth of 1.7%, about five additional people per year.

The migration percentage that the families reported was calculated considering the young people that leave the parents house (especially to search for a temporary job in the city or to study) and never go back to the community (Aguilar y Canaviri, 2010). Besides this type of migration, during the time of the research I observed that a big number families or community members migrate for short periods. The migration is usually to the city to sell their labour force or to Chapare to produce fruits and coca). Nevertheless, most of the times they are back in the community during the farmer's union meetings the 20<sup>th</sup> of every month, they accomplish the political positions when they have to and they continue cultivating their communal lands in Chuñuchuñuni.

When the last census was directed in 2001, Chuñuchuñuni had 70 households and following, some characteristics are presented: 60 out of the 70 houses, that are usually one room huts, are constructed with adobe and the rest with flat stones and mud; only 12 have calamine roofs 4 have concrete floors and the rest are made of straw and soil floors; 39 have access to the communal water system while the rest use water from the closest river, stream or lake; there is only one toilet; only five houses with electricity; and only two houses cooking with gas, 42 with dry guano and the rest with wood. Technology in the households, from the 70 houses: 53 of them have radio; only one television; 29 have bicycles; 3 have cars; one has a refrigerator; there's only one public telephone in the community; and no one has cell phones. Regarding the population itself, first of all, they reported 0% of migration at that time, while in 2010 we encounter 10.4% of migration. Then, from the 292 people living in the community 79 is illiterate (from which 66% are women and 34% men); there's only 70 (24% of the total population) people that assist or that has ever attended to any school from which 48% are women and 52% men. Form the 70 people that attended to school, the grade achieved is 87% primary school, 2% kinder garden and 2% to secondary school. The mother language of the population is Quechua as 92% of the population

<sup>3</sup> The working population is calculated with men and women over 10 years old and below 70 years old

<sup>4</sup> Children and elderly people are men and women below 10 years old and above 70 years old

<sup>5</sup> School age was calculated as between two years of age through 14 (is this correct?)

speaks it; the 8% remaining speaks Aymara (6% of them are women and 2% men). As a second language, 45% of the population speaks Spanish from which only 16% are women (INE, 2001).

After almost 10 years of the census, during the research it's been observed that the appearance of the houses is almost the same as in 2001, the sanitation system is still much reduced: there are only 2 bathrooms in the community, one in the school and one in the artisans association. The deposition of excreta is still being done in the field nearby the households. This practice contaminates the environment and the rivers (Quispe, et al. 2010: 35).

The drinking water system in Chuñuchuñuni is communal and covers the need of the families that live close to the centre of the town but not from the ones that live further away. The water comes from a waterhole on the mountain nearby that usually never dries in the year. In contrast to 2001, the electricity system is much more spread now. Most of the houses in the community count on with this service. Nevertheless, the families that live further away are not attached to the public lightening network, but some have solar panels, and some others lack this service.

Technology in the houses it's been observed that nothing had changed too much. Some of the only observations that shows a change are that there are more cars (around 15) and that almost everyone has a cell phone, some young people, even have the most modern and up to date cell phones. The curious thing is that at the time when I arrived to the community, Chuñuchuñuni didn't have cell phone signal coverage, so everyone used the cell phones as a radio, to take pictures or record music. The only telephone communication system they used was a fix telephone cabin with a communal number that worked in a very special way. If you called the community, anyone that was around, picked up the phone and asked you to call again in 5 minutes. Then, he or she shouted the name of the person you're looking for until they listen and answered the call. However, this system started to change during the time of research as at the end of the year 2010, the telephone company ENTEL built a signal tower close to the community so the cell phones started to be used also to make and receive calls.

The communication system also works very efficiently with the radio located in Pongo. All the announcements by leaders, institutions or organizations are voiced through the radio, which is widely heard by men every early morning or late evening.

Education: in Chuñuchuñuni there's only a primary school up to the 8<sup>th</sup> grade and a *wawawasi*<sup>6</sup>. The infrastructure of the school is new as it's been improved and enlarged in 2005, while the *wawawasi* is still under construction because it only started working since mid year in 2010. The school is the typical public, rural school. The things that characterize it are that the teachers attending these schools are generally last year students of Magisterium, they force students to wear tidy uniforms, be always with a well done haircut, an obligatory military like formation every morning, shouting "God morning teacher" as hard as possible, and which consider occidental education like the only valuable and important education.

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<sup>6</sup> *Wawawasi* is the name for the day care centre in Quechua

To give an example, once during my internship, we gave a workshop about agro-ecological practices and at the end of the day the AGRECOL technician takes the floor and say:

“You have to realize, that we don’t teach you anything, it’s you that teaches us. This practices we’ve seen today, are not ours; they belong to your culture, your *Yapuchiris*<sup>7</sup> are the wise people here; we only give the space to them to transmit us and the rest of the community their knowledge”.

And as soon as he finished, the teacher of the school raised his hand to take the floor and said:

“Community members, I want to thank AGRECOL in your name to come here and teach us what they know; we have to be grateful that technicians come to us to teach us what they know. We never have to stop learning from people that have studied in universities, they know a lot, and with their help we'll go over poverty”.

During the time of research the school in Chuñuchuñuni had 64 students and the *wawawasi* 28 students (92 out of the 114 children on school age of the community), showing that 20% of the children don't attend to the education system (*Dirección del Núcleo Escolar de Chuñuchuñuni*, November 2010). Besides that, it’s important to mention that from the students enrolled in the school and the *wawawasi*, there’s a big failure to attend specially due to long distances from home to school (Quispe, et al. 2010: 35). Some teachers add that the deserters are usually women that remain at home helping their moms or to be protected from getting a husband in an early age (interview to Doña Francisca Franciscano. 2010). Finally, the absence of secondary schools in the area forces the majority of students, to leave the community in order to continue with secondary studies in Pongo or Cochabamba and usually end up migrating (Aguilar and Canaviri, 2010).

Religion: The community of Chuñuchuñuni has a catholic chapel in front of the communal sede. Up to 2009 the school was teaching catholic religion as a subject, but since the new Constitution changed in Bolivia, the new Education Law “Avelino Siñani and Elizardo Pérez” allows elaborating new curricula with practices and customs from each town (personal conversation with the Medicus Mundi Director, 2010). With this regard, the school proclaims that the subject was open for discussion for the year 2011, but up to the time I finished my field work there were no new suggestions.

In terms of non formal education, during the participant observations it was seen children learning implicitly what their parents do. In many occasions I saw little daughters reproducing what their mothers do and little boys reproducing what their fathers do. For example, once sharing the afternoon with Doña Francisca she was capturing the sheep between her legs and Lizbeth her 5 year old daughter run after the sheep trying to capture them as well, while Christian, her 3 year old son stayed next to his father just looking at them. There’re also narratives about past

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<sup>7</sup> Yapuchiri (farmer in Aymara) is the term used by AGRECOL to call the most experienced farmers

knowledge and traditions: what grandmas used to do. But this knowledge is not in use it is remaining just as a narrative.

The public health system: The election of Evo Morales as the first indigenous president of Bolivia in December 2005 brought ambitious proposals to revise the public health care system (personal conversation with the nurse of Chuñuchuñuni: Delbi, 2010). The people from Chuñuchuñuni attends to a health post in the town of Pongo (50 minutes by public transport), where there are two auxiliary nurses that take care of general medic care. Besides that, the post gets a visit of a specialist doctor once a month. Sometimes the specialist is a surgeon, a gynaecologist or a dentist. Additionally, the community receives the visit of a nurse the 15<sup>th</sup> of every month. She arrives at 4 in the early morning and leaves at around 9 in the morning. She has a little room that the community provided her as a consulting room, but most of the times she visits patients on their own houses (because she complains that no one visits her in her consulting room).

On the other hand, the people from Chuñuchuñuni reported to use “traditional botanical medicines” (in Bolivian public healthcare commonly described as biomedicines”). Since 2009 in Bolivia, they introduced some regulations in the Health Service to recognize the traditional health practices of rural communities. The nurse of the community comments on these new regulations:

“It's true that even I use plants to treat myself. Plants like *ñuñumayu* for the fever rose marine, celery, parsley and camomile for inflammations and antiseptics. But now, the traditional doctors are replacing our old bosses and they're going to force us to use herbs instead of drugs for treatments. We already had a three days course of biomedicine to start applying those treatments”.

In the community, the international NGO Medicus Mundi, working with the Ministry of Health and Sports, supported the creation of a new political position in the village board: the community Health Secretary, which was responsible for coordinating the work of the formally trained nurse with the traditional healers of the community. Elected as the Health Secretary for this region, Albina said that she regrets having to relate with the Western medicine: “I don't believe in doctors. I know how to cure myself with plants. They are forcing me to accomplish this position in the community, but I'll find the way to escape.”

Some examples of the biomedicines she and other community members use are included in the following table.

**Table 2.2 Examples of biomedicines used by members of the community**

| Disease or illness                                   | Treatment                                                                                                                               |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fever</b>                                         | <b>Eucalyptus tea, phasa, airampo, urine, alcohol, alder, burnt ants and water, ash, water and airampo in a hot rock and percolated</b> |
| <b>Ch’ojo (like a reaction caused by a fright)</b>   | <b>Boiling lemon, eucalyptus tea, wira wira, warikunka tea, choquekailla, burnt sugar</b>                                               |
| <b>Flu or letting the cold enter inside the body</b> | <b>Smoke of sara k’oronta, apple tea, kiswara, chinchircoma, animal fat, tusca, waycha</b>                                              |
| <b>Headache</b>                                      | <b>Eucalyptus leafs on the forehead , aliso, thola, bath of salt and urine</b>                                                          |
| <b>Stomach ache</b>                                  | <b>Muña tea, coca, hierba buena, burnt alcohol, paiqo</b>                                                                               |
| <b>Earache</b>                                       | <b>Sara musura, smoke of fox leather</b>                                                                                                |
| <b>Eye pain</b>                                      | <b>Wash with carrot’s water and lemon, drops of red chili increases the sight</b>                                                       |
| <b>Toothache</b>                                     | <b>Grained Ñuñumuyu</b>                                                                                                                 |
| <b>Rheumatism</b>                                    | <b>Wash with pine water</b>                                                                                                             |
| <b>Relapse</b>                                       | <b>Eggshell, ant’s shit, bran, rosemary, muni, rumi qawa, llapa llapa, hair smoke</b>                                                   |
| <b>Post delivery</b>                                 | <b>Ointment of <i>wallikia</i>, <i>kisca kisca</i>, (<i>amor seco</i>) and <i>chaucha</i></b>                                           |
| <b>Prostate problems</b>                             | <b>Chinchircoma ointment and <i>Linkizapatilla</i></b>                                                                                  |

Source: Aguilar and Canaviri, 2010; and data collected in workshop “Salud, Nutrición y Alimentación Sana” in November 2010)

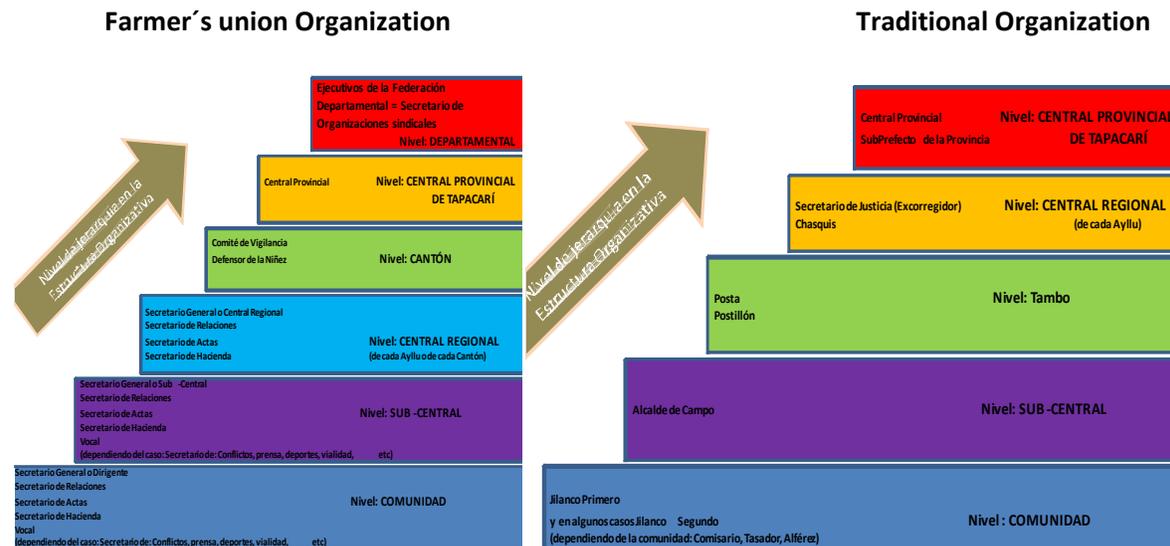
Community’s socio-cultural aspects: in Chuñuchuñuni members are organized in a farmer’s union, to which only men are affiliated and women without husbands or widows. They meet once a month (the 20<sup>th</sup> of each month) to discuss about communal activities and reports about the relationships with other communities, provinces, government officials, NGOs, etc. The last meeting of the year they have a General Assembly where they elect the directory. They name five persons of the community and then call the list of the affiliates so that each of them goes to the front blackboard to make a vote with a piece of chalk. The person with higher votes becomes the leader of the community, the second one the relationships secretary, the third the acts secretary, the fourth the treasurer and the fifth is just a vocal. That same day the outgoing directory gives possession to the incoming directory (Aguilar, 2010).

They also vote for traditional authorities (Spanish the ‘originaria’ organization, which has a very political connotation of being the native indigenous way of organizing and ruling communities). Nevertheless, they are not necessarily elected in the General Assembly; they are usually elected in

the monthly meeting of November and they start with their functions the 2<sup>nd</sup> of January each year.

Both organizations, the farmer's union and the traditional organization, have a directory with different positions, levels and hierarchies, like shown in the following graph:

**Graph 2.1 Farmer's union and Traditional Organizations**



Some very interesting things observed from the communal organization are the communal day work and the communal fasten. The communal day work is once a month that each affiliate has to do something for the community. The tasks are agreed in the monthly meetings and they are usually constructions for communal areas or school, fixing the communal water system, cleaning the road, etc. Every affiliate has to accomplish these tasks otherwise the days of work for the community accumulate and have to be pay at the end of the year.

The communal fasten happens between the 20 and the 31<sup>st</sup> of December every year. All affiliates attend to 2 days of fasten. The attendance is controlled by calling the list. The first day everyone goes to a close up mountain (with a cross on the top) where they spend the day praying, celebrating mass, singing and forgiving their sins. Among the prayers they ask for a good productive year, enough rain, little frost, hail and draught, for the protection of the family members and the animals. At around 5 or 6 pm the leader of the community brings cookies for everyone and then everyone can go back home to eat but a food without salt. The second day everyone gathers in the chapel of the community to continue praying. At midday 10 persons of the community (in yearly turns) sacrifice 10 lambs and share their potatoes. They eat together for the rest of the day while singing and praying.

Celebrations and traditions: they follow the almost the same mix catholic and pagan celebrations like the rest of the country: Carnival, Easter, Holy week, Saint Santiago, St Vera Cruz, Urkupiña Virgin, the national (06/08) and city (14/14) liberation holidays, the Death days (*Todos Santos*) and Christmas. During the time of research I was present during the *Todos Santos* celebrations. The

families that have had someone death in the past 3 years or less, build a little altar for the soul in their houses. The altar called “*la mesa*” (the table) is full of bread, fruit, toasted cereals, candies and *tantawawas* (homemade breads with different shapes each having a particular meaning). The celebration last for 3 days, the first and the third day is celebrated in the house and the second in the cemetery. The whole community visits every house with altars to pray and accompany the grieving family. In exchange the visitors get food, drinks and the food from the altar.

The celebration of Carnival is to celebrate fertility, and to thank Mother Nature for the production. The people celebrate with qhoas<sup>8</sup> and also painting the animals. They put on bright colourful earrings in the top of the ears of sheep, llamas and donkeys for decoration, but also as a fertility sign.

An old man remembrance tells that until 15 years ago (1995) there were four big celebrations in the community: Carnival, Easter, Saint (*Tata*) Santiago (the 25<sup>th</sup> of July) and Christmas. For each of the 4 celebrations, the whole community organized together a big fair or assigned godfathers or godmothers to organize big parties.

“It was very important to have these celebrations, because everyone that was angry with somebody else could make peace after some drinks; that was the way to solve problems in the community. But now that we don't have those big feasts and everyone celebrates on their own, there's no chance to solve problems easily; now everything is revenge or remaining angry splitting the community. (Personal conversation with Don Patricio Mamani, 22 Dec, 2010)

Marketing and exchange: Aguilar and Canaviri, 2010 collected some information about the markets, products taken to be sold, products that are buy and the types of currency used. The closest market in Pongo (the Ayllu Urinsaya's market) runs every Saturday is the one with the most attendance, especially by the women of the house. They sell potatoes and *chuño*<sup>9</sup> and buy almost everything there: vegetables, fruits, bread, groceries and food provisions (rice, pasta, sugar, salt, etc.), clothing, medicines and school materials. Most of them are pay with money, but especially food is exchanged with *trueque*<sup>10</sup>.

The market in Confital (the biggest market of the Ayllu Majasaya) which runs every Tuesday is attended only by some women sporadically or around once a month. They sell papa and *chuño* and buy groceries, vegetables and fruits. The same as in Pongo, most of the items are bought and some others are exchanged with *trueque*.

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<sup>8</sup> Qhoa is like incense which is burnt with some other aromatic herbs.

<sup>9</sup> *Chuño* are cold dry potatoes

<sup>10</sup> Trueque is an exchange of products and the quantity is fixed with piles, plates of something or with the same weight of product. For example a pile or a big plate of potato is exchanged with a pile or a big plate of green beans or other vegetable; or a kilo of *chuño* is exchanged with a kilo of onions.

There is another market in Leque Palca (the sede community of Challa) which is attended once a year by the men of the house. They don't take anything to sell there and they buy farming tools, agricultural inputs and livestock.

The last market attended, mostly by men, is in Quillacollo (a big province 13 km from Cochabamba). They go there once a month or only after the harvest season. They take potatoes to sell or labour force (especially in construction) and they buy clothing, farming tools, agricultural inputs and some groceries which have to be paid only with money.

Aguilar and Canaviri, 2010 estimated that a family in Chuñuchuñuni has an average of 4 members. That family size and having too small children among the family makes farming very difficult to accomplish. Therefore, they complement the labour force with reciprocity practices called *Ayni*, *Minka* and *Umaraqha*. They are part of farming in adverse conditions where uncles, cousins, neighbours, friends, godparents, godchildren and close relatives converge to work together to coexist.

“The *Minka* is not made for money, it's done so that another day when the person cans he or she will give it in return or help you back” (conversation with Don Patricio Mamani, 2011).

“*Umaraqha* is when you kill a lamb and you invite your close friends and extended family to eat well... they will work hard with you to prepare the land or to harvest the potatoes, but, at the end of the day we will all share a delicious meal together” (conversation with Doña Virginia Espinoza, 2010).

*Umaraqha* is usually practiced during the potatoes harvesting time. The family that invites the friends and relatives to harvest, kill a lamb, pull apart the meat with a lot of salt, boil the same potatoes that are harvested and eat in abundance together.

“The *Ayni* we do give back: today is for me and tomorrow is for you. It is more often when we seed. For example, if you lend me your bulls to plough my land, then I help you loading your manure to fertilize your land” (conversation with Don Valerio Rodriguez, 2011).

A common day in a Chuñuchuñuni's family usually starts at 4 in the morning for some of the members, for example for the woman that wakes up to cook. She cooks a plate of food for breakfast and a snack for midday (called *sama* in Quechua). In the mornings they usually eat a stock with llama or lamb bones, few vegetables, potatoes and *chunño*, while the midday's snack is usually potatoes, *chunño* and rice or pasta. While the woman is cooking, the rest of the family is still sleeping. The husband usually wakes up an hour or two later, freshens up a bit and listens to the radio. He also makes minor repairs or gets ready his farming inputs or tools. After breakfast, the man leaves for work and the woman wakes up the children, gives them breakfast, and gets them ready to school. Afterwards, she takes the animals out of the corral, freshens up, washes clothes

(some days) and goes shepherding at around 9 or 10 am until 5 or 6 pm. When she's back she locks the animals in the corral, makes the plates of the previous day and starts cooking for supper. They eat at around 8. Then the woman makes the children sleep and goes to bed at around 10 or 11. In the other hand, when the man arrives home at around 5 or 6, rests for a while meanwhile listens the radio, eat supper, helps the woman to put children in bed and go to sleep at around 9 or 10. If the woman is finished, she goes to sleep with him, but in some cases she stays weaving until 11 or 12.

An activity analysis helps us to distinguish how women and men use their days with the following time distribution:

**Table 2.3 Women and men's activity analysis on a daily basis**

| Daily hours dedicated to:                   |                         | Women       | Men |
|---------------------------------------------|-------------------------|-------------|-----|
| <b>Home works</b>                           | Taking care of children | 3 *(8 - 14) | 0   |
|                                             | Cleaning and washing    | 3           | 0   |
|                                             | Cooking                 | 3           | 0   |
| <b>Production and handcrafts activities</b> |                         | 10          | 10  |
| <b>Representation activities</b>            |                         | 0           | 1   |
| <b>Recreating and resting</b>               |                         | 5           | 13  |

When I refer to home works I refer to activities like taking care of the children and accompanying tasks such as taking them to school, attending to school meetings, taking them to the health post, etc. In the production and handcraft activities I include taking care of the animals, shepherding, farming and weaving activities. Regarding the representation activities I refer to attending to farmer's union meetings, accomplishing representation positions and responsibilities, communal work, etc. And finally in the recreating and resting activities I refer to time spent sleeping, having some rest or having some fun making sports or celebrating with friends.

What we can observe from the table is that men usually spend their day in their farming activities, attending to community meetings or accomplishing representation positions and the rest of the day they can rest while chatting, accompanying their women while they cook or weave, listening to the radio and sleeping. In the other hand, we can observe that besides taking care of the animals and weaving, the women have a doubleheader with the house work and taking care of the children. The hours spent taking care of the children vary depending on the age of the kids, if they are babies, the women take them in their backs during all their activities and if they are in school

age they take care of them during the afternoons (when they are not at school).

## 2.2 Social roles and activities of women and men in the community and in the family

The roles and activities undertaken by men and women in Chuñuchuñuni are clearly differentiated. Therefore, they occupy different space in the family and in the community. Men are the main protagonist in the public space of the community and women occupy the private space of the family. This is reflected in the different activities that they undertake in the family and in the community. Nevertheless, there are also some activities shared among men and women that will be described below.

### 2.2.1 Shared activities in a Chuñuchuñuni's family

The families in Chuñuchuñuni usually share responsibility in activities such as farming, construction and the organization of traditional celebrations.

Picture 2.1 Shared activities from men and women of Chuñuchuñuni



Farming activities: they start with the preparation of the fallows. Usually, the first thing they do is burning the straws and short vegetation of the land. The man turns on the fire while the women and the children guard the sides of the plot to stop the fire with branches or by throwing soil over the fire with a shovel. Some weeks later, the men till the land with bulls while the woman tills the land manually with a pillory. As soon as the time is ready for seeding, it's common to see the men tilling the land again while the women drop the seeds and the manure behind him. They seed in three different dates that change depending on their predictions about the arrival of the raining season. In the year of research (2010) the dates were slightly backward as the rains arrived very

late. The times of seeding are called the early sowing (that in 2010 was at the end of October), the mid sowing (at the beginning of November) and the late sowing (mid or end of November).

Some months later (in the year of research was during the last days of December) man and woman usually go together to the land again to till it. In some families the men till with the tillage while the woman tills with a plow. Sometimes if there's too much rain, they till again a month later. Afterwards, during harvest time (starting at the end of February could be up to late May) the family harvests together. They usually harvest with guests from the same community or from the extended family practicing the *Umaraqha*.

When the grains are cultivated and harvested, there're also some activities man and women do together like threshing and winnowing. While the man is picking up the grains with a shovel, the woman is cleaning the residuals and skins of the grains from the surroundings of the pile.

Construction work: it is very common to see the man taking care of putting the adobes of a wall while the woman is preparing and passing him the wet clay or soil with straw to stick the adobes.

Finally, during the time for celebrations, men and women work together but with different tasks. For example, in the organization of the *Todos Santos* celebration while baking *tantawawas*, men were mixing the pastry and putting the bread in the clay oven, while women were making the *tantawawas*'s forms shaping the pastry. Another example is that women were in charge of cooking while the men had to run after the llamas to catch one, sacrifice it and cook its meat (the only difference is that men took only like a couple of hours doing that job while women start cooking at 4 or 5 in the morning and keep on cooking until 5 or 6 in the afternoon due to the number of guests and to offer 3 different plates during the day).

### **2.2.2 Exclusive roles and activities that men undertake**

The principal roles recognized for men are to provide monetary resources for the family and to be the representative of the community. Besides that, their principal activities are related to farming, their participation on the political positions and their recreational activities.

#### **Picture 2.2 Activities exclusive for men**



The principal economical activity in a traditional Chuñuchuñuni' s family is to be a farmer. Because farming is a shared responsibility between men and woman, he always has to be present. In the cases that the man is missing, he has to look after another man to replace him, for example the brother, the father, cousin, neighbour, etc. If a man replaces another for farming activities, it is usually "paid" with a reciprocity practice. For example, Don Sergio Casilla was away in jail and from there he sent a football ball for all men in the community; in exchange he asked them to help his wife, Doña Martina, in the seeding, hilling and harvest.

The responsibility of accomplishing farming activities is not so strict with women. She can be absent, especially if the man can work associatively with a brother, father, cousin, or neighbour. The woman then, sends food and water at mid day with one of their children or prepares it very early in the morning so that he can take it with him.

One activity that is exclusively for men within the farming activities is fumigation. "Women cannot fumigate because the backpack spraying is too heavy for them, that's only boy's task" (Conversation with Don Feliciano Mamani, 2011).

During low farming activity season the men of the community search for alternative income through selling their labour force in farming, industry, construction, or truck loading in the markets.

In terms of the second role, the community farmer's union is only composed of men affiliates. Women can only be affiliated to the community if they are widows or if their fathers are too old and they are still single (in that case women represent their parent's family). The responsibility of being a community affiliate generates many activities which have to be accomplished and that cost a fine in case they are not followed or for affiliates that arrive late to the activities: attending to monthly meetings, representing the farmer's union for a year in its directory by turns, giving a

day per month for communal work, attending to the annual communal fasting, and in some cases the NGOs' meetings or workshops become obligatory in case that the leader of the community decides so and the assembly supports it.

In regard to representing the farmer's union for a year in its directory by turns, men have to be a Board Farmer's union Authority once and another time they have to be a Traditional "*Originaria*" Authority like a *Jilacata*, Field Mayor or Justice Commissary. Women can't be a traditional authority because only people that wear Ponchos<sup>11</sup> can accomplish this position, which is an item only of the men's indumentums. They say that such authority needs to wear a Poncho all the time to protect the cultivations and as women don't wear ponchos they cannot play that role of protector of the land. Doña Felicidad adds to this comment:

"If the *jilacata* will take off his poncho, the people will see him as a bad guardian. He has to remain with the poncho all the time, even at his house, because when he takes it off the hail or frost can arrive to the cultivations. The poncho over him is like he would be covering and protecting the cultivations. If he removes it, then is because he doesn't care about the protection of the production in the community."

This sexual division of tasks leads to a consequent physical separation of spaces observed in the meeting rooms during the research. For example, as the man assumes a principal political position he occupies the front sits of the meeting room to discuss the issues at stake. In the other hand, the women usually sits on the floor at the back of the meeting room; they sit in a circle just listening the decisions that are being taken or chatting whispering about any other issue.

Finally, the last point about men's recreational activities regards to their tradition to organize the parties, celebrations and to be the centre of attention during them. In any of the celebrations I participated during my research, the man is the key protagonist: he receives the guests, provides them with drinks, conversation and entertainment, especially if the guest is another man; if the guest is a woman, they are usually disregarded as they usually go to the kitchen to help the other women of the house. The woman is always playing a secondary role, most of the time cooking or serving the plates. It's also curious to observe that this is also reflected in the physical space that they occupy during the celebrations. While men are standing or sitting on chairs in the centre of the room, women are sitting on the floor at the back of the room. For example, during an inauguration of a dentist chair in the Health post in Pongo, men were standing in the front door playing instruments, while women were sitting on the floor beside the men's circle (see picture below). Another example was in *Todos Santos* celebration; men were sitting on chairs or standing close to the altar, while women as usual on the floor in the back position or close to the door to quickly go to the kitchen to serve the guests.

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<sup>11</sup> Poncho is the name of a long cape made of sheep wool

Picture 2.3 Women and men separation of spaces



Inside this type of recreational activities, it is said that only men can play this instruments, for example *pinquillo*<sup>12</sup> that is an instrument of the dry season which is played when the rain should be arriving. “We use it to call the rain and you can perfectly see that if we are many of us playing it for a long period of time, then the rain really comes”. There are two versions of why *women cannot play it*. One is the men’s version: “they cannot play it because if they do the milk won't stop in their breast when they are breast feeding: it will flow out all the time”. And the second is the women's version: “we cannot play the *pinquillo* or any other instrument because if we do, too many men will follow us”.

In the Andean culture it was said that all the types of wooden flutes are the feminine instruments and that they should be played in the raining season (*parawata* in Quechua) only by men. But, they also say that in the dry season (*ch'akiwata* in Quechua) only the woman should play the masculine instruments like the *charango*. Nevertheless, when asked, the woman said they never play instruments: “Only men play the instruments, but when they will be a bit drunk we are the ones to dance flirting a bit”.

Other recreational activities that are only for men and not for women are sports, like football or “*paloma*”.

“We've only played football during two opportunities in the last 10 years, when there was a woman of the community in a political position in the Central Province, who organized women championships”. (Source: Doña Marta Cruz).  
“Playing “*paloma*” (pigeon) during Todos Santos is a rough game just for men” (Source: Doña Virginia Espinoza).

When I asked why women don't play it, they answered it was because they didn't know the rules. But when I asked why they didn't ask to learn the rules they said that it was because it is only a

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<sup>12</sup> *Pinquillo* is an Andean wooden flute

men game. In the other hand, they said there is also a game in *Todos Santos* where women can participate. It is the game of the “*pipocas*” (popcorns). This game is played only at midnight with the bones of the knees of sheep or llamas as craps. It's played at the bottom of the altar table and the winner drinks and cheers with the soul of the death. Among my observations during *Todos Santos* celebration, women don't have any time to be playing around during that day. They have to be cooking from early morning up to almost 6 or 7 pm. They cook and cook one plate after another one to invite food to the entire guests that come home to pray for the soul of the death. Only very late at night, they can rest and seat close to the altar table, and as they have to keep vigil the whole night, one of the things they do is playing the “*pipocas*” (popcorns).

### 2.2.3 Exclusive roles and activities that women undertake

The principal social role of the woman is to take care of the family, undertaking the house related work and taking care of the animals and its sub-products. They also play a role, but secondary, when they are married, which is contributing to the men to generate income for the family. This role becomes primary when the woman is single or widow. Besides that, their principal activities are taking care of the children, taking care of the husband, feeding of the family, following the development, nutrition, growth and health of children, taking and picking up children from school, all the activities under house work and taking care of the animals: sheep, llamas, donkeys and bulls; and its sub-products: wool, meat, milk, etc. Inside the activities to generate an extra income for the family women weave and sell their labour force.

Picture 2.4 Activities exclusive for women



Most of the time, it is the women the only one taking care of the children. When children are small, up to 3 years, they usually take them in an *aguayo*<sup>13</sup> loaded in their back.

“Our *aguayo* is always very heavy. We take everything there: food, plastic cover, lantern, clothes for our children, wool, sticks to weave and sometimes something more. Besides that *aguayo* we have a second one where we load our children”.-describes Doña Virginia-. “Some men also carry an *aguayo*, but is a smaller one; they take it in their hips, not in the back, and it’s usually only for his coca leaves and snack, not for babies” Doña Virginia adds.

With regard of taking care of the children Doña Virginia says Don Patricio sometimes helps her. But I’d like to describe one of my observations: One day during my field work I visited Doña Virginia. She said she had to weave to finish her *aguayo* before the 8<sup>th</sup> of the month (when they deliver all *aguayos* in the artisans association for selling). So that day Don Patricio said he was going to take care of Yolanda, their youngest daughter. When I arrived, Don Patricio came to talk to me with the baby in his hands. After 15 minutes of our conversation, the baby run out of his arms and went away crawling on all fours. Don Patricio didn't realise until some 15 minutes later. By that time he cried: “*ahhh, where is my Yolanda?*” But, I was observing Doña Virginia in the back of Don Patricio, that stopped weaving, grabbed Yolanda, took her inside the house and put her to sleep. When he realized he was not really helping his wife he asked her to apologize him feeling a bit ashamed.

With regard of taking care of the husband, there is one statement very illustrative that came up in an interview to Don Patricio:

“the designs of our handcrafts show the pairs of opposites the same as we are. When a young man is single, he’s lacking something; only when he gets married he feels complete; he forms his whole with his pair of opposite, the one that complements him”.

Nevertheless, in the other hand, Victoria Franciscano comments:

“No, it’s terrible! When woman gets a husband she’s never again relaxed. She has to do everything for him and worst when the children are born, she has more and more work to take care of them.”

Feeding of the family and following the development, nutrition, growth and health of children: women usually wake up very early to cook for the family and arrange that that food will be enough for all of them for breakfast and lunch; they cook again in the evening. “Well, if we don’t cook, then our children doesn't have anything to eat, so we always cook; we don't get tired of it because we’re already used to it”-says Doña Francisca. Nevertheless, I was visiting Doña Virginia once that Don Patricio was on trip and she told me: “now that he's not here I can be lazy of cooking; then I

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<sup>13</sup> *Aguayo* is an indigenous cloth weaved with sheep wool by women.

only cook once a day and I store it for lunch and dinner". She also describes that Don Patricio helps her peeling potatoes while she is making the rest of the dish. She says he's one of the few men that know how to cook at least rice and pasta soup. Doña Candelaria adds: "In my case, my husband cooks for me only 2 or 3 times a year".

It could be that due to feeding is women's principal role I could also observe a physical separation of spaces regarding this issue during communal eating times. When there are meetings or workshops in the community, at midday it's common to organize a eating together called *ahjtapis*<sup>14</sup>. Everyone opens her or his bag of "*sama*" (snack) and puts it in the middle of the room in a circle (there's usually a woman that opens her *aguayo* so that everyone can put the food over it). So then, women usually sit on the floor close to the *aguayo* and men remain standing in an outer circle or besides the women's circle and crouch now and then to pick up food (see picture below).

**Picture 2.5 Women and men separation of spaces**



Women are also responsible of weighing and measuring their children with the nurse every month, as the government has a close control of the malnutrition of children in all Tapacarí Province. They also attending to school meetings, follow their grades and homeworks, take and pick them up from school every day or arrange the way to wait for them at home.

House work: women make the cleaning of the house and washing the clothes, as well as the cleaning of the children and making the dishes. Only when there's too much clothes to wash, men help the women and usually go to the riverside to wash them.

Doña María comments: "Sometimes men help us, maybe 2 or 3 times a year".

Doña Candelaria complements: "It's because they don't like touching water,

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<sup>14</sup> *Ahjtapi* is the moment of eating together sharing everyone's food

sometimes they don't even want to wash their own hands; they sometimes even want to warm it up before washing them”.

While taking care of the animals and their sub-products: women go shepherding every day of their lives. There are very few women that don't go shepherding as there are very few men that help with the animals. Most of the time in the day, the woman is away shepherding or taking the animals to graze. There's something interesting with children and it is that most of the time the mother takes her children to shepherd with her. Therefore, boys and girls learn how to shepherd and graze. Nevertheless, at some point in the adolescence, males stop doing it, while girls appropriate it as their responsibility.

Women also milk the animals and in some cases if the milk is abundant, they also make fresh cheese with it. Then, they shear sheep and llamas once a year. For sheep, they grab the sheep between their legs and shear them. While for llamas, they need someone else's help to hold the animal while they shear it. When the wool is dry after shearing, the yarn of the sheep or llama is taken in an everyday journey shepherding. There, women spin yarn on a spindle to get wool of different diameters. Women traditionally are in charge of staining the yarn. They dye it with aniline to get different bright colours or with local plants or lichens to get opaque colours. For example, there are lichen that dye to brown; the flower of *kiswara* stains to dark orange; *th'ola* leafs to green, etc.

When the wool is ready, woman warp the wool to prepare the loom for weaving. Women need a pair to do this and usually do it with female relatives, neighbours or friends; if one helps another to wrap is implicitly known that she will get the same help back later.

Women continually weave. They use flexible plastic rods, as well as artisan looms and more sophisticated foot pedal looms. In Chuñuchuñuni weaving is a women task. Men are only seen using the pedal loom. Arminda, the oldest member of the artisan association, explains, “Here, no man weaves because [if they do], people will call him a homosexual”.

Every woman I met in Chuñuchuñuni tells me that from weaving loom they are developing lungs problems. Doña Francisca explains (see picture below):

**Picture 2.6 Women hitting the loom with a llama bone to make it tide**



“It is because weaving is too much work, you need too much strength to hit with the bone). And the problem is that it’s not only weaving in [the context of] peacefulness. While weaving, women must wake up every now and then to watch out for the children, to cook, and to do everything... So [weaving] just makes us get much more tired”.

While chatting with a focus group, on the women reached the conclusion that lung pain could also be due to weaving outdoors over the cold ground, in particular when receiving cold wind on the back. In addition, shepherding could add to their health problems, as they shepherd in all climatic condition, including rainfall, frost, hail, and cold winds. Sometimes they only cover themselves with a sheet of plastic, and if they get wet, anyways they remain out there in the elements until they return home with the sheep at the end of the day. That the women discussed the fact that old men used to weave before, that they also knew how to spin yarn on a spindle and made pants and skirts in former times. Following the arrival of synthetic wool, they argued, men stopped weaving. “But we cannot stop weaving,” one woman lamented, “because that’s what women do while being with the sheep and that’s their job.”

The clothing or handcrafts weaved by women are usually one of the most important income for women of the community. Women can sometimes get 200 Bs for one item, but it usually takes them two weeks to weave it. Some other activities to get income are further explained in Chapter Four.

Finally, when a woman is a widow, when they are single and the father is too old, or when they are married but the husband is absent (some of them are in jail for previous illicit activities), they have to play a representative role in the community farmer’s union and to accomplish a political position (usually a subordinated one) by turns.

#### 2.2.4 Children's Activities

It's been observed that children are copying the activities of their parents. Some examples, which I captured in photographs, are a grown up couple constructing a bathroom in the school (as part as their contribution to communal work) and young kids constructing a *qh'ocha*<sup>15</sup> with mud at the *wawawasi*. The same tasks were observed in both couples: in the grown up couple while the men puts the adobes in the right position and the woman passes him the mud to put the adobes together, in the children's couple, the boy was making a tower with the mud while the little girl was bringing him wet mud (see pictures below).

**Picture 2.7 Don Emigio and Doña Cristina constructing the school toilet and Ruben and Lizet constructing a mud kitchen**



The other two examples are observing little girls taking care of sheep as their mothers do and learning how to load their little *aguayos* since they are very small (first with only their stuff, but later on with dolls and then with children) (see picture below).

**Picture 2.8: Lizbeth taking care of a baby sheep, Bertha and Dionisia (and Alex in the *aguayo*) practicing to load their *aguayos* first with dolls and then with their younger brother**

<sup>15</sup> A *qh'ocha* is the place where women cook, it's like a square with a whole made of mud.



While adult males and females both play football, men and women do not play sports together. In contrast, I observed boys and girls freely playing football together at school (see picture below).

**Picture 2.9: Alexia and Bertha playing football at school**



Doña Francisca tells that when she was at school they also used to play *paloma* (pigeon): “Girls were allowed to play *paloma* at school, and actually, we were better than boys. We made competitions many times and in all of them we were the winners.”

Doña Francisca that is the *wawawasi* teacher comments:

“It must be that the parents think that the children become rebels at school, because they don't want to send women to the *wawawasi*. I've asked them why is that and they've answered me that there's no reason to send them to

study and that if they do they think girls will get pregnant or will return home with a husband already”.

Doña Francisca explains that parents are crazy and that little girls are not yet thinking of having a husband or kids. Nevertheless, when kids enter into adolescence, they start flirting and searching for a partner, but that’s completely normal. Even Doña Francisca doesn't remember that she got pregnant at school. I assume that the fundamental problem is not flirting, but the absence of sexual education as well as the absence of available contraceptives for controlling pregnancy.

### 2.2.5 Physical separation of space

In this community, there is not only a well established sexual division in work, but people also experience tremendous physical separation. Great space separates people during public events, for example in the rooms of meetings, during meals, as well as celebrations. I’d like to share what women think about this issue.

**Picture 2.10: Separation of spaces in room meetings**



Women agreed among themselves that they like sitting on the floor, where they feel comfortable. They explain sitting on the floor as part of their tradition and that they are used to.

“It depends on what someone is used to, right? There are very few women used to sitting in a chair, so they sit there [on the floor], while most of the men are used to sitting in a chair, that’s why they sit there. They [men] feel it’s more comfortable in a chair, we [women] don’t”.

In reference to the common practice of sitting in a group at the back of meeting rooms, women explained to me that they remained at the back because they were used to not being taken into account during meetings.

“When we participate, they laugh at us. They discriminate us or they even quarrel with us for taking the floor [of discussion]. Therefore, we prefer to

remain at the back [of the room]. There we can chat together, laugh, gossip a bit and criticize what the men are saying.”

When discussing further on discrimination, the women add further details. It starts when the affiliated (formal representative) is only the men of the family and not the family as a whole, or the couple as a family. For this limitation, men almost never can be absent in the farmer’s union (union) meetings. He can only send his wife three times in the year replacing him. If it happens that the wife is there more than three times, she is not considered present. She is not allowed to comment, but she is asked to vote (for not losing the vote of her husband). Nevertheless, the family will receive a fine because the husband was not present at the meeting.

“Men don't value the presence of women in their meetings”, says Doña Francisca. “I don't know what they are going to do now that there’s a discrimination law, which states that the woman have to be receive the same rights as men”.

Finally, Doña María refers to one more example of discrimination:

“Have you seen how men of the community treat the councilwomen? Even if she is in a important political positions they (men) treat them as little kids, arguing that she’s not well informed or that she doesn't know what she’s talking about or how to do things well”.

During my observations I could see that in a meeting Doña Francisca was the only one participation in front of the farmer’s union meeting. It was clear, however, that her interventions were not very well received. Upon speaking, the village authorities stopped her many times asking, “Have you already finished?” She demanded attention to concerns that were not on their (men’s) agenda, such as the improvement of the *wawawasi*. The general response was that her concerns were not immediately relevant and could be discussed at the end of the meeting. Nevertheless, that time never arrived. I don't know if her intervention is related but, after the first time I saw her in the community meeting, the week after I went back to the community, I found her with a black eye. She said she fallen off, but others explained to me that everyone in community knew that she had been beaten by her husband, Don Raúl.

## CHAPTER 3. LIFE-WORLDS OF FIVE UNIQUE WOMEN

### 3.1 Introduction

In this chapter I'll introduce one by one the five women I studied and my experience during two focus group discussions. Introducing their life-worlds the reader will be able to understand the uniqueness of these five women and describing the focus group discussions, the reader will get in touch with the variety and huge contributions of the interaction.

As mentioned in the methodology, the ethnography observations allowed me to pick up the data as it is, from the real life of these five women and from their own language. Only then, I was able to make a following approximation and interpretation of their practices to fit in my research topic.

Regarding the focus group discussions, as mentioned in Chapter one, I carried out two sessions (from 5 to 7 hours) with women (and few men) from Chuñuchuñuni: the first one with 7 women and the second with 16 women and 4 men. During the sessions, I presented the practices collected from the five women with pictures and stories elicitation. The objective was to make a collective reflexion of the data to complement and enrich it. Additionally, this methodology was fundamental to evaluate my correct understanding of the information I collected so that later on I could use it to relate it with the objective of my research.

### 3.2 Five Life-worlds

#### 3.2.1 Doña Virginia Espinoza

Doña Virginia is 28 years old. She is married with Don Patricio Mamani, a 33 year old man from Chuñuchuñuni. She was born in the Community of Sapanani (North of Sacaba, Km 8 East of Cochabamba). She met Patricio when she was 18 while she was studying her 6<sup>th</sup> year. Patricio was studying for the seminar in a priest's school next to her school in Quillacollo (13 Km West of Cochabamba). After they met, both of them stopped studying. At the beginning of their relationship, the first 5 years, they lived with Patricio's parents in Lacayani. After that, they constructed and moved to their own house in Chuñuchuñuni. They had a baby girl, Sandra, that died, before she was three years old, of a very strong diarrhoea that killed her in 3 days. Doña Virginia suffered a lot due to her lost, but short after her deceased she got pregnant again of a boy, Jhony Iván. When Jhony was 3 she got pregnant again of a girl, Yolanda.

Jhony Iván is now 5 and Yolanda is only a year and 8 months. Her son was going to *wawawasi* in 2010, but since the academic year started in February, he is attending to the first year of school. *"He's a good student"*, Doña Virginia says proud of her son's intelligence, *"he's been compared with the rest of the kids many times, as him doing the homework better than the rest"*.

Doña Virginia studied in the school only until her 6<sup>th</sup> grade, and she didn't manage to study longer because she got pregnant from Sandra.

Picture 3.1 Doña Virginia Espinoza



A normal day for Doña Virginia starts at between 4 and 5 in the morning, when she wakes up to prepare the food for Don Patricio and the kids. *“In the mornings I usually cook ‘wet’<sup>16</sup>, because ‘el Patricio’ doesn’t like to eat dry in the mornings.”* She gives more detail, “once a year we kill one llama and then we cut the bones in many small pieces, then I dry them and I use one piece every morning to prepare the soup, to give flavour, I put potatoes and any

vegetable I have”. That food serves as breakfast and the remaining is taken as a *“sama”<sup>17</sup>* to be eaten at midday.

After cooking, Doña Virginia eats with Don Patricio and then, wakes up Jhony, gives him food, tidies him up and sends him to school. Then, she wakes up Yolanda, gives her some food, takes her in her back, and takes the animals out of the corral. While the animals stretch a bit she tidies the house, the kitchen or washes the clothes. Finally, she gets ready to leave. She goes shepherding until 5 or 6 pm, and when she’s back, she cooks again for the dinner. After cooking she gives food to Don Patricio, Jonny and Yolanda, and then she eats, and puts the kids to sleep. She usually finishes that daily journey at around 11 pm, when she can finally go to sleep. Sometimes, before going to sleep she weaves a bit, either for her, for the kids or to help Don Patricio with some of his work.

“It’s better to have daughters, instead of having sons” she says. The reason of this, she says is because daughters will always help you and will be with you all the time, while sons are rebels, they don’t want to help and they’ll prefer to be playing with kids of their age.

Doña Virginia has a strategy to gain some days ‘free’ from shepherding. She alternates the shepherding with her *‘comadre’<sup>18</sup>*, Doña Candelaria. Therefore, she shepherds one day (her cattle and Doña Candelaria’s one) and the other day she can do something else like washing the clothes or weaving loom, while Doña Candelaria shepherds for her. She comments: *“I could weave one item per month before, to sell it with the artisans association. Now that same item probably takes me a year. Now Patricio is the only one that weaves, I just help him with the warping”*.

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<sup>16</sup> She refers to cooking soups

<sup>17</sup> Sama is the quechua word for picnic

<sup>18</sup> Fictive kinswoman literally translated as a co-mother

Don Patricio, besides weaving, is the president of the Artisan's Association called *Arte Andino*. From that activity he earns 1200 Bs per month, which is the family's more important income. For weaving each mantilla he earns 60 Bs and, depending on his time, some months he manages to weave from 5 to 12 mantillas.

When Doña Virginia talks about her idea of feeling vulnerable, she expresses her worry the amount of work she has as a woman.

"It was easy, you know? When I was single... now it is complicated having kids and husband. You never have time, there are so many things to do all days and you never finish". She is also worried about not knowing about contraceptives methods. "Women, we, suffer from having more and more kids and we don't know how to protect us from not having so many".

The second thing she sees as the factor of increasing her vulnerability is the exposition of her body to cold, rain, wind and thunders while she shepherds.

"It is hard, you know? There is not an option for us though, we have to shepherd every day and that means doing it in rain, wind, cold or any weather condition. We also know that any day we could also die due to a thunder, that's the risk we are exposed to".

That is why Doña Virginia and Don Patricio are trying to move out from Chuñuchuñuni. Some years ago they bought a land in Sipe Sipe (25 Km West from the city of Cochabamba), and they are constructing little by little.

"This year we used all our savings in the structural work of our house in Sipe Sipe. We want to see if Yolanda's godmother can help us with the fine construction... she said she was going to help us, we'd need around 5000 Dollars for it".

Two years ago, there was a student from New Mexico that arrived to the community for doing her thesis, and Doña Virginia named her (Melissa) the godmother of Yolanda that was growing in her belly. During the time of my fieldwork Melissa arrived to Cochabamba, and Doña Virginia y Don Patricio asked her for help in the construction of their house. Unfortunately, Melissa rejected helping them. Therefore, Doña Virginia went back to her tide way of living to save as much as possible.

"We'll manage, maybe in a couple of years. Don Patricio brings his entire salary to me, he only spends what he gets for viaticum per diem, and the rest I can administrate. I buy very little food and the rest I can save for the house... we plant more potatoes then."

Another reason to leave closer to the city is because, Don Patricio and she want to give Jonhy a better education. Doña Virginia always refers to the education of her kids and she believes in Chuñuchuñuni they won't get the best education they could get.

The last example she gives referring to her vulnerability is related to her participation in the organization. This year (2011) she was elected as the leader of the women communal farmer's union. But, since the elections, they didn't manage to organize anything among women.

“Medicus mundi promised to organize us, and to help us with some training, but they promised to come one day and didn't accomplish their promises”. She doesn't believe it will be worth investing her time in the organization anymore. “No one takes us seriously; husbands won't let their wives pay too much time for the organization, and in the end we won't reach anything from organizing meetings”.

Don Patricio recalls the time FHI (The Hunger Foundation) was in the community, and he says it was the only moment women organizations succeeded, and that it was only because they could get something in exchange from her attendance to the meetings, either, vegetables, flour or grains.

When Doña Virginia explains what she understands for climate variability she talks about three different things. Firstly, she talks about the amount of greens<sup>19</sup>.

“There are not greens. The animals are very hungry as they don't have anything to eat. There's not even enough food in the river side. It is of course, because it hasn't been raining like previous years. We usually had a lot of greens for this time of the year (early December)”. Later on she added, “We almost didn't have any rain in January either and February it's been crazy, too much rain. Previous years were not like that. We had little rain from November till February”.

Secondly, she talks about the amount of ice rains: “Ice rains started earlier this year and we had many already, not like previous years that we had 3 or 4 in all the season”. And thirdly, she talks about the amount of water for the cattle.

“In previous years there was like a flooding area behind the `loma´ so we could take the animals there to take some water. That place never dried out, but lately it's been completely dry, so we cannot take our animals there anymore. We have to go farther away to the river or to stay close to the community so they have water in this flooding area”.

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<sup>19</sup> All woman refer to greens as the food for animals in the hills

### 3.2.2 Doña Francisca Coria

Doña Francisca is a beautiful 22 year old woman. She was born in Challa Grande, a town that was part of the Ayllu Urinsaya until 2003. After that year, due to an internal fight, it became part of Ayllu Aransaya. Doña Francisca's mother died when she was very little, as she got pregnant again and died shortly after the birth, together with the baby. After her mother's death, her father decided to go back to his parent's house. Therefore, Doña Francisca was mostly risen up by her grandmother.

Picture 3.2 Doña Francisca Coria



Doña Francisca was married to Raúl Franco. They meet each other at school and started going out since then. Doña Francisca got pregnant when she was 16. The first baby they had is Lizbeth, who is now 5 years old. Even with the baby, Doña Francisca continued studying. She explains how she managed to do it:

“I contracted a little girl, she was 12, and she looked after my baby. She stayed with her when I was at school, and she also helped me in the little store we had when I was back home. That's the only way I could've done it”.

She continues “At school no one noticed it. Not even in my house, my father didn't realize. Only when I was 7 months pregnant I had to give a Physical Education exam and the teacher realized I couldn't jump. Then, they realized, but fortunately it was already at the end of the year. They told my father, and so he told me I should go to live with Raúl. We rented a little room close to school and opened a little store. I had my baby in January so I was ready again when school started in March”.

She continues “Before starting the new academic year, Raúl and I got married on the civil way. We went to the director of the school with our certificate of marriage and told him we were living together, married and had our baby; he answered that there was not a problem, that we could continue studying. It was different with my friends, many of them were pregnant and as soon as the

director got to know it he didn't let them continue with studies. We were lucky”.

In their last year, Doña Francisca got pregnant again.

“No one noticed it again, I was travelling in my graduation trip with 7 months pregnancy and no one knew. That was already in November and school finished shortly after that. So, I managed to finish it without any problems”. Christian is now 3 years old.

The *wawawasi* in the community was inaugurated in August 2010 and Doña Francisca started to work as a teacher there since September.

“The first teacher was René, the youngest brother of Don Patricio, but he couldn't stand it even a month, that's when they called me to take care of the children. They called me because there is not many persons in the community that graduate from school”- she explains, - and the teacher needs to be a graduated - .

A normal day for Doña Francisca starts at 5 am. She wakes up to cook for Raúl. After cooking she gives powder milk to her baby sheep with her mother in law. She wakes up Lizbeth and Christian and prepares them for the *wawawasi*. They go there at about 8 and have breakfast with the rest of the children. Arminda that cooks in the *wawawasi*, also prepares a meal for 11. In that break, Doña Francisca runs back to her house to give barley and oat to the donkeys, and the mothers' sheep that stay at home with their babies. At around 3, when the classes are finished, she goes back home to weave or reaches her mother in law to shepherd for the rest of the afternoon. At around 6 she goes back home to cook for dinner for Raúl and the kids. After giving food to them, she puts them to sleep and goes to sleep as well.

So, Doña Francisca is the *wawawasi*<sup>20</sup> teacher and Don Raúl is a farmer. Besides teaching Doña Francisca also cooks now and then for the community meetings or for meetings of the artisans association. Don Raul also sells his labour force in farming, construction, etc in order to get any extra income.

The day of Christmas Eve, Don Raúl went to shepherd the sheep while Doña Francisca stayed at home to finish weaving her loom. Around 11 in the morning, the sky started to thunder really loud. Doña Francisca heard the thunders and had a bad presentiment. She was always scared of thunders. I remember the second day I accompanied her at the *wawawasi* to spend the afternoon with her after classes. We were *'pijcheando'* while looking after the sheep and the sky started thundering. She was completely freaked out. She repeated all the time that I should go back

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<sup>20</sup> The *wawawasi* is the day care centre for children below five years old (from 2 to five years in Chuñuchuni).

home, or I was going to get caught by a thunder. At the beginning I thought it was because she didn't want to be interviewed, so I asked her, but she replied she was always scared of thunders.

As if her fear worked like an attractor, a thunder was the reason of the lost of her husband. That morning, Don Raúl was in *'la loma'* with his mother and nephew Santos. The rain was going to start and Don Raúl thought it was better to run to a closer hill to get protected from the rain. His mother shouted at him not to run that it was better to remain bent with a plastic just where they were. But it was too late; he started running already and in that precise moment a thunder felled down over him. Santos started shouting and crying his name and tried to wake him up. But Don Raul didn't react. Then, Doña Felicidad, Raúl's mom, stopped Santos and explained that when I should thunder falls down to somebody, it's better not to touch the person, to leave them quite, and that in those cases the person can sometimes wake up after some hours as if nothing would've happened. Nevertheless, Don Raúl didn't wake up again. They took him to the church and let him there alone and locked the whole night, but the day after he didn't wake up either. Then, they took him to the cemetery and cried for his lost.

"It's Doña Francisca's fault", the women of the community were saying, "she is too lazy, she never goes to shepherd her sheep, she was always sending him to shepherd, she was not a god wife". When I heard this comment I answered, it is true she doesn't like going shepherding, but if she was there instead of Don Raúl, maybe she was going to die instead of him. To that they answered, "That's true, we women are always in risk of dying by a thunder, when we leave home in the morning we never know if we are going to come back, but for being lazy she lost her husband".

Now that Doña Francisca became a widower everything changed in her life, she avoided to talk to me for more than a month. But after that, she threw away all her worries. She didn't know what to do or where to go. The thing that worried her mostly was that if she'd find another man it would be a danger for her kids.

She explains, "I know I'm young, but I can't get another man, because I don't know if he'll love my kids. He can hit them and I don't want that to happen. My girl can also be in risk because he can violate her. That always happens with step fathers, as soon as they get drunk, when they are not their kids they can do whatever especially to woman."

Before the lost of Don Raúl, when she talked about her vulnerability she referred to her education.

"They say that the government will start asking for teacher with tittles for the wawawasis. I'm only a graduate, so I'll have to study. Don Raúl will also study with me, he wants to be a physical education teacher. There's no way to save with farming, that's why my husband and I have to sell our labour force in any opportunity to get some extra income to save. As soon as we have enough, we

are going to go to study”. The other issue she was always raising was the collective gossip from women towards her. “I am teaching their kids and I know they always criticize the way I do it, but they never tell me anything in my face, that’s something I hate. I also know they envy the way I cook, they’re always jealous because they always ask me to cook and they don’t ask them”.

During my time in the community I never heard a bad comment on Doña Francisca’s way of teaching. In the contrary, the mothers were telling me that their kids loved Doña Francisca and that they were happy for that. Nevertheless, it is true that they were gossiping around about her cooking.

“The only problem of Doña Francisca is that she thinks that we don’t know how to cook and that she is the best cooker of the community. When we had a food fair, she really did her best, while we didn’t have enough time to prepare too much, so she was awarded. Since then, she is always saying to everyone that she is the best cook and that we don’t know how to cook. That’s not true, she is to sober, she should be more humble”.

Another aspect of vulnerability she was raising was about the possible lungs problems she was going to suffer due to weaving loom. *“All women have problems with their lungs due to weaving the loom”*. At the beginning I didn’t understand this comment so she explained to me better. *“We don’t know very well why it is, but we think it is due to the hitting we have to do with the sticks when you make each line very tight, then, the shaking of the arms every hit brings lungs problems”*. She was not the only one giving this explanation, all of the women I asked, answered me the same. But, I don’t find that this reason fully explains their lungs problems. Through my observations I was able to see that when they weave loom they usually do it for around 7 hours, seating on a stone, with their backs facing all weather conditions: rain, cold, wind, etc. and Chuñuchuñuni is an extremely cold place.

The last thing she was always complaining about that from her point of view made her more vulnerable was the fact that women were not heard in the community meetings.

“They never listen to me when I give my report every month about the wawawasi. Besides that, they promise me things they never do.” For example, two months ago I told them the raining season was starting and that our roof in the wawawasi was plenty of holes. They said they were going to program a communal day of work to repair it, but they didn’t. Last month I reminded them, and they said they were all going to go to the wawawasi to repair it after the meeting. But they didn’t. It seems they don’t notice that their kids are there, not only me”. “In this community, men don’t give importance to women in the organization. But in my community (Challa Arriba) it is not the same. For example, when a “traditional” authority was elected he always had to accomplish the position together with his wife; they are elected as a couple.

Men protect the production with his Poncho and women protect it with her aguayo”.

Besides Doña Francisca’s comments, I was there in the meetings and I was really amazed by the way she was treated during her report. First of all, she was pushed to finish since she started. The word they used after each point she was talking about was ‘ok, is that all?’. And finally, to all her requests they were answering ‘ok, we will do it later, or we will discuss about it later, or let's see after the meeting’. But, that later was never arriving. I remember after the second meeting I noticed it, when the meeting was over I went to talk to the leader to ask him about Doña Francisca’s queries, but he saw me with a ironic face saying “*what a pity, everyone is already gone*”, even if they were still there.

But of course her vulnerability changed a lot after Don Raúl’s lost. First it was this worry of getting another man who wouldn’t love her kids. Second, was her uncertainty of not knowing where to go. I asked her if she was going to go back to her town, Challa Grande, but she said that only her grandmother was still there.

“No, I’d love to, because it’s a more productive region, but what am I going to do there with her that only shepherds every day?” I don't know if I should stay here either. It is his parent’s house, not mine. We were constructing our own house next to the wawawasi; maybe I should finish it and move there. Or maybe I should go to the city with my father. He offered me to help me to study and look after my kids while I study. But I don't think I’ll study for wawawasi teacher anymore. I want to study computers. I guess I’ll stay here for one more year, because I cannot leave the children of the wawawasi without a teacher. Then, the community will have to find another teacher for next year”.

And the final thing she mentioned as affecting her vulnerability was: having to participate in the organization.

“Now that he is not here anymore, I’ll have to participate in the men’s meetings. But they never listen women, so it will be as I wasn’t there. I won't participate in any position, because I think is useless”. Nevertheless, Doña Francisca was elected as the acts secretary for the women's communal organization. “We always have a hope, though. We always think that the women's organization will do something for our god. But it’s only hope, because I don't believe in the organization. This year (2011) it seemed Medicus mundi was going to help as to get organized, but you see, they didn't come when they said they would.”

When Doña Francisca explains what she understands for climate variability she talks about three different things. Firstly, she compares the amount of thunders of this year with the ones of previous years. “I think only 3 or 4 years ago it was the same as this year with so many thunders,

because last years it was not like that”. Secondly, she talks about the amount of greens. “There’s not enough food for the animals because there are not greens. It is because the raining season arrived later this year, it only started raining in late January, so we hope it will also last longer”. And thirdly, Doña Francisca complains about the intensity and size of ice rains. “Previous years’ ice rain was not that heavy. This year, it is very strong, the size of each ball is bigger, and the frequency is more often”.

### 3.2.3 Doña Maria Franciscano

Doña Maria is a 42 years old woman, mother of 2 boys, a teenager girl and a small girl. She was born in Chuñuchuñuni and studied only until the 2<sup>nd</sup> grade in the community school. She is married with Don Valerio Rodriguez, the current communal leader. She got married when she was 16. Their family is in consolidation because they don't depend anymore on their parent’s economy and live on their own. Her youngest daughter is Elizabeth who is 16 years old. After Elizabeth she has 2 boys, Iván and Wilson. After the boys she got pregnant again. They had another boy, but after 3 days the baby died and they never knew the reason.

#### Picture 3.3 Doña Maria Franciscano



Don Valerio explains, “I was here for the birth, then, I had to travel and it took me 3 days, the bay died the night before I came back, so he was dead already when I returned, we don't know why, maybe he was missing me too much”.

When Doña María and Don Valerio were married for almost 10 years, he cheated on her and disappeared with another woman from the community (Elsa) for almost a year. At that time Don Valerio was the president of the artisans association and he was organizing expositions of their products around the country and outside it all the time. And of course he usually took artisans with him to show how they weaved the loom in the expositions. So in one of the trips, he felled in love with Elsa and decided not to come back to Chuñuchuñuni.

After a year, Don Valerio convinced Elsa to return to the community. When they came back Don Valerio went back to his old family. Elsa was pregnant but Don Valerio couldn't visit her or the baby girl (Daisy Eugenia) because when Doña Maria forgave Don Valerio, she put him the condition that he shouldn't visit Elsa anymore. After their reconciliation Doña María also got

pregnant, they had Melisa, who is now 5 years old. When Daisy Eugenia was born Don Valerio didn't give her his last name, but everyone knows in the town, that he keeps on visiting Elsa and the girl. Doña María now pretends to be blind to it and never talks about it.

Doña María used to have a lot of sheep, but since the betrayal, Don Valerio gave her another activity, so that she wouldn't have to be away shepherding the whole day every days. "Shepherding is a real waste of time. Imagine, you are every day of your life shepherding, you can never have a break, you are there even with rain, cold or any weather condition, and you only can make 200 Bs. in two years", Don Valerio comments. He refers to one sheep that can only be sold after two years of putting on enough weight. But she doesn't realize that they don't shepherd only one sheep, they rest of the women in the community usually shepherd around 50 to 70 sheep, 3 to 5 donkeys, 15 to 20 llamas and a couple of cows or bulls. Which after 2 years can be valued for more than 25 000 Bs.

So now, they only have 4 sheep and a couple of llamas that can perfectly graze in their back yard. They also graze in the "loma" when, some days, Elizabeth goes shepherding with her aunts and therefore takes the family animals with her.

A normal day for Doña María starts at 5 in the morning, when she wakes up with Elizabeth to cook. After cooking they eat with the family and then the boys get ready for school. The youngest one is still in the school in Chuñuchuñuni and the older one go to school in the public school bus to Pongo (half an hour to 45 minutes by car, depending on the rain that damages the road which is only of soil). Later on, Doña María remains at home, cleaning the dishes, washing the clothes, and doing the entire house work. She also takes care of the selling in their store as it is in the same house. Sometimes she weaves the loom for Elizabeth (if she's gone shepherding) or she weaves hats with sticks.

In the afternoon, at around 4 or 5, Elizabeth is usually back to help Doña María cooking. They prepare the dinner and eat with the family at around 7. When the dinner is finisher, Doña María puts Melisa to bed and the rest usually remain awaked chatting 10 when they all go to bed.

After Don Valerio was back to Chuñuchuñuni, after the betrayal, he stopped his participation in the artisans association, so they didn't have any income. Therefore, Don Valerio learnt from a friend how to sew police uniforms and police weapons coverage. Then he taught that to Doña María and they started to receive orders from the police to sew around 50 items a week. They had more and more work every time and worked really hard for around 3 years. After the 3 years, Don Valerio got tired and decided to rest for a year or two. The moment I got to know them they were starting their 2<sup>nd</sup> year of rest, and while they were not sewing they decided to open a little store.

The store is in the first room of their house. They sell all kind of sweets, cookies, dry groceries, etc. On Saturdays, they put all their products in their car and take them to the market in Pongo. Doña Maria tends an 'aguayo' on the floor, places her products on it, and sell all she can the whole day. They do the same on Tuesdays when they go to another market in Confital and on Sundays to the

market in Challamayu. They say that is a big effort to try to sell in all markets and that there's a lot of competence. But anyways, they manage to earn around 500 Bs. a week.

Besides the store, Don Valerio is still taking care of the land as a farmer. They cultivate potatoes, oat, barley, papalisa and oca. "I don't understand why Don Valerio doesn't allow Doña Maria to have sheep and why he doesn't want her to go shepherding; how are they going to keep producing potatoes if they don't have guano anymore?", comment the women of the community, "They won't have wool for their `pullus'<sup>21</sup> either", they add. In the first encounter with Don Valerio he started explaining how he does his farming without having animals, as he knew the gossip around the community.

"I arrange everything with Minka", - he says -, "To prepare the land I borrow the bulls of my brother and father and in exchange I take their guano to the land in my car. I also help other friends taking their guano in my car and in exchange they give me a bag full of guano...and if I don't have enough I buy more guano in Pongo".

When Doña Maria talks about her vulnerability she mostly refers to the collective gossip from the people of the community. She hates when the people are controlling all her steps, and Don Valerio's steps. She never listens when they come with the gossip that they saw him taking to Elsa or when he visits Daisy Eugenia in the wawawasi. She says she cannot live in peace with such a lot of social control. In the other hand, the gossip about Don Valerio not letting her shepherd, she doesn't mind. She says "yes he doesn't want me to go shepherding and as we got rid of our animals he has to see how he does to do farming, because we have to keep on eating, you know?"

Another topic she refers to as increasing her vulnerability is the hard weather conditions for shepherding. She always remembers those days of shepherding as the toughest days she lived. She attributes those days as the ones giving her bad health. To be shepherding in rain, cold wind and froze gave her some problems with her lungs. She also attributes weaving the loom as the responsible of her lungs' problem. "All women that weave the loom have lungs' problems, that's why now I only weave to help Elizabeth, she is still young to weave", she says. She says she only weaves to help Elizabeth, but from what I observed, she weaves all the time she is at home, while she attends their selling store. She is not subscribed in the artisans association, tough; that's why only Elizabeth can sell her products there, even if they're mostly weaved by her mother.

When Doña María explains what she understands for climate variability she says she notices that this year is completely different as last year. "It's very different because this year in Christmas everything was still very dry". She attributes it to the climates changes, because she says they are many climates. She probably listened to the terminology and she uses it as she understands. When I ask her what she refers to the many climates, she explains: "Here we really live climatic changes,

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<sup>21</sup> Pullus is the Quechua word for blankets made from sheep wool.

because they are various climatic changes: when we have rain, when we have hail, frost, then it can suddenly change to draught, winds or many other climatic changes”.

### 3.2.4 Doña Albina Casilla

Doña Albina is a really active 33 year old woman and a single mother. Her father is from Chuñuchuñuni and her mother from Condoriri (a very close community). Her daughter is called Herminia and she is 5 years old. Doña Albina got pregnant when she was 28. Because her house is in the hill in front of the community at that time, she moved to the house of an uncle to attend school in the grownups classes. In the same house, her uncle was hosting another young boy that was also attending to school. This boy was only 14, and that year he left Doña Albina pregnant and one more girl from the town. He recognized the babies and gave them his last name, but latter on that year he left to his own community. Due to the pregnancy Doña Albina stopped studying, so she only achieved until the 8<sup>th</sup> grade.

#### Picture 3.4 Doña Albina Casilla



Doña Albina’s father is a 60 year old farmer and he is losing his sight. He attributes it to the use of pesticides. “We’ve used pesticides for around 5 years until I started feeling my eyes where leaving me”, he explains in a very rough Spanish, as he speaks mostly Quechua. “Even if I stopped using them 3 years ago, my eyes haven’t come back<sup>22</sup>”, he continues.

Doña Albina’s mother is 62 years old. She usually stays very close to her house to shepherd their sheep and graze their donkeys, llamas and cows.

Doña Albina lives with her parents and their home is restructuring because the oldest son has already gone to live on his own. They were only 2 kids, so now Doña Albina and her daughter are the only ones remaining at home.

A normal day for Doña Albina starts at 4 in the morning when she wakes up to cook for the family. Later on all eat and then she prepares her daughter and sends her to the *wawawasi*. After that, with her mother, she takes the animals out of the corral and cleans the dishes. Afterwards, some days she helps her mother shepherding and grazing, other days she helps her father with the

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<sup>22</sup> He refers to his sight

farming activities, or another days she goes to the river to wash the clothes. After 3 pm, she usually walks to the town to encounter her daughter from classes and go back home. They cook again for dinner, eat and put her to sleep. Most of the times, Doña Albina remains awaked until midnight weaving the loom and only after that she goes to sleep.

When she works with her father they farm in Chuñuchuñuni, or in Condoriri. When they farm in Condoriri they wake up at 4 in the morning, cook fast and leave at 5, as there 's a long way walking to Condoriri. They work there until 4 pm and walk back home. In Condoriri they're able to cultivate some vegetables and crops, like corn, wheat, carrots, onions, and spinach among others, while in Chuñuchuñuni del can only cultivate potatoes and oat, due to the lower temperatures.

Economically Doña Albina earns a bit of money only from weaving. She usually weaves 2 `chuspas'<sup>23</sup> a month and that represents 180 Bs. To weave them she works every night of the whole month, and sometimes even an extra day or two that she stays at home weaving instead of helping her parents.

When Doña Albina talks about her vulnerability she only refers to the farmer's union and the organization. As her parents are too old, she is the one of the family who is affiliated. Therefore, she is obliged to attend to the meetings every month, to accomplish a day of communal work every two months and to assume a position in the farmer's union' directory when the turns say it's her time. But, as she is a woman, she is never taken into account, and usually her participation is a source of laughs and mock. "I hate when they say that woman should not participate because they know nothing. I hate when they say we should remain silent because we don't understand how things work".

In addition, she complains that whenever she has to execute her turn in the directory of the organization, she has to obey the position they want her to take and that she can never choose. For example, first she was chosen to be the recording secretary while she says she doesn't know how to write well enough. Then the last election, she was elected to be the health secretary. That role was supposed to make her attend to trainings about occidental first aids and to coordinate with the nurse of the health post of Huayllamayú.

"I don't want to do that, because I don't believe in that medicine. I've never been to the doctor or to the post and I never will. But, I have no option, they just order me and therefore I have to obey. Of course that means I have to avoid the position for one year don't showing up for the trainings, etc because I won't do it."

When Doña Albina explains what she understands for climate variability she talks about three different things. Firstly, she says there're no greens for the animals due to the lack of rain. She compares it with last year's amount of greens. "Last year it was already raining from November,

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<sup>23</sup> Andean bags

October, so for early December everything was already very green. Therefore, the sheep were not dying of starvation. Secondly, she says she hasn't been able to cross the river to go to the market, or that she's been getting completely wet the whole February while trying to cross it". "The other years the level of the water in the river was only high shortly after the rains, and afterwards you could cross it, but this year almost the whole month it's been very high". And thirdly, she talks about her crops and greens being taken off by heavy rains. "Sometimes the rain is so intense that it removes pieces of hill. The whole soil gets off and then there's only rock. Some other times even the potatoes get off with the rain if it falls down when they are still too little".

### 3.2.5 Victoria Franciscano

Victoria is a young 18 year old woman. She's a student of 1<sup>st</sup> of secondary (9<sup>th</sup> grade) in the boarding school run by nuns in Pongo. She was born in Chuñuchuñuni, the town where both of her parents belong to. She is single and still has no kids. The family she is part of is restructuring, because her older brother and sister are already gone to form their own families. Despite that, in her house she is still living with two of her sisters and 3 of her brothers.

Picture 3.5 Victoria Franciscano



Her older sister living in the house is Marta who is 24 and the youngest is Sandra, 16. Both of them take turns with Victoria to cook and to go shepherding. Then her three brothers: Pedro 14, Carlos, 11 and Jeison 9, are still attending to school in Chuñuchuñuni. Victoria's mother, Doña Luisa, is 48 and is a shepherd and her father Fermín is 52 and is a farmer. The mother has a lot of help from her daughters for cooking and taking care of the animals and the

father usually works with his oldest son (Fermín, 28), who comes cultivates together with his father for his own house and for his parents house. When the youngest sons are not at school, they also help the father in the land. The oldest sister, Irene (26) is left to another community with her family and she only visits her parents once a year especially during feast days.

Victoria enjoys her life with her parents. "I don't want to get married, because I want to stay living with my mom". The only reason she explains is because she is fine with her mom and that she doesn't want to change. About having kids she says "If I get some money, maybe in 10 years I can have one, to raise it with my mom, the baby won't have a father as I won't move anywhere else".

A normal day in Victoria's life starts at 5 am. The first thing she does is start cooking, or going to collect alfalfa for the animals. She alternates the tasks with her sister Marta, so one day she cooks and the other day she goes to collect alfalfa. At around 7 am all the family eat breakfast and then clean up the house. At around 9 am she gets ready either to go shepherding or to start with her loom. Weaving from 9 to 17 she manages to finish one *camino de mesa*, a piece of rug for the centre of the table, in two weeks. After 17:00 she usually meets again with her sister and mother and cook together for dinner. During the days she doesn't weave her loom she washes her clothes and helps with the housework. "We go together to sow, to ridging, to harvest potatoes, to prepare the land with guano, etc... we always help our father".

Each month, Victoria weaves one *camino de mesa*. From that, she gets 120 Bs, and that's her only monthly income. During school breaks she tries to go to the city to get a temporary job, as a maid or taking care of old people. She also explains that whenever she is in a hurry needing some money she sells her sheep. She only has two sheep that she shepherds with her parent's animals, but every year she has one breeding, and so, when it gets fat enough (in about 2 years), she can sell it. She says she can get around 200 Bs in the Pongo market, when the sheep is well nourished.

When Victoria thinks of her vulnerability, she only refers to the difficulty of getting money. She describes the terribly hard work of weaving the loom for two weeks to get only 120 Bs. She is tempted to find a job in the city and if it's a good one, to stay there.

"When my sister was in the city, she had a very nice boss, she was very lucky. She was selling in a cloths store. Maybe you know from someone that could contract me for 2 or 3 months? I want to work only during my holidays and wish I could finish school, but it depends if I'm also lucky I can stay working for some years and could've money as my sister".

When Victoria explains what she understands for climate variability she says she doesn't notice any change. She says she's been taking her sheep to the same places every year and that the amount of water, rain or grass haven't changed in the last years. Up to what she remembers, they've always shepherd their animals in a very far hill behind her house and she didn't notice any changes in the amount of food for the cattle there. To go to school, she usually takes the school bus, so she haven't realized any changes in the amount of water in the river either.

### 3.3 Focus group discussions

One important aspect to highlight in my research was the contribution of the focus groups discussions for two aspects. One, to add to the existing data collected and second to let me realize the enormous heterogeneity of the women in Chuñuchuñuni and the impossibility to generalize or homogenize their views and understandings of life.

To organize the first focus group discussion, I invited the women from whom I collected the data. Unfortunately, not all of them attended, but the ones present also took some friends with them. The principal objective of this meeting was to socialize the information gathered individually in order to reflect over it collectively, complement it and validate it. It's important to detail that the validation referred to verify my correct understanding of the information I collected.

To the second group discussion I pretended to have a new group between 7 to 10 women but 20 people attended (16 women and 4 men). The organization had two objectives. One of them was a petition coming from the first group discussion, to have a little workshop about contraceptives, sexual and reproductive health arranged for the end of the day. And the second objective was to present the data collected for my research, complement it with new contributions and to classify it in four categories: "I knew it" or "I didn't know it" and "I think I can include it in my practices" or "I think it's not really useful for me".

In the first focus group discussion, it was possible to go deep in the practices, activities and knowledge of the women in their daily activities. Furthermore, it contributed to distinguishing working activities and specific relationships between men and women inside the family in the field and in the community. Because this group was formed only by women, they went deep into private concerns about their difficulty of planning the number of children they'd like to have.

In the other hand, with the second group it was possible to complement the data collected with extra practices, activities and knowledge referred to animal management, distinguishing nature Bioindicators and traditions. An interesting aspect to mention is that the presence of men in the group reminded the women some aspects and practices not mentioned before. They also provided explanations from their outside perspective to the meaning of socio-cultural practices and daily activities of the women that maybe because they're inside, they cannot explain them. Nevertheless, the presence of men in the group had also a negative influence on women that reduce considerably their spontaneous participation.

To the objective of classifying the strategies in this session, the idea was to find which women's activities or recommendations other women didn't know and if after getting to know them they could see them as useful activities that could improve their own practices. To make the story brief I didn't succeed finding out the novel practices that could strengthen women's practices, because we fell into an endless discussion of "what is really useful or useless" and "what is important for some women for others it's completely useless and vice versa".

This experience was very useful to realize that women's practices are not homogenous; they are diverse for each woman and for each of their life situations. Processes of exchange are useful, but categorizing in a group is not recommended, because the group doesn't see the practices from each women's feet but as a generalization that is not fully applicable for anybody. I finally decided to use this moments of exchange as a space for sharing but that later on each woman, as a unique entity, will decide and apply what she thinks is useful for her and probably will include something else she had heard from the rest of her community mates.

### 3.4 Comparative table of the five women and their characteristics

The following table summarize characteristics of the five women and their life-worlds.

**Table 3.1 Comparing five Life-worlds**

| Characteristics / Women                      | Doña Virginia                                                   | Doña Francisca                                                                                   | Doña María                                                                                | Doña Albina                         | Victoria                                                                              |
|----------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------|
| <b>Age</b>                                   | 28                                                              | 22                                                                                               | 42                                                                                        | 33                                  | 18                                                                                    |
| <b>Precedence</b>                            | Sapanani                                                        | Challa Grande                                                                                    | Chuñuchuñuni                                                                              | Chuñuchuñuni-Condoriri              | Chuñuchuñuni                                                                          |
| <b>Status</b>                                | Married                                                         | Widow                                                                                            | Married                                                                                   | Single Mother                       | Single                                                                                |
| <b>Number of Kids (alive)</b>                | 2                                                               | 2                                                                                                | 4                                                                                         | 1                                   | 0                                                                                     |
| <b>Number of Kids (deceased)</b>             | 1                                                               | 0                                                                                                | 1                                                                                         | 0                                   | 0                                                                                     |
| <b>Family Structure<sup>24</sup></b>         | Consolidation                                                   | Formation process                                                                                | Consolidation                                                                             | Restructuring                       | Restructuring                                                                         |
| <b>Economical activity (woman)</b>           | House work /shepherd, Part time weaver collaboration in farming | House work / <i>Wawawasi</i> teacher/ weaver Part time cooker/ shepherd collaboration in farming | House work +selling store and markets+ part time sewing activity collaboration in farming | House work Weaver/ farmer/ shepherd | Weaver/ temporary jobs in the city/ shepherd/ collaboration in house work and farming |
| <b>Economical activity (man/father)</b>      | President of artisan association and farmer                     | Farmer and selling labour force                                                                  | Farmer and sewing activity/ collaboration on selling store                                | Farmer (father)                     | Farmer (father)                                                                       |
| <b>Grade of School achieved<sup>25</sup></b> | 6 <sup>th</sup> grade                                           | Graduate                                                                                         | 2 <sup>nd</sup> grade                                                                     | 8 <sup>th</sup> grade               | Student of 9 <sup>th</sup> grade                                                      |
| <b># of Cattle</b>                           | Sheep                                                           | 16                                                                                               | 13                                                                                        | 4                                   | 35                                                                                    |
|                                              | Donkeys                                                         | 1                                                                                                | 2                                                                                         | 2                                   | 3                                                                                     |
|                                              | Llamas                                                          | 5                                                                                                | 4                                                                                         | 0                                   | 16                                                                                    |
|                                              |                                                                 |                                                                                                  |                                                                                           |                                     | 2 from her and 65 of her family                                                       |
|                                              |                                                                 |                                                                                                  |                                                                                           |                                     | 6 from her family                                                                     |
|                                              |                                                                 |                                                                                                  |                                                                                           |                                     | 30 from her family                                                                    |

<sup>24</sup> Luis Carlos Aguilar (1994): A family in a formation process is a newly formed family which is still attached to the parents house; a consolidation family is a the one that is already separated from the parents house and live by their own; and a restructuring family is a family where the kids are old and already left the house to form their own families

<sup>25</sup> Grade of School achieved is generalized in 12 years (but specifically they are 8 of primary and 4 of secondary education)

|                     |                           |                           |                          |                         |                                                                                      |
|---------------------|---------------------------|---------------------------|--------------------------|-------------------------|--------------------------------------------------------------------------------------|
| Cows                | 0                         | 0                         | 0                        | 2                       | 3 from her family                                                                    |
| <b>Future plans</b> | Move to Live in Sipe Sipe | Move to study in the city | Sew again and keep store | Remain in the Community | Part time jobs in the city or for a couple of years and stay living with her parents |

As it can be seen in table one, the five case studies include women of different age, social status place of birth, economic status, and production system which allowed collecting heterogeneous data regarding their conditions of life and activities. For example, in the case of Doña Virginia and Doña Francisca they were born outside the community, but in communities with similar cultural and farming tradition. Doña Virginia represents a family in which the women's principal activities are shepherding (including the associative shepherding) and taking care of the family. These activities allow her to maintain in touch and with a tight relationship with nature.

Doña Francisca's case, who works in the *wawawasi* of the community since a year ago, she previously represented a typical family of the area accomplishing activities as shepherding, weaving, taking care of the family and helping in the farming activities. At the moment, she keeps her cattle thanks to the support of other women of her family (mother in law and sisters in law) who shepherd her animals.

The rest three case studies are women who were born in the same community of Chuñuchuñuni. Doña Maria's case, the oldest women of my research, her principal activities are taking care of the family and selling in a store in her house and in the rural markets close by. Five years ago, with her husband, they made the decision of leaving the traditional activities to replace them with sources of higher remuneration based on trading, commercialization and sewing garments as alternative activities.

Doña Albina represents the case of a single mother that remains in her parents' home, and that due to the age of her parents, she takes over a big load of the farming, shepherding and affiliation responsibilities. She spends most of her time in those activities and uses some of her sleeping time to weave in order to increase her family income. For her characteristics, Doña Albina demonstrates a strong and brave personality in response to her situation, because she accomplishes activities from her women's role and replacing the man's role of her missing husband and her sick father.

Finally, Victoria's case represents a single young woman that intercalates her shepherding, weaving and studying activities with the house work sharing them with her two sisters and mother. The climate variability and vulnerability context seems not to worry her directly, because due to her age, contact with the school outside the community and a low family responsibility, she doesn't need to assume a primary role to sustain a family.

## CHAPTER 4. WOMEN'S CULTURAL PRACTICES IN THE CONTEXT OF HIGH CLIMATIC UNCERTAINTY

### 4.1 Introduction

In the following chapter, I'll develop women's cultural practices in the context of high climate uncertainty in Chuñuchuñuni. Climate variability and vulnerability are so embedded in women's daily activities that they become implicit. Everyday life activities confront severe climatic risks and socio-environmental uncertainty. Women's practices developed in this context are constantly adapting in endless empirical trial and error experimentation.

The research question stated for the following chapter pretends to document all the practices women have in confronting climate variability to hear for the first time women from the Central Highlands of Bolivia's hidden voice in development policy.

### 4.2 Background

In their study of farmer adaptation to climate, Crane et. al. (2011) introduced the concept of 'agriculture as performance', where practices are viewed as not isolated, but rather seamlessly integrating social and ecological factors. In addition, decisions are taken depending on the need of the moment, improvising spontaneously and enacting "embodied or tacit knowledge, rather than just intellectual expertise". When agriculture is understood as performance it can be compared with a musical analogy. In this sense, women (musicians) interact with their social and environmental world (other musicians), depending on their circumstances, "in real time during the performance of a piece". To compose the song, during the improvisation, the musicians unfold technical subsistence activities and creative skills embedded in biophysical and social circumstances.

As Crane et. al. (2011) explains "in addition to performing agriculture", women "are simultaneously performing their roles as members of social networks and collectivities". Therefore, in order to facilitate the analysis, the results were organized as a function of the women's practices immersed in their daily activities derived from their gender roles (developed in chapter two) and analyzed within the framework of climate variability and vulnerability.

### 4.3 Data sources and methods

The five women representing my case studies, heterogeneous in age, marital status, family composition (Aguilar, 1997), place of birth, conditions of life and type of daily activities, with the two focus groups discussions provided all the material to develop the following analysis. As it will

be observed, they perform agriculture interweaving their social and environmental circumstances to create a spontaneous song that will harmonize with their daily responsibilities and needs.

During the participant observations, interviews and focus groups discussions the activities women follow in their daily lives and the recommendations they give referring to their local knowledge of nature were documented and classified into four categories related to women's roles: livestock management, care and reproduction of the family, farming activities, and traditional and socio-cultural practices.

#### 4.4 Findings: Women's practices in a context of intrinsic high climate uncertainty

##### 4.4.1 Livestock management:

Women's knowledge regarding livestock comes from the "know how" acquired through generations of daily activities and practices of women, working as individuals and in groups in their family and neighbourhoods, in the domestication and care of animals for food, fibre, fertilizer, labour, and land management. Over time, in the context of the Central Highlands of Bolivia, the resultant social organization around routines and practices have led to the implicit understanding that women are to be charged with livestock management.

Picture 4.4.1 Some livestock management activities



For a better understanding I classified their practices into four categories:

- a) The identification of the territory in which animals graze during different seasons is influenced by the wind, temperature, moisture, food availability and the proximity of water for drink. A traditional practice that is limited to some experienced women in the community is the selection of grazing location based on the migration patterns of foxes.

- b) The complementary feeding according to the kinds of animals, their characteristics, their age and the time of the year. For instance, women can easily recognize the type of grass that sheep or llamas like and the place where these grass grow. Additionally, the livestock diet is enriched with barley and oat that people grow as a crop that is part of a fellow rotation system with potatoes. During seasons when the grass offspring arrives late, the livestock diet is supplemented with *collpa* (salt mixed with the remains of the cultivation of barley and oat, other vegetables or *chuño* skin). Besides *collpa*, some women give mineral salts to llamas and organic waste to the pigs.

Special care is given to the baby sheep's feeding. Some families prefer that these animals do not get out for grazing with their mothers but instead, to keep them in the house where they can be fed with alfalfa and oat. When the mothers do not have enough milk for the baby sheep because of the lack of grass, the diet for babies is enriched with corn soup or oat, and in some cases, with milk powder. It is said that during these hard seasons with lack of grass, mothers reject their baby sheep. Therefore, women capture the mothers between the legs and force them to breastfeed the babies in order to avoid their dead.

- c) The treatments to maintain animal's health or to treat animals' illness identifying the different sources that cause them. For example, one way of preventing possible illness among the baby animals is to keep them in the house until they are strong enough to graze in far places, and the other practice is to cover the baby animals with plastic during the grazing in order to avoid them getting wet and cold.

On the other hand, the practices involved in the treatment of diseases and illness is related to the knowledge of biomedicines, beliefs and superstitions that have no explicit explanations. As examples, the cure of broken bones is done through the use of poultices made out of quinoa, egg and urine; animals' diarrhoea is cured by means of tying the tail of the animal to its back, which the people think that the animal will be cured because it will be ashamed that everybody sees it defecating; malnourishment is cured tying the legs so animal cannot move and remains at home saving energy where it is possible to take care of it and provide a proper feeding; the so called "white eye" on sheep is cured by putting them fungus' spores and sugar on the eyes and using cold water to wash the animal face every morning.

- d) The use of techniques for livestock improvement and the treatment of sub products from animals like wool, meat, bones and milk. Women have a genetic management controlling the reproduction of their cattle. For example, the animals' mating season is controlled so that the births happen when the grass is growing again and the frost season is gone. In order to do so, the males are castrated or they are taken to a different community during

half of the year. Donkeys are castrated because as working animals it is needed that they become robust, vigorous and their aggressiveness to be reduced.

Many activities are carried out for the treatment of the animals' sub products, which in many cases help the trading or storage of these products for longer periods. For example, Meat and bones are dried with salt so they can be storage and used during the year for the feeding of the families. From sheep milk cheese is made out for own consumption and sales. This is possible only during years with abundant rain and grass. Finally wool is stained of different bright colours so that the clothing is more striking to the eye.

#### 4.4.2 Women's care and reproduction<sup>26</sup> of the family unit

Regarding this practices, women teach their female daughters how to accomplish these tasks since they are very little, so that they can help them and share the responsibility with their daughters in the overloaded work inside and outside the hose. "When your first baby is a baby girl, it means good luck, the family will have very good luck" (Doña Virginia Espinosa, 2010). When a mother has a female baby as the first kid and express that the family will have good luck, in reality they are expressing their happiness that they'll have someone to share their daily activities.

Picture 4.4.2 Some care and reproduction of the family activities



Practices of mutual help are developed among women consisting, for example, shepherding in association with other woman so both livestock could be taken care by turns. However, the most common activity for sharing work among women is the replacement on the shepherding activities

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<sup>26</sup> The role about the reproduction of the family is related to taking care of the kids, of the husband, feeding the family, all the house related work, and finally giving birth

and other tasks by other women from the same household (mother in law, mother, daughters or sisters).

Some other practices and traditions are also developed in order to facilitate the working load they have. Regarding child care, they used to wrap the children with a tied band keeping the arms close to the body and straight legs. They believe in this way children will have a better growth and that they'll strengthen their muscles, in addition, they sleep more hours. As another example, they extend as long as possible the breast feeding period to ensure proper nourishment, but at the same time, they feed children, since an early age, sharing the same plate with them until they have two years. Even though, this practice reduce the keep-an-eye-on work, it is not possible to be sure on the amount of food each child consume, thus sometimes provokes their malnourishment.

A generalized action is the feeding of children with sheep milk and cheese. Milking the sheep is only possible during two months in the year at the end of the raining season (around February and March). This time corresponds to the abundance of grass so the baby sheep can eat and there is some milk left available for the family. Likewise, other techniques are carried out to store food for longer periods such as the dehydration of potatoes and *oca* (*Oxalis tuberosa*) to use it during the coldest time of the year. Another way to take care of the children nourishment is with the organization to prepare the meals in the school and the wawawasi by turns. Two mothers at a time cook at school with the food provided by the municipality (milk powder, sugar, cookies, rice, noodles, flour, beans, lentils and others) and with potatoes and some vegetables that each student brings every day. Finally, families also take care of the feeding of the school's teachers providing them a load of potatoes monthly by turns, with the objective that they feel appreciated on the community and do not leave their position.

Regarding taking care of the husbands, women keep as a very important obligation to guaranty that food is always available and to offer them meals with the best pieces and the largest amounts. Besides, they ensure their good rest and sleep and do the domestic activities like washing the clothes, house cleaning, taking care of the children, etc.

To obtain water for drinking and cooking, the main source is a communal water system that comes from a wellspring on the mountain which is carried by a piping system to five public taps. Another way to obtain water is collecting rain, but this practice is not as frequent as before due to the communal system appearance. In order to drink water during the shepherding activities close to polluted rivers, women look for small affluent in the hills, dig small holes and waits until the water gathers and the dust sediments, then they drink it.

One of the main women's concerns is the number of kids they'd like to have. A common contraceptive method for family planning is the *Depo Provera* (a quarterly contraceptive injection composed by *medroxyprogesterone acetate*) but it is only provided to women by the Health Centre under the authorization and approval of their husbands.

“I provide Depo Provera to almost 90% of the women in the community every three months, but I can only do so when the couple comes together to ask it to me. Women are not allowed to get the injection alone, otherwise, their husbands believe that they are cheating them and they blame us to be helping them.” Open interview with the nurse of the community, Delbi, October 2010.

A commonly expressed desire among women constitutes the saving of enough money to buy land in the city, build a house and reach, in this way, better education opportunities for their children and stop shepherding. However, this is a partial migration since they keep their membership on the community to continue receiving a piece of land for crop growing.

#### 4.4.3 Women’s practices for income generation:

Women’s perception about the need of income generation to complement the husband income usually comes from two socio-cultural sources: one is the attempt to respond to the poverty context in which the family lives (in which she is supposed to help the husband to be a good wife) and the other one comes from her protection role of the family (the role reproduction and taking care of the family role) which is to have enough money to guaranty the presence of indispensable elements for her kids as food, clothing and school materials. This last element was once express as the fear that the husband could spend the family income in alcohol.

Picture 4.4.3 Some income generating activities



The actions taken for income generation are individual and associative artisan activities (weaving the loom, skirt knitting and other clothes), trading activities (small grocery store inside the house and market sales of groceries, handcrafts, wool, meat, animal skins and eventually animals) and labour force offer. The jobs related to selling the labour force can be inside the community for married, abandoned or widow women in teaching, cooking or as translators; while for single women they can migration temporally to the city where they can get involved in laundry activities,

house cleaning and taking care of children or elderly people. The income generation activities that women pursue usually fit in their daily activities without leaving their traditional shepherding and taking care of the family activities, representing them working days of fifteen to nineteen hours.

It is important to mention that the creation of women's organizations or associations has two different connotations. One, the productive association, where there is a directive board formed by men and women artisans and it is mainly oriented to improve the handcrafts and their trading. To be part of this kind of association is important for women because of the possibilities for income generation and additionally because it is an encounter point among women that gives them a sense of belonging and facilitates the socialization of their thoughts and feelings about their lives.

The second reason to seek a women's organization responds to the influence of the indigenous movement of the zone (centrals, sub centrals, communal union and farmer's union), and also to the initiatives promoted by external institutions or by the municipality of the province that want to improve women's rights, giving opportunities to develop training and income generation projects. The research has observed that this kind of organization only plays a role when it is time to vote during the annual elections of the directive board (nominal representation) but does not perform any other activity during the year. Women are sceptical that this initiative will help them to improve their income.

#### 4.4.4 Farming Activities

Farming activities are usually men's responsibility; nevertheless, women have also specific and essential contributions in this field.

Picture 4.4.4 Some female farming activities



Among the main activities of this area are: that people have a communal way of cultivating crops holding as many plots as possible in different zones to maximize altitude, sun exposure and soil fertility differentials. In this sense, they manage a fallow rotation system which means to seed in at least two pieces of land with different climate risk and to rotate crops annually in those pieces (between potatoes, oat and barley). Maintaining a communal way of managing the land instead of

transforming to a private land community, they guaranty that anytime that the land degrades, erodes or loose fertility a new piece of land can be requested and assigned.

In some other cases, the seeding is even made in two separated communities with different ecological characteristics which enlarge the variety of crops that can be grown and reduces the risk of losing the production. Moreover, they play tinkering with planting dates and crop varieties to match changing rainfall (the first seeding time in October, the second in early November or the third one at the end of November). Another agricultural practice used is the construction of terraces for cultivation despite the presence of sudden slopes in the terrain.

Within the agricultural activities, women have developed skills for the application of manure and the potato seeds. Women carry these products on their backs together with their children not older than two years while seeding. As it was previously stated, women also participate in the hilling and harvest duties. Another specific activity of women is the cleaning the cereals during the trite and vented techniques.

#### 4.4.5 Traditional and socio-cultural practices

##### 4.4.5.1 In the community and the socio-cultural field:

Life in the community maintains an organizational tradition highly recognized and related with the lives of the families and individuals. This is expressed on the conformation of a farmer's union organization and another one the "traditional and original" organization in which the main directive roles rotate annually among all the affiliates to the community. One of the directives roles within the traditional and original organization is the *jilacata*. The person who assumes this role must use a "poncho" as a symbol of the protection of the crops. If this person takes off the "poncho" at any moment, it is understood as if the person does not care about the community or the production because is not protecting them. Symbolically, person that uses the poncho covers the crops against frosts, hails and droughts with it. The use of poncho is exclusive for men while the "aguayo" that women use do not have this protection connotation. "We do not know why only men can be *jilacatas*, we could also have our aguayo all the time protecting not only the crops but our families" (Doña Francisca Franciscano, 2011).

##### Picture 4.4.5.1 Traditional practices in the community



On the other hand, within the community reciprocity activities we can find the *Ayni*, *Minka* and *Umaraqha*; which are carried out to collaborate on the productive duties of the community. These activities are fundamentally related to the shared work among families on the soil preparation and harvest.

#### 4.4.5.2 Local Knowledge of nature:

Nature knowledge comes from a very close relationship with the environment and is based on a conception of a harmonic relationship between human beings and all living organisms. Women have developed their practices from the observation and respect with their surroundings.

Picture 4.4.5.2 Local knowledge of nature



The analysis is grouped into two areas:

- a) Reading bio-indicators: This is one of the activities more related with nature and climate variability since through the reading of plants, animals and other elements,

women forecast the type of productive year, the times to carry out agricultural tasks and specific climate events.

For instance, bio-indicators that show if it will be a good or bad production year could be observed on animals like foxes, birds or fishes. If the fox is observed and heard howling on the river, it will be a bad year, but if it is observed and heard howling on the hill the year will be good.

These indicators can be also seen on plants like the *qh'uta* which if it flourishes well, the production year will be good; or using the algae, if they are abundantly present on the rivers it will be a good productive year but if just a few of them are found, the production will be low.

Other nature elements like the stars, clouds or ice can also be observed for this purpose. For instance, in the case of the clouds, they must be observed during May and August festivities (Saint Vera Cruz, national festivities, etc.) in order to forecast a good or bad productive year.

On the other hand, bio-indicators that indicate that is the right time to plant or to harvest can be seen also on animals or plants such as the *kapurito* (horsefly) that if it is present in big quantities and with unbroken wings, it means is time to plant. The chino-chino indicates that potatoes are ready to be harvested. Within the observations of plants forecast is generally associated with the type of flowering: until the frost burns the flowers, it is not time to plant yet. Besides, the observation of the first three flower (*qh'uta*, *ulala* or *sank'ayu*) indicate which of the plantings (the first one in October, the second one in early November or the third one at the end of November) will be the most productive one, depending on the fact that the flower gets burned or not with the cold.

Finally, bio-indicators that forecast specific climate events like rain, hail or frost come from the observation of elements like the wind, the moon and the rainbow. For example, when the wind comes from the north of the community it will bring rain but if it comes from the west, it will bring hail and frost.

- b) Local knowledge of toxic and useful plants, as aliments, bio-medicines for animals, crops and people: The use of plants has been reducing and is under the risk of disappearing due to the lack of its use or its replacement with modern technologies. As an example, the case of the knowledge related to plants that were used as food on times of bad harvest are now being replaced by industrial products like rice and noodles. The knowledge of bio-medicines for animals is disappearing because of the progressive utilization of antibiotic treatments coming from the pharmaceutical industry.

Among the knowledge of plants for animal care there is the practice of avoiding *garbancillo* in the diet of sheep because its toxicity that gets them drunk or the specific plants that sheep or llama like and the regions where they grow. There is also the knowledge about the plants that stimulate animal milk production like fennel or *llantén* that are used only if the grass season comes too late and the baby animals are already born. As mentioned earlier, some of the illnesses of sheep are cured with plants or fungus, such as the “white eye” treated with the “*tasa tasa*” and the broken bones treated with quinoa flour.

Within the knowledge of plants that can be used in the crops it is possible to mention plants with insecticide properties like *muña*, *locoto* and onion, which are applied in case of the presence of certain types of insects like moth larvae, Andean weevils, *ticona* and *piki-piki*. In the case of the potato crop some ointments or tonics made out of alfalfa, *chaucha*, *chinchircoma*, *chachacoma*, among others.

Some of the ointments utilized for the potato crops based on sour and spicy plants, are also used as biomedicines for people with respiratory and diuretic problems. Other plants used as biomedicines for treatments for people to cure fever, fear, stomach ache and cough are the *ñuñumayu*, *muña*, *kiswara*, *wira-wira*, *eucalyptus*, etc.

In addition, women have knowledge about other useful plants like *kiswara*, *ñuña*, *thola* and lichens used for staining llama or sheep wool, to weave pullus (blankets) or the loom; plants used as food spices such as *yuraj muña*; and some fruits, roots and leaves that women pick during their shepherding activities. As Albina states: “the *siki* or *ponghayo* are thick roots that can be eaten; one has to grate the stem and then eat it; it has a sweet milk, but not much; and it looks like a lettuce but flatter on the soil, but only the stem is eatable”.

#### 4.4.5.3 Traditional and Spiritual Practices

The field of traditions and spirituality in the peasant and indigenous communities is very wide and usually associated with rituals. For example, for dead people, there is a special festivity the first days of November as it was described on chapter two. The celebration of this ritual, among some of its aspects, is aimed to keep the soul of the dead happy so that it won't bring bad luck to the family and to the production. In the case of people that died because of a lightning during the shepherding activity, there is a specific ritual with the purpose of being able to shepherd again on the same place where the tragedy happened and to avoid the possibility of another lightning hitting a member of the family.

#### Picture 4.4.5.3 Traditional and spiritual practices



In the case of asking for luck, prosperity, fecundity and abundance on the production, to the supernatural, different traditional rituals are developed. For instance, during marriages the guests stick money on the clothes of the groom and the bride as a way of mutual help and expressing their desire of abundance. Another example is evidenced during the carnival festivities, when coloured wool is knitted to the animal ears to invoke luck and fecundity.

To defend from frost and hail people has custom to burn straw at the edge of the crop fields, pouring alcohol on the four cardinal points on the field, cover with a black cloth the roof of their houses or the centre of the crop field and put the head of a dead dog in the centre of the crop field. In addition,

There's also an annual activity that is the result of the religious syncretism explained from the convergence of traditional Andean and Christian religious traditions. The first one is the traditional and original tradition of offering animals to the Pachamama, asking to the supernatural to provide a good raining season after the planting. It consists on a community gathering where everyone knees on the top of a mountain and sacrifice sheep, eat them and burn the bones together with the *koa*. The second one comes from the catholic religion that tries to modify the pagan connotation of this practice by matching the offering to the Pachamama with the Christmas festivity. Nowadays, the festivity consists of a two days event when during the first day a generalized fasting happens, asking God for the arrival of the raining season, and the second one, where a meal is prepared (sacrificing 10 sheep in the church) symbolizing conciliation and sharing among every "brother and sister" of the community. Nowadays, the communal fast is held annually, it is compulsory for every affiliate and is common that women assist to this activity as a replacement of their husbands.

#### 4.5 Discussion: Women's comparisons regarding their practices

Table 4.1 summarizes characteristics of the five women and their life-worlds and the quantity of activities within their practices they have in respect to the context of an intrinsic high climate variability and uncertainty.

The activities quoted in each category were listed and numbered. The information was collected during my participant observations, presented and complemented in the focus group discussions. I classified the activities and double checked if my understandings were correct during permanent consultative individual and group discussions. In some cases women asked me to separate activities identifying two or three additional actions within the ones I classified as being the same. During the focus group discussions and using coloured cards dynamic, I intended to make women select the activities they considered strategic for helping their own family to deal with climate variability. Nevertheless, the dynamic was not successful therefore I decided to present the data as my case studies describe and enacted it.

**Table 4.1 Number of activities within the women's practices, comparing five women and focus groups discussion results**

| Practices, activities and local knowledge of Women |                                | Total | Doña Virginia | Doña Francisca | Doña María | Doña Albina | Victoria | Focus group discussion |
|----------------------------------------------------|--------------------------------|-------|---------------|----------------|------------|-------------|----------|------------------------|
| Animal management                                  |                                | 21    | 14            | 10             | 6          | 11          | 5        | 17                     |
| Taking care of the family and house work           |                                | 15    | 14            | 12             | 12         | 12          | 9        | 14                     |
| Income generation                                  |                                | 10    | 5             | 4              | 7          | 4           | 5        | 8                      |
| Farming activities                                 |                                | 9     | 7             | 7              | 7          | 8           | 7        | 9                      |
| Socio-cultural activities                          | In relation with the community | 2     | 2             | 2              | 2          | 2           | 2        | 2                      |
|                                                    | Nature relationship            | 25    | 12            | 11             | 10         | 18          | 8        | 25                     |
|                                                    | Traditions and spirituality    | 10    | 8             | 6              | 6          | 8           | 6        | 10                     |
| Total                                              |                                | 92    | 62            | 52             | 50         | 63          | 42       | 85                     |

As it can be seen in table two, from the 92 activities that women talk about describing their practices in an intrinsic high climate variability region and a context of socio-environmental uncertainty, the women that have more of them are Doña Albina and Doña Virginia. Both of them are like the typical women of the community, dedicated to activities like shepherding, weaving, taking care of the family and farming. In the other three cases, their lives are diversified in different activities as commercialization, teaching and the attendance to school.

It can also be seen that 85 out of the 92 activities or actions taken, were recognized and cited during the focus group discussions, which could imply that the work with focus groups contribute

significantly to the individual research. Nevertheless, individual research showed a deeper insight that described with higher detail women's activities.

#### 4.6 Conclusion and final remarks of the Chapter

Women's practices in an intrinsic high climate variability region and a context of socio-environmental uncertainty have shown that they follow a different logic as the one described by the *Fundacion Agrecol Andes* (AGRECOL) and the so called climate change that the local NGOs talked about. For women of Chuñuchuñuni, climate variability, climate change and climate based vulnerabilities are implicit and can't be grouped into explicit categories. They don't talk about ways to confront climate based vulnerabilities, climate change or climate variability but they are completely embedded in their daily practices, where they perform and enact their activities interweaving their social responsibilities.

Differences in the logic to describe these concepts or to keep them without explicit definitions to rather live and experience them opened my eyes to a fundamental difference between the way to conceive the Communal Agriculture Risk Management (GRAC) project, women's development projects objectives and women's perception of reality. In order to explore these differences, find the points of encounter between AGRECOL, the local NGOs and the community of Chuñuchuñuni, and the interfaces that came out from their encounters I decided to make a following analysis of interfaces where women's life-worlds and climate encounter the development projects, which will be described in the coming chapter.

## CHAPTER 5. WOMEN AT THE INTERFACE OF CLIMATE AND DEVELOPMENT

In the process of studying women's knowledge and practice in the context of climate variability, I became increasingly aware that as well as Yapuchiris (mostly men), they also are being placed in the pathway of Agricultural Research for Development industry. While not the initial focus of my research, nonetheless, I felt it became necessary to begin to shed light on the social processes and politics involved in professional-led, project-based responses to the growing public concern over climate change. In particular, this is useful in revealing how development bureaucrats and community leaders selectively utilize the concerns of women in setting agenda and obtaining access to resources, while not necessarily representing (or advancing) the interests of women themselves.

During the time of data analysis an issue came to light involving the view of AGRECOL and the local NGOs towards the climate based vulnerability the women from Chuñuchuñuni experience in their everyday life situations and the view of the women themselves towards development projects, technicians and aims. I also became aware of gaps and bridging actions aimed at finding points of encounter powered not only by technicians and researchers with the community members but also in the other way around: by *Yapuchiris*, authorities and the same women from Chuñuchuñuni. The multiple worldviews, agenda, and interests of these actors came together at the moment of discussions and debates over project purposes, priorities, desired activities, and the distribution of resources. This situation placed into question the notion that there was a single best pathway forward in addressing concerns over climate change and climate variability. It also began to expose me to the underlying competing realities and politics of development in practice.

In their book chapter on the social encounters between bureaucrats and peasants, Alberto Arce and Normal Long (2001) describe the dynamics of "knowledge battles" involved in development work. After introducing the basic concepts of their "interface analysis", I draw on people's narratives to describe and analyze the practicalities of how *técnicos*, researchers, Yapuchiris, community members from Chuñuchuñuni, in particular women, came together over ideals, how competing agenda were subject to processes of contestation and resolution and how social networks evolved during the process.

### 5.1 Social Interface and Social Networks definitions

In his research, Long (2001:177) encounters "critical points of intersection between different social fields, domains or life-worlds, where social discontinuities based upon differences in values, social interests and power are found". These social interfaces represent emergent forms of organization and understanding put forward by actors in their creative efforts to accommodate the multiple perspectives and cultural forms inherent in social heterogeneity. During the process, parties inevitably come into contact and conflict over their divergent interests, leading to processes of

entrenchment and re-organization, as they manoeuvre and struggle to advance particular interests and agenda over those put forward by others. This activity is described as particularly rich in the context of rural development projects.

During social interfaces Long (2001:179) warns that there could be great differences among the life-worlds, values, norms and interests, of the participants compromising communication and interaction. He also mentions that “there are some fragile, changeable or non-existent communication channels between the various parties involved, not the permanence and coherence of existing linkages”

To understand how knowledge is created and transformed, Long (2001:170) explains that its important to identify how people build bridges and encounter in the intersection of their diverse life-worlds. The analysis of knowledge doesn't look at the source of where it comes from but how it is socio-culturally enacted. In development interfaces Long shows (2001:172) strategic elements where discontinuities in interests, values and power occur.

“A close-up study of interfaces provides insights into the processes by which policy is transformed, how room for manoeuvre and empowerment are created by both interventors and ‘clients’, how persons are enrolled in the ‘projects’ of others, and how metaphors, images and ideologies shape the contests that take place over competing paradigms and strategies of development”

Besides social interfaces and knowledge analysis there is one more final concept that Long uses and it's about network analysis which includes the concept of social capital. He defines social capital as the “capacity of individuals to command scarce resources by virtue of their membership in networks or broader social structures”...” Such resources encompass not only material or tangible benefits but also less tangible properties such as knowledge, skills, trust, shared values, organisational principles and representations” (Long 2001:132).

Finally, Long (2001:133) explains that relationships are always changing, thus, “networks constantly reconstitute and modify the sets of relationships involved”. Finally, Long (2001:143) also talks about the evolution of networks and explains that “each stage in the development of an enterprise or organization people became enmeshed in a slightly different matrix of social relationships which opened up new sources of information, assistance and capital”.

## 5.2 The Yapuchiri project by design

The Communal Agricultural Risk Management Project (GRAC) implemented and leaded by the *Fundación Agrecol Andes* (AGRECOL) and the *Centro de Estudios Superiores Universitarios* (CESU) is sponsored for four years by the Collaboratie Crop Research Program (CCRP) of the McKnight Foundation. Despite AGRECOL's explicit dedication to “capacity-buildiing” and “development” (AGRECOL website, 2010), CCRP is based on a long history of “scientific contributions to

agriculture” and more recently “research for development” (CCRP website, 2011) and as a result it finances AGRECOL with the condition of research contributions. The meaning of this is debated during the CCRP’s yearly “Community of Practice” meetings, when representatives from its 14 regional projects come together to present their activities and receive feedback on their scientific relevance. AGRECOL previous experience with research was very limited, as they mostly carry out development and participatory action projects. Nevertheless, to fulfil the requirement of McKnight Foundation to perform a mixed research and development project, AGRECOL made an alliance with CESU (a research institute), responsible for fulfilling the donor’s demands for the application of scientific method and purpose.

The GRAC project started in September 2009 with a broad data collection for a base line analysis of the Challa County. The Challa County is the place where the project is implemented and it is composed by 3 Ayllus: Majasaya, Aransaya and Urinsaya. AGRECOL had a previous development project experience with the Majasaya Ayllu, where they carried out a Risk for Disasters Prevention Project for three years sponsored by COSUDE (the Swiss Cooperation for Development). That previous project was implemented in Jesus de Machaca (Perú), Tiawanaku (North of La Paz), and in the Majasaya Ayllu (Cochabamba). Successful and influential farmers of those regions were selected (mostly individual male farmers, based on the criteria of the persons who repeatedly had high yields) and named “*Yapuchiris*” (which in Aymara means farmer, but as used by Spanish speaking development professionals in Bolivia is intended to acknowledge their traditional knowledge and ancestral wisdom) to distinguish them from the rest of the farmers. According to the assessing committee (AGRECOL and PROSUKO *técnicos*) the *Yapuchiris* outperform other individual male farmers due to the use of different practices and strategies like the use of climate prediction with the observation of Bioindicators and mitigation actions like the use of bio-fertilizers, natural ointments preparation and its frequent application to the crops.

Many *Yapuchiris* from Majasaya learnt different practices from their *Yapuchiris*’ colleagues from Peru and La Paz in the previous COSUDE project. For the new GRAC project, AGRECOL recruited them to train a new generation of *Yapuchiris* selected from the broader population of farming families in the Challa County. As per the design of the GRAC, the *Yapuchiris* would become “promoters” of a better future and would be paid for each day they participated, and helped the “*técnicos*”. This money was not described as a “*salary*”, but a “*compensation*” in exchange for the time they lost to their regular agricultural activities. This compensation provided to *Yapuchiris* was thought to be important so that *Yapuchiris* would feel that abandoning their lands for some days won’t disturb too much their ability to generate income (as seen in Chapter two when being the men of the household, they have the responsibility to provide the family income). The authorities from each Ayllu selected the “new” *Yapuchiris* who were going to be trained by the “old” *Yapuchiris* (the ones from Majasaya) and a cycle of *Yapuchiris* formation started. The criterion of selection of the “new” *Yapuchiris* was this time on a voluntary basis inconsistent with the earlier criteria.

During my field study, the new class of *Yapuchiris* were immersed in the experimentation component of their overall training course. This involved testing something learnt as a result of the training activities, as a means of “validating” the usefulness of ancestral *Yapuchiris* practice. The experimentation cycle was organized and financed by the GRAC project, which purchased supplies and other incidental. For example, some *Yapuchiris* conducted comparisons between “bio-fertilizers” to their conventional practice, based on synthetic fertilizers. Others tested the use of natural insecticides prepared with onion, garlic and peppers with synthetic insecticides. The idea of the experimental cycle was to learn and get convinced while doing; in that sense, the *Yapuchiris* were asked to compare the yields between the Agro-ecological practices promoted by the old *Yapuchiris* with conventional practices. The expectation was that the new *Yapuchiris* would gradually abandon their existing, less enlightened practice and convert to Agro-ecological-based production. When the benefits of agro-ecology were not expressed in yields, the blame was placed on such factors as environmental decline (e.g., “degraded and ill” soil or “seeds that had become used to toxic substances”) or “not following the procedures” or “not applying the natural sprays enough times”, in which case the prescription became “further practice”.

None the less, the project doesn't end in the experimentation and formation cycle. The GRAC project narrative expresses that in the future repetitive (formation and experimentation) cycles have to be locally led by the same *Yapuchiris*. The implication was that the new *Yapuchiris* would become a type of “community advisors” charged with publically announcing their predictions and the results of their enlightened practice in the community, so that colleagues would find the light and “contagious” the rest of the farming community with the Agro-ecological production. Then, the community would become an example for the Ayllu, for the County, for the Province and thus “upscale” the GRAC project to the Municipality level. In addition, the project aspires for the *Yapuchiris* to influence local grade schools and, eventually, rural education system.

But, what is the “research” proposal of the GRAC project? The project is organized around three questions: 1) what are the agronomic strategies of the *Yapuchiris*? 2) What organizational strategies lead them to a better climate risk reduction?, and 3) what are the best practices in land and territory management and planning to reduce climate risks?. The project's Research Coordinator is charged with supervising bachelor and master thesis, including the collection of field data related to the three questions. In addition to this activity, the coordinator leads wider, “umbrella” research tied with proposed PhD. Thus, the Research Coordinator collects data from students, project coordinator and the field technician to build up her own research and the project research.

During the first year evaluation seminar of the AGRECOL projects, there was an endless discussion about whether the GRAC project, was indeed an integrated “research for development” project or a two components project that followed independent agendas: one for development and the other for research.

During my time with the GRAC team, I found conflicting stories between research and development components. In addition, I observed contrasting and conflicting dilemmas among the

project implementers, the student researchers and people from the communities. As soon as student researchers entered in the field with the development team many conflicts raised, not only between researchers and community members, but also between researchers and the development team (project coordinator and technician). A blurred mixture of actions to help the development team and actions applied to each specific research got confused and therefore, community members also became confused with the continual arrival of new people who asked questions, instead of helping them to pursue their interests.

### **5.3 Multiple interfaces between the GRAC project, the women's development projects and its operating environment**

#### **5.3.1 First encounters with the field practitioners**

Among the GRAC project and the women's development projects run by the local NGOs there were many *técnicos* or field practitioners involved. Nevertheless, for the exercise of this Chapter I'll only describe three *técnicos* whose names have been changed to protect their image and interests.

We first met engineer José (alias Pepe), he is one of the women's development projects coordinator. Then we met engineer Juan, he is an engineer agronomist, as well as Pepe. Juan got involved in the women's development project by coincidence. Despite he was only in charge of the Administration of one of the local NGOs working only 30% in the office, he decided to support Pepe, from another local NGO, in his field work. Juan accompanied Pepe in the trips with the idea to learn from Pepe's experience, but suddenly he found himself working more than 100% for the women's development project as a field technician, but had to keep working as an Administrative for his own local NGO. Only after a year and a half of this situation he got a full contract as a field technician in Pepe's NGO. The third and final *técnico* is an AGRECOL official, Ernesto.

The Challa County, where the women's development project works (as well as the GRAC project) is situated between Cochabamba and Oruro. Some communities are close to the main highway and some others are one or two hours away. The community of my research is Chuñuchuñuni, which is half an hour by car from the highway, in the dry season, and an hour and a half during the raining season. There's also a walking track starting in the Km 110 which goes up the hill up to Chuñuchuñuni. For the people of the community it takes between 15 to 30 minutes, but for people not used to walking in the mountainous highlands it can take over two hours. The area of Chuñuchuñuni is mainly devoted to potato cultivation and livestock production (especially sheep and llamas), but it's considered as a very poor region with only self consumption production.

During the first encounter with the local NGOs, Ernesto and I, they explained me many issues, Pepe started:

“What these people suffer the most is high climatic risks, as they are exposed to frost, hail, draught and, in some areas, even floods. These people really experience extreme climates and even if we cannot say for sure that there’s climate change in the area, because there’s no technology close to the area measuring weather indicators, we know that these people is really affected by the changing weather. From the population, the most affected are women who daily have to get water and aliments for their families and their animals”.

Ernesto added some comments:

“That’s true, the population is vulnerable due to the weather, but not only to the weather, if you have read in the presentation of the GRAC project we define that climatic risks generate many facets of vulnerability to this people in respect to economic issues (as they have a poor economy of self consumption that depends on their production and savings capacity), technological issues (low access to technology to mitigate or to reduce climatic risks), socio-cultural issues (as the existence of social organization and traditional knowledge which could help us to prevent, reduce or mitigate climatic risks for example weather prediction, access to land and fellow rotations, reciprocity and redistribution), and finally, we talk about the ecological vulnerability that is mostly about the deterioration of their natural resources. In response to these vulnerabilities farmers have developed many strategies and AGRECOL’s mission is to spread those ancient traditional practices”.

Pepe interrupted him to comment:

“My local NGO has been working for many years in Tapacari and as far as I know, so is AGRECOL, which is been working extensively with *campesinos* ’s strategies to reduce climate risk. But despite our projects, we perceived that we have a gap of information regarding the strategies that women may have developed. We are not sure, but we believe that the women of this region also developed strategies, especially in the area of the use of plants. For example, I’m sure they’d have the knowledge of nutritious local plants that in times of low productions or high production looses due to climatic threats I guess they supply their family with those plants.

Juan continued:

“Besides, we’ve heard that they might know about other plants for biomedicines, for example, tell us Ernesto, about AGRECOL’s great discovery of Doña Eduarda in the Majasaya Ayllu”.

Ernesto explained:

“Yes, Doña Eduarda is a Yapuchiri we discovered with a huge potential. She uses the natural ointments for people, to cure crops. She is a healer (*curandera*), and she knows very well how to cure making preparations with local plants of the surroundings. It was her idea and initiative to test the ointments for people in her own crops, and as she did, she got one of the highest yields of the area. Many men started respecting her and her knowledge and even wanted to try her ointments in their own crops”.

Pepe interrupted and said: “...so your mission Mariana, is to find more women like Doña Eduarda”.

Juan took the floor again:

“You have to know that you'll be facing very difficult and tough conditions, you know? The people in the community is very poor, they have enough just for self consumption and nothing remaining; sometimes the production is not even enough for the whole year, so they have to migrate or to sell their labour force to find other sources of income. The children in the community suffer from malnutrition and they don't have possibilities for higher education. The social organization maintains strong traditions and strong authorities that keep the order in the communal way of living. So, you'll also have to be careful to respect the communal organization.”

Ernesto interrupted and talked about his perception about my introduction to the field with AGRECOL's project:

“Don't worry too much, as AGRECOL will introduce you to the area, the people is happy with what we do. We believe that our project is different to any other project that had ever arrived to the area, because it pretends to use their same knowledge and social organization to improve their living conditions. We believe they have all the ways to get out of poverty in their same community. They have the Yapuchiris, they shouldn't forget the practices of their grandparents that allowed them to survive in the area for centuries. The same Yapuchiris will lead their own development, that's why our project is different. We don't bring outside recipes we only encourage innovation and experimentation while rescuing the old traditional practices.”

### 5.3.2 Encounter between AGRECOL's *técnico* and the *Yapuchiris*

When I arrived to Chuñuchuñuni the cycle of *Yapuchiris* formation was in its 3<sup>rd</sup> workshop, which I could attend shortly after arriving to AGRECOL. During that workshop that was called “Strategies Generation” I was able to observe the dynamic between the project implementers with the “old”

*Yapuchiris* (from Majasaya Ayllu) and with the “new” *Yapuchiris* (in this occasion they were *Yapuchiris* from the Urinsaya Ayllu only). I’d like to describe shortly the workshop in order to give an idea of the project implementers approach and the first encounter between them and the *Yapuchiris* that I was able to observe. I was relief that the approach was not at all top down, but recovering their own ideas and inputs to build their strategies”. The GRAC project coordinator facilitated the workshop and the activities during the day started with participatory concepts definition, and followed with group activities to determine the agricultural practices that they are used to apply. The *Yapuchiris* were grouped by communities and then described a year agricultural calendar. During the plenary session community by community showed the different dates to apply treatments and to perform farming activities. After the five communities of the Urinsaya Ayllu finished, the facilitator announced the presentation of the annual agricultural activities of the “old” *Yapuchiris* from the Majasaya Ayllu, and asked the rest of the communities to listen carefully in order to find interesting activities to be copied and further explained.

When the old *Yapuchiris* finished, Ernesto expressed asked many questions demonstrating enormous curiosity. Suddenly the curiosity was contagious and all the participants made more questions. In the “old” *Yapuchiris* presentation many agro-ecological practices were described, including the preparation of biofoliares, natural insecticides, etc. When the “old” *Yapuchiris* were overloaded with questions Ernesto interrupted the interventions:

“I see that there’s a lot of interest from the part of the new *Yapuchiris*, that maybe won't be fulfilled with the questions. So I’d like to offer a following workshop as a practical one were the “old” *Yapuchiris* will be able to teach us all their preparations, when and how to apply them. Do you agree? We are committing ourselves to bringing all the materials for the natural preparations and to go community by community making these workshops”.

After everyone agreed happily, the facilitator interrupted Ernesto and added: “It will be even more useful if we extend the workshops in the communities not only to the *Yapuchiris*, but to the rest of community members or everyone that would be interested in learning from the natural preparations”.

The proposition was received with a lot of please, and different dates were settled for conducting the practical workshop in each community. To conclude the workshop, the facilitator assigned some homework to each community:

“I’d like if you could please present the annual agricultural calendar of your community that each group has presented in the monthly communal meeting of each community to validate it. It will be just to see if the community would like to complement something else or if they agree with what you put in it. I’d also like to ask you if you could share with your community mates what you’ve seen from the agro-ecological practices of the “old” *Yapuchiris* to invite them to the coming workshops in each community.”

The people agreed, but the validation of those agricultural calendars was never accomplished. During the following two or three workshops when the facilitator asked if the information was shared and validated in the monthly communal meetings, but the answer was always negative or between laughs a repetitive: “we have forgotten!”

### 5.3.3 Encounter between the field implementers of the women's development project and the community authorities and commoners

It happened to be that two of the “new” *Yapuchiris* were Don Fortunato, the principal authority of the Ayllu called the “*Central Regional*” and Don Hugo, the principal leader of the community of Chuñuchuñuni called the “*Dirigente*”. Due to this coincidence, in each of the Ayllu meetings or communal monthly meetings we were always very well welcomed and AGRECOL, as well as the local NGOs would always be prioritized to communicate their monthly announcements.

In one of the opportunities, one of the local NGOs was invited by the Ayllu authorities to write a productive plan for the Ayllu to present it to the municipality authorities. Therefore, the participation of Pepe and Juan in that monthly meeting was different:

“Compañeros (mates), Pepe started, I’d like to ask you to reflect upon something with me. This productive project you want us to write is for you, it’s not for us. Therefore the ones that should be writing it are you. Nevertheless we know that you’re asking it to us because we have experience in writing projects for donors or for formal institutions and you don’t. But despite that fact, we won’t put anything in that project for ourselves; we will only reflect what you tell us: your needs, your own petitions, only what you’re willing. That’s the reason why we need all of you to come to the workshops: women, men, young and aged people, so that we can fully reflect what the whole population want.”

It sounded really inclusive so the following workshops were really crowded. The local NGO had only 60 days to organize workshops in each of the five communities and to generalize and extract the most needed issues to write the productive project at a final design (meaning it was not only a proposal, but it had to include the final budget and specify the beneficiaries). Pepe and Juan organized the workshops so that in 1 day they’d split half day for making a diagnosis of the community and the other half day to identify with everyone the principal problem of the community and the principal objective that the project could have.

Even if the needs of the five communities reflected different issues at the beginning, as well as the needs were heterogeneous for different gender and age groups, the most important need and the principal objective of the project in the five workshops resulted on the same one. It came to be something related to climate change, economic and productive activities with a strong gender component. This homogenization of the needs of the five different communities and their

different gender and age population is an example of the dangers of facilitation that Long describes. He explains that when facilitators try to make the communities decide on their own development priorities or goals, they have a pre-established agenda to do so and that:

“there’s always the possibility that unwittingly participants would be following the path laid out by the facilitators, closely related to the issue of emancipation versus manipulation is the power of the facilitator to either allow group dialogue to follow its course or to control it and direct the discussion by applying time limits on topics judged irrelevant or by emphasising topics familiar or foreseen for discussion” (Long, 2001: 186 and 187).

It is not a coincidence that the local NGOs work also with women and climate change.

#### **5.3.4 Encounter between the field implementers of the women's development project and the women of the community**

When I was asked to document women's strategies to manage climate risk, local NGOs asked me to direct a workshop for women. As I was coordinating with AGRECOL, we organized the workshop together. That workshop had to be organized including topics of health, nutrition and healthy eating associated to healthy production. Nevertheless, the idea was that the workshop would include some of the strategies of the women I'd already research. The only problem was that the workshop had to be organized for November of that year (following the funding planning of the local NGOs), but I was starting my research the same month. There was no possibility to have results for that same month, but from the point of view of Pepe, there was nothing to worry about:

“In that workshop we can organize that the nurse talks about health and nutrition, and we ask AGRECOL if they can help us bringing any Yapuchiri, for example Doña Eduarda, to tell us about her experience about plants for healing people and crops. Someone else could talk more about plants for eating, and then we cover the healthy eating and nutrition topics.”

The workshop was organized and was made for November, but the speakers didn't really follow our expectations. As soon as the nurse started talking, she started giving advices for birth control and then went over a very sensitive topic about not desired pregnancies, rape, intended baby's death, etc. When the workshop finished and I approach the nurse to ask why she changed the topic she said:

“we’ve talked about nutrition many times, the information enters into one women's ear and goes out from the other ear; they’ve already been trained about nutritional cereals, fruits, and meals preparation, so I didn't think I needed to repeat what they already know.”

During the intervention of Doña Eduarda, the public showed too much interest in the use of plants for healing and wanted to push the subject into a practical workshop where Doña Eduarda could teach them how to treat different affections, but they showed no interest in how the plants could be used to treat crops illnesses to improve production. The interest in the biomedicines was so big, that Pepe intervened to promise a following workshop only about plants that would also include practical issues on how to prepare some ointments.

In the organization of the workshop two sudden speakers were included at the last moment. One of them was a guest from the research coordinator from AGRECOL, which invited an official from *Vecinos Mundiales* (an NGO). She shared her experience in the Highlands of Potosi, especially in food safety and food sovereignty, showing two very interesting videos that attracted everyone's attention. They talked about the rescue of traditional practices, the meanings and symbolic use of different artefacts and nature elements.

And the second one was the director of the artisans' association that we decided to include him in the programme because the same day the artisans' association had convivance where they were going to cook and eat together. We strategically include them in our list of speakers so that the artisans would be present at our workshop and also share the lunch with us. This decision filled the room, we expected about 20 to 30 women and we had more than 52 participants. We asked the director of the association to talk about the use of plants that would help artisan's production. He talked a bit about the plants that were used for staining and then showed a brief video about the steps to produce handicrafts.

Due to the two last interventions, the final speak that had to be directed by the *Yapuchiri* Don Facundo, was not possible. He was going to talk about how to add an extra nutritional value to our daily eating consuming and collecting eatable local plants of the surroundings. Juan thought that the public was too tired and that it was already too late, so just gave Don Facundo five minutes to comment on the workshop, then gave Pepe the floor to close up the workshop.

### 5.3.5 Encounter between the field implementers of the women's development project and the researcher

The final activity for the 2010 year was an "Experiences Exchange" organized by AGRECOL. They brought *Yapuchiris* from the North of La Paz, that also work with McKnight funding, to exchange their annual production cycle and knowledge about Bioindicators. The local NGOs as well as government officials were also invited to participate. It was a two days event and it finished with a big banquet of lamb, *chicha*<sup>27</sup> and with the *Yapuchiris* from Urinsaya playing Andean music. When the event was over, Pepe and Juan had drank some *chicha*, so they asked me to drive their car to take them back to the city as for my pregnancy I didn't take any alcohol. As soon as I started driving Pepe felled asleep because he was very tired, and Juan started asking me some questions:

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<sup>27</sup> *Chicha* is a maize beverage

“Mariana, how is your thesis going? Do you think you're being able to collect relevant and true information?”

I didn't really understand his question, but I answered that it was going fine and that I thought I was indeed collecting some interesting women's experiences. Then he continued asking:

“Have you ever been in the South of our city?”

The South of Cochabamba city is a very poor area that lacks sanitation services and receives drinking water only once a week. I answered him that my mother used to work there and I accompanied her when I was a child. Then he continued...

“When you were a child? Well I have to tell you that it had changed really a lot, that now it had grown enormously and that you probably don't know anything about it. How can you pretend to get to know an Andean community if you don't even know the South of your own city? How do you think you'll be able to do something for that people if you don't understand poverty? Let me tell you that you won't get to know them and you won't be able to do anything for their improvement. These people of the Ayllu “*estan jodidos*” (are “screwed up”), they are poor, they have very little production, lack of water and rain, severe climatic threats (like frost, hail, draught and floods in some areas), soil degradation and moreover, they're losing their ancestral traditional knowledge. Do you think you'll be able to understand that? I live in the South and I know how hard is to live there. I've been raised in that area, my friends are there; I know its dangers and its functioning, so I know what is to live in hard conditions. But you don't so if you want to do something for poor communities I recommend you should first get to know the South of your own city”.

Juan continued saying how good he knew the South of the city and continued being explicit about his mistrust of my possibilities of understanding his indigenous world. I consider myself a very discussion lover, but this time I preferred not to say anything and just listen at everything smiling. Before arriving to the city, Pepe woke up and listened to the conversation. He pretended that Juan was not in the car and said: “You know Mariana, Juan got this job saying that he speaks Quechua and as you've seen he doesn't...it would be so much easier the job for me if he'd really speak Quechua! So don't listen at him”

Let's get to understand why Juan reacted in this way. It is clear that he wanted to show himself different to me. He wanted to make explicit the distance between us. He also wanted to show his experience over mine. Juan's understanding of the indigenous world is interesting and contradicting. He has long hair that usually wears it braided. In the top of his head he always wears a hat that is typical from the indigenous region of Ecuador. He is a musician and he feels much identified with the musicians from Otavalo that play *San Juanitos* (a music genre from that region). Juan's narrative expresses his understanding of the Andean indigenous world shortening the

distance between him and the community. But, in the other hand, Juan discourse shows a big distance between him and the indigenous people from Chuñuchuñuni's community with his clothing. With his comments, Juan wants to discredit my approach to women and families (facilitated by my pregnancy condition) because he heard that Don Fortunato (the Ayllu leader) started calling me "sister Mariana" shortening the distance between me and him, while Juan was always called "engineer Juan". Discrediting my approach he reinforces his approach that maintains the gap with professional titles between the *técnicos* and the lay.

#### 5.4 A view from below: Chuñuchuñuni's community

When you arrive to Chuñuchuñuni's town you come across with many sheep and llamas grazing around. The town's has small stores in four of the houses where they sell all types of groceries. The road that takes you to the town is elevated in the hill from where you can observe all the houses, mostly made of adobe and calamine roofs. Then you can also see the school at the right of the town with a concrete soccer field which is illuminated with very powerful lights during the night. At the centre of the community there is the communal "sede" where the central telephone cabin is placed. Behind it, the chapel and the artisans' association can be observed. And at the left of the town there is the cemetery and further left a little stream. The stream is very contaminated with coca leaf residuals and gasoline due to previous cocaine transformation procedures. The authorities explained that many years ago a person from Sucre arrived to the town to teach them how to produce cocaine. Nevertheless due to not transparent money conflicts he was expelled from the community.

It is true that the community lacks sanitary system but when asked, the community people would never use their income or savings to flush a toilet. Instead, they'd spend the money buying a taxi or a bus, on latest technology cell phones (to show off their acquisitions) or in celebrations. From the top of the community many cars can be observed in the back yards of the houses. Some testimonies say that the cars became accessible when people produced cocaine, but now many of them are used only during Saturdays as public transport to take people from the town to the nearest market in Pongo that functions only those days. Poverty indicators consider sanitation and drinking water as one of the prior elements to get out of poverty, but these people is fine without a toilet, else they'd have constructed them already. Besides sanitation, the people have drinking water thanks to the communal water system, but as it's communal it can't be considered in the individual houses water system survey. Additionally, poverty indicators consider the overcrowding of the houses and houses are usually one room only. People from the community consider that they have to sleep all in the same room in order to efficiently exploit the heat that they produce together. Therefore, there are no houses with more than one room to sleep, but it seems it doesn't represent poverty but an efficient way of using and conserving human energy and heat. Poverty levels also consider monetary income or savings capacity, but these people don't have liquid cash. The accumulation of cattle is a way of saving, so that it can be used during hard times, either to eat or to sell. Potato production is limited and it's also true that it is mostly only for self

consumption. Nevertheless, the amount of potato and *chuño* (dry potato) sold informally in the markets has never been estimated. Handcrafts, skirts and “*aguayos*” are weaved in the loom and wear to demonstrate especial status, especially during communal celebrations and festive days. And most of the families follow this tradition. As the president of the artisans’ association once expressed:

“During the months of July and November and December I know that the artisans won't hand me any product, because I know that they're busy weaving for their own clothing for the national feast days and for Christmas and New Year's eve”.

### 5.5 Encounters with women's life-worlds

When women talked about their perception of climate variability, climate change and their vulnerability, they interweaved both concepts into their daily life and gender related daily activities. Their vulnerability categories were less schematic and less explicit than the categories that the GRAC project used. They articulated and integrated climate variability with different dimensions like ecologic, loose of local knowledge, economic, sexual division of labour, socio-cultural relationships between men and women, and between them and the community and with spiritual and cultural dimensions.

For example, when they described their vulnerability from the perspective of their gender related daily activities they associated how climate variability affects them directly on the outbreak of grass for animals that becomes unpredictable in different years; the arrival of the raining season that in some years is latter than in others; the changing and variable season of wind and frost; the different intensity that storms, rain, hail and frost have in different years; the variability on the level of the rivers that makes impossible that they can access the markets; and the arrival of torrential rains that erode the soils (affecting the availability of grass for the animals and the crops). Different women compared the weather with different events. Some of them compared their observations to what happened previous months, last year, previous years, or the last time that they experienced something similar.

“Here we really live climatic changes, because they are various climatic changes: when we have rain, when we have hail, frost, then it can suddenly change to draught, winds or many other climatic changes” - Source Doña María Franciscano.

On the other hand, when women talked about the deterioration of their natural resources they associated it with the lost of their local knowledge due to losing credibility in them and reducing their use. They considered that this knowledge stays only with the old people and disappears progressively as they die due to the incorporation of new modern knowledge introduced by people from the community that migrates to the city or by development institutions that

introduce exogenous technology without integrating the existing knowledge and technology. In addition, women felt vulnerable to the reduction of food and water sources for the cattle (taking care of the animal being their principal daily activities), the contamination of the rivers and the impoverishment of the cultivating lands. Likewise, their worry was associated specifically with the weather conditions in which they are exposed to in their everyday activities like shepherding (exposed to sunshine isolation, cold winds, hail, rain, frost, etc.); in their handcrafts production activities that while weaving the loom they get health problems especially with the lungs.

They also expressed their vulnerability due to the scarce monetary income that comes from the crops cultivation, and due to their reproductive and taking care of the family role, they feel insecure through the following fears: not having enough to accomplish their responsibility of feeding and cooking for the family; feeling handicapped to be able to find part time jobs or extra activities that could generate additional income for the family (or for them in the case of women without families); the lack of time in their everyday responsibilities for getting a job that could generate some income or to access to learning opportunities or grownups skills training workshops (lack of time resulting from their disadvantage in the sexual division of work that generates a double shift for women: inside the house and outside in the shepherding and farming activities); and finally their biggest concern (expressed in their words) is “not knowing how to have less kids”: the cultural conditions and the machismo environment makes them very difficult decide the number of kids they’d like to have and to access different methods of birth control or family planning without the male permission.

In Socio-cultural relationship between the women and the community they expressed that it is mostly constituted by affiliated men. Women only have permission to replace their husbands three times in the year; if they try to replace them more times they are not taken into account during the roll call, obscuring their existence as community members. So it is that the community chooses only men for positions of political representation. Anyways, as the work of the women takes them between 15 to 19 hours a day, they wouldn’t be able to accomplish that type of political positions neither in the farmer’s union nor in the traditional organization. Women are affiliated in the community only in the case that she doesn't have a man in the house (or when he is too old or sick). In those cases, they are forced to accomplish subaltern positions which are not for taking any important decisions or actions. The community is also like an agent of social control, who controls lonely woman or women with unfaithful husbands throughout gossip and murmuration.

Finally, in the spiritual and cultural field climate was also immersed. Difficult and adverse weather conditions represented the issues to fear or to raise a lot of respect. For that, the community developed numerous rituals and begging poems and songs for nature, to God and to the Divine in order to ask and receive good luck, blessings and prosperity for their families, animals and lands.

In women's visions of their life-world Women from Chuñuchuni never expressed that they are farmers, they’d say that their husbands are the farmers and that they only help them. Women

regard themselves as shepherds and artisans. Therefore, they'd hardly recognize that the GRAC project is for them as well, because they perceive it as doing things only for men.

“When the engineers organize those courses and trainings, they are about male issues. For example they teach them about fumigation with natural preparations and we never fumigate because that's men's responsibility. They also talk about the activities they do in the land during all the year around, but they don't talk about our animals or our production activities”. –Source Doña Francisca Franciscano.

Additionally to this comments they'd also mention that the times and days when the workshops are organized are impossible for them to attend, as they have too much work with the family and the animals that they cannot leave undone to attend a workshop.

Women would also think that the GRAC project, as well as the projects run by the local NGOs, is only for men, because the *técnicos* that implement them are also only men, with whom they don't feel comfortable. I realized these during one of the field trips when I travelled to the community with one of the local NGOs team. We were driving close to the house of Doña Virginia, who the previous trip gave me some money so that I could buy some cheese for her in the city and take it for her. So I asked Juan to stop for a while in her house. We saw that she was in the back yard with her husband (because the walls are less than a meter high) and when we stopped Juan was the first one to get off the car. We suddenly saw her running away inside her house. I shouted her name from the window, but she pretended not to hear. Her husband approached us and I explained I was looking for Doña Virginia. He said I should look for her inside the house. When I entered and saw her she said:

“Sorry I run away, but it's because I am afraid of those gentlemen of long hair. I am ashamed of talking to male strangers, especially with those engineers.”

## 5.6 Attempts for bridging the gap between different life-worlds

Engineers Pepe and Juan worked in Chuñuchuñuni for almost a year at the time when I finished my research and AGRECOL for a year and a half. We generated many points of encounter between us and the people from the community and also tried to generate actions for bridging the gap between our life-worlds, but the attempts were only mere sympathetic actions that real linkages to transform social discontinuities.

The GRAC project worked in bridging their gaps with the men of the community during the workshops, in informal feast days encounters and especially during the experimentation cycle. Ernesto would visit the *Yapuchiris* crops and help them spraying or preparing natural insecticides. He would also try to remark how good they knew their Bioindicators and natural environment. Nevertheless during this encounters they maintained their position as *técnico* approaching and helping *Yapuchiris*, without shortening their differences.

Very little points of encounter happened to be between Pepe, Juan and the women of Chuñuchuñuni. Even if they were supposed to work especially with women, they would only work during the community meetings were women don't really attend. Besides, in some other opportunities, some actions that Pepe did in order to show empathy with them happened during the workshop for women that I mentioned before. For example, as he noticed the big interest from them to know more about plants and biomedicines, he settled a following workshop to fulfil that interest and made it practical, so that they'd also learn how to prepare some ointments. Nevertheless, he didn't attend that following workshop, Juan was the one to make it true, who made the day chronogram, who looked for the materials and who contracted two healers that would give that workshop. Despite this possible scenario to shorten differences, Juan continued as the *técnico* facilitator and not the equal "student" (sort to say) of the Yapuchiris.

I vainly suggested some actions to include women in their projects. For example, I suggested that the workshops could include animal management practices (one of the activities extensible performed by women); that they could be organized in an evening schedule (so that the women could attend after finishing all their responsibilities); and that it should be community by community and not an activity of the Ayllu because as the distances were so long women would take to many hours to arrive to the centre of the Ayllu.

There were some other activities I organized with the GRAC project support during my time of research. For example, Ernesto told me there was money for women experimentation too, so that I had to pick up their interest to support some of their activities. So the first time I met a group of women and asked them what they would like to experiment, they showed that their interests were more related to handcrafts, learning about sowing, skirts confection, new techniques of wool staining, menthol ointment preparation, and others. One women mentioned she'd like to have a green house, so that was the only action (from Ernesto's perspective) that could be associated with risk management. The rest of the activities, he said, were not inside the GRAC competence, so that the municipality or the local NGOs could fulfil those desires maintaining his position of decision taking and not deciding it together with the women.

In other area, there were some other petitions I came to collect about women's interests. For example during one of my focus group discussions, the group asked me to provide them with some information about birth control and family planning. In other meeting with the artisans' association board they asked me to help them writing letters, teaching computer skills to one of the artisans (to have a better control of their income and expenses), to help them producing a power point presentation and a video of their handcrafts to promote their work outside the store where they sell, they also asked for a motivation and organizational encouragement workshop for all the members so that they'd feel more committed to the association, among others. When I talked to Pepe about these petitions he said his local NGO could support one workshop and that the rest I could try to do during some other time, or with AGRECOL's support. So it is that I organized that workshop during the monthly meeting of the artisans' association a health anthropologist (an aunt of mine that volunteer to give that speech) could attend to give a talk

about birth control and family planning. Besides it, another researcher of the GRAC team that was studying social organizations contributed giving a motivational speech to the members of the association.

The final aspect I'd like to talk about bridging actions to reduce the gap between the projects run by the local NGOs, the GRAC project (especially) and the women of the community is the attempt to spread women's practices I mentioned before in chapter three during the focus group discussion activities. Now that I look back as the source of events I can see that I was forcing these activities to fulfil my own interests. I had a dilemma of only "extracting" information and not providing anything with the results of my thesis. Besides that, I knew that the *Yapuchiris* workshops were only for men, so I wanted to include the female part on it.

Therefore, I arranged that at the end of my field work I'd organize two encounters to show my results among women. I thought that I could systematically document these encounters to learn from the process that I used to refer as: "What happens when practices are shared in a tentative process of exchange to strengthen women's climate variability management?" I felt that making practices explicit, women could identify which of them they didn't know before and which of them they considered interesting to use in the future for themselves. The idea was interesting, but I forced a process of classification of the practices with colourful cards dynamic that didn't work out and was not really necessary. With interface analysis now I understand that when there's an encounter of exchange, life-words get modified but that's too complex to measure or to quantify.

## 5.7 Wrapping up and concluding

The relationships among GRAC team mates and researchers, the local NGOs' *técnicos*, community members, *Yapuchiris* and women in Chuñuchuni were far from strait forward. In this Chapter I presented diverse examples of the encounter between life-worlds and what happens at the social interfaces between a development project and the women it is designed to serve. The concepts and activities to be discussed or confronted, who convenes with whom and who decides, what continuities and changes take place during and after the encounters reveal a dynamic process full of strategic action but also contingencies and surprise. Finally, I wish to explore opportunities for greater agency of the women who largely appeared to lay at the margins of this development activity.

The Yapuchiri project design showed ideals that contradicted in many aspects. For example, while identifying Yapuchiris as promoters they were selected by the criteria of their performance as outstanding farmers. They looked as farmers as male individuals as if they were separated from their family-run enterprise (that as we saw in chapter two, farming activities are family conducted) revealing a male-centric bias as if individuals, and especially males were capable of acting autonomously. Furthermore, to select "new" Yapuchiris to be trained, the task was left in authorities' hands that selected them on a voluntary basis criterion. In this sense, "new" Yapuchiris would be named "Yapuchiris" (that had a previous connotation of a farmer that

performed better than the rest of the farmers) differentiating them from the rest of farmers while in the practice they could be the same.

When I talked about the narrative of the GRAC project regarding that the *Yapuchiris* will further lead their own development and lead the following formation and experimentation cycles up scaling them to municipality level and even trying to include their lessons at a school level, what we can really observe is that *Yapuchiris* don't even participate during community meetings. The processes of making them appropriate of the GRAC methodology and procedure is not yet achieved. But why is this happening? It was described that during monthly Ayllu meetings the GRAC engineers would participate in the meetings, but they'd speak and report the activities themselves instead of delegating it to the same *Yapuchiris*. We also saw that the "homework" of the *Yapuchiris* to validate their work during workshops at a community level was never accomplished. It's difficult to know the reasons, but from the little experience in collective validation activities that I gained during two the focus group discussions, I realized that community members didn't like to be exposed into a classification or validation process. That is because most of the activities a farmer or a family do are particular and heterogeneous not to be generalized. In validation processes there is the danger of being evaluated from each one's perspective and thus not from what the rest could know or experience. Validation sessions usually evaluate as positive what they see and that's not precisely all what someone could know or could experiment.

In the other hand, the principle of differentiating *Yapuchiris* from the rest of the farmers with the fact of nominating them as "Yapuchiris" separates them. Therefore actions to reach consensus with the rest of the farmers would represent putting themselves again in the same position than the rest of the farmers. This petition by the GRAC *técnicos* contradicts the logic of distinction that the *Yapuchiris* gain when selected as "Yapuchiris". Nevertheless, it is important to distinguish that the GRAC strategy to combine *técnicos* work with *Yapuchiris* promoters was a mechanism to facilitate the intercultural dialogue to reach their project objectives.

But, the differentiation it's not only an AGRECOL procedure, the same type of differentiation that the GRAC project does with *Yapuchiris* can be observed in one of the local NGOs técnico, Juan, when trying to differentiate him from me. He wanted to show that he is closer to the people because he is not urban nor a person with white skin as me. Nevertheless, he is not a neutral actor because he evokes symbols strategically to show he is closer to indigenous people. His racism shows he doesn't want people with white skin to work with "his" people. He differentiated himself from me as the GRAC project differentiates *Yapuchiris* from the rest of the commoners. In practice this means that the GRAC project cannot work with common farmers but only with the "elected" ones. So do the local NGOs cannot work with "white" people, but with selected ones? How would they reach the whole community with this gap and differentiation they create?

A contradiction lays in Ernesto's claims that the GRAC project is different than typical development projects, because it does not rely on external agents and "exogenous" knowledge, but instead on the leadership of *Yapuchiris*, local experience and traditional practice. The *Yapuchiris* are offered a monetary compensation for teaching, which takes them out of their fields

and places them in the institutional context of the professional bureaucrat, subject to the whims of donors and the administrative priorities and processes of the research for development project. The GRAC project finances the materials (most of them bought in the city) for experimenting, so there's no certainty that the *Yapuchiris* will continue using the natural pesticides or fertilizers when the GRAC project won't be there anymore to buy the materials and to transport them from the city to the communities.

During interviews on communities, Juan declared in repeated opportunities that the people were poor, "screwed up" that their living conditions were terribly hard and tough. We also saw the indicators that are used by the National Statistic Institute to measure the degree of poverty of the area. Nevertheless, when talking to the people of the area, they presented a very different concept about poverty. They denied that they suffered and their own poverty indicators were associated with daily difficulties instead of to their living conditions. When provided the opportunity, they invested extra money in cellular telephones, a vehicle or festivities and not in a latrine or increasing the size of their house.

Pepe and Juan used a narrative of "participation", while in their discourse their facilitation in participatory processes was utilized to advance their "climate change and gender" agenda. As we saw the outcome of the Ayllu Urinsaya productive project Pepe and Juan strategically used the workshops and diagnosis sessions to advance their project. During the wrapping up moments they'd obscure all the participations and inputs of the participants to shine topics about risk management generalizing and homogenizing interests of age, gender and occupation. Van Paassen (2010) calls a "facipulation" process which includes facilitation for manipulating certain outcomes. As Long (2001, 187) explained, this happens when the facilitator limits the time to topics he consider irrelevant and emphasize topics he consider relevant. This attitude from Pepe was observed during the workshops with the women when he wanted to generate curiosity or when he wanted to make contagious his own interests related to what he considers is important. The "facipulation" use of facilitation meant that for the local NGOs practitioners participation is neither pluralist nor democratic, but that it is manipulative and homogenizing. It demonstrates that they work more for themselves (the *técnicos* of the women's development projects) than for the community, because the resulting project could generate them an extra job paid by the municipality.

During the encounters between GRAC implementers with themselves, with local NGOs *técnicos* and with student researchers is clearly seen that no one of them have experience in interacting together with the development and research components. It's also seen that their conflicting interaction bring conflicts also with the community members who start asking for many things, materials, courses, trainings, etc. Sometimes these petitions are fulfilled and some others didn't succeed adapting the "risk management actions, climate change and gender" requirements in the administrative structure of the projects. It'd be seen that the one to discriminate what activities, workshops and material petitions are worth to spend in, was usually: Pepe from the local NGOs and Ernesto from AGRECOL. The conflicting interactions generated interfaces with wider social

differences and discontinuities as the researchers, instead of getting closer to people from the community to conduct their research, were perceived as assistentialist providers of materials, technology and workshops.

During the encounters between the GRAC people (engineers and student researchers) and the *técnicos* of the local NGOs, with women of the community we can see many elements of social discontinuities and transformations. To accomplish the donor's plan of action of the local NGOs, the workshop organized for them (that had to be included before the end of the year 2010) had an improvised day agenda including guest speakers that were not coordinated among themselves and that talked about they thought was interesting and not what was convened, instead of including women's practices to manage agricultural risk which had to be the future results of one of the researches. The improvisation also forced the participation of one of the guest speakers (the director of the artisans' association) in order to have a full room of participants that were there primarily because they were convened to attend to a "sharing and eating" day together. Strategically using a sharing and eating event was an opportunity to get close to women, but during the rest of the day of the workshop the social differentiation and thus discontinuity was the principal component of the interface.

As we observe the local NGOs strategic use of a *Yapuchiri* from AGRECOL, Doña Eduarda in the workshop conducted for women, she is one of the only women trained by the *Yapuchiris'* course of the GRAC project. But analysing the types of implications of this trainings in Doña Eduarda's life we can see that Doña Eduarda's life change drastically as she becomes the first women getting into men's activities: fumigation. Her incursion in an unknown field that didn't belong to women implies that a change is happening in the traditional way of living, in the implicit social agreements of women's tasks and roles. This means that new opportunities get opened to women, perhaps meaning conflict and extra challenges for their daily lives and activities, but in the other hand, they could represent interesting and appreciated changes. If we go deeply into Doña Eduarda's life we can see that as she became a successful *Yapuchiri*, her reputation grew and went beyond the *Ayllus*, she began to lose attention to her animals and family. She has a 17 year old son that whenever her mother travelled to give courses, he skipped school and started drinking. Doña Eduarda's husband blamed the mother for being absent, but asked her to continue attending to the *Yapuchiris* programme as it represented liquid cash for the family, so he didn't need to work outside the house. Despite his discontent with her absence that represented him new responsibilities he disliked, he helped her taking care of the animals.

As in Doña Eduarda's example, the rest of the women learning from Doña Eduarda, either getting into *Yapuchiris* training, or into the women's development project activities, thus into men's tasks and responsibilities, could also experience a big change in their lives: an uncertain interface opened for them with unexpected outcomes in their private and social life. As we've seen the example of the workshop organized by the local NGOs for women, women as participants of the training gained access not only to the projects and its resources but to sources of information and got connected the people related to the projects: *técnicos*, researchers, *Yapuchiris*, other male and

female commoners, etc. They broadened a social network which was previously of difficult access for them. Opening this new interface doesn't show clear outcomes yet, therefore it's difficult to know how they'll be used. Nevertheless, the fact is that the linkages are established and new spaces are opened to transform resources and new projects of life, an opportunity that didn't exist before that could also bring some risks with it.

For the GRAC project, Doña Eduarda's participation in their course meant a success of including women in their project and reinforced their idea that the Yapuchiris' trainings are the only way to carry out development to improve peasants' lives. Furthermore, the petition of the local NGOs to AGRECOL, of using Doña Eduarda to give a workshop for women was a strategic decision in order to make the most of her influence over women. It is clear that the strategic use of Doña Eduarda as a bridge to reach women, and not any other male Yapuchiri was indeed because Pepe and Juan were aware of her capacity to influence other women and even men with her story, how valued was her experience among commoners, her ability to learn from other Yapuchiris and to reproduce and communicate her discoveries with the community. Doña Eduarda's role facilitated communication and transfer of agro-ecological technologies to women. Nevertheless, neither AGRECOL or the local NGOs, didn't expected that the interest of women in Doña Eduarda was going to reach more interest in her healing abilities than in her crop managing experience.

This example shows the mismatch between AGRECOL, the local NGOs projects and women's interests and needs. The contradiction of not including real women's activities in their agendas brings them the impossibility to have their wider participation in their Yapuchiris' courses or in the meetings organized by the local NGOs. It implies that, for the moment, they make development for men only. So, are the projects really reducing vulnerability, including women into the economic activities they believe important and reducing the impact of climate change as their original objectives? If the local NGOs' definition of climate change as well as the AGRECOL's definition of climate based vulnerabilities doesn't encounter with women's definition of vulnerabilities and experience of climate change, would their original objectives ever meet?

When interactions with women occurred, it can be seen that there was a big gap, because the projects would talk about agriculture referring only to land and crops management or production activities only as economic activities away from the field while excluding shepherding and other production activities. In the same way, the pre-established concepts of climate variability, climate change and climate based vulnerabilities would not be discussed in front of different perceptions of climate variability, climate change and vulnerabilities from the women's perspective. Women would consider that the projects are only for men due to the topics included in the workshops, only male facilitators, and due to the scheduled times when they were organized. Nevertheless, in the complexity of their interface they were encountering and broadening their network connecting not only with the projects practitioners, but with other men and women from the same community, Yapuchiris (as Doña Eduarda) and authorities. They had different times together where they shared each other's practices, shared knowledge about biomedicines and plants, where their networks broaden during the encounters. They'd probably won't use the linkages

immediately, but they'll stay at the back of their heads and they can make use of them at anytime in the future in manners that we cannot foresee yet.

## CHAPTER 6. CONCLUSIONS

Working with women in the Central Highlands of Bolivia meant a big challenge and a great opportunity. Obstacles culturally and socially constructed opened a gap in reaching their life-worlds. Nevertheless, hearing their hidden and silent voice while getting to understand their logic to confront endemic climate variability broaden the conceptualization of climate variability itself and vulnerability that women from the Central Highlands of Bolivia experience. Moreover, during the process of studying women's practices they were placed in the pathway of Agricultural Research for Development industry. The identification and analysis of the social interfaces that emerged from this encounter provided deep insights into understanding how development policy implementers and community leaders selectively set agendas that not necessarily represent women's interests and concerns over climate variability.

Getting to know women's roles and activities in a Chuñuchuñuni's family I identified men's and women's responsibilities and tasks that could be explained furthermore with the notion of gender constructed social roles. Zabalaga (2005) develops an explanation about the social construction of gender and remarks on value assigned to specific roles attributed to men and women in the sexual division of work. As consequence of this, women, as observed in Chuñuchuñuni's families, perform a double shift of 16 to 19 hours a day. Furthermore, I found an explanation given by the same author of why women used to retract their participation in public scenarios as social construction of gender roles are fully develop in different social spaces: for women in a private space and for men in the public space.

In addition, Matamala (1996) includes a description of another component socially constructed by different societies which refers to the values attributed for being a man or a woman. For example, when being a man he is supposed to be macho, brave, bold, fearless, etc., while when being a woman she would usually be sensitive, weeping, fearful and gossip lover. Assigning these values, women are being mistakenly classified as the "weak and vulnerable gender". Therefore, when they develop strategies to confront pain, poverty and adversities, they cannot associate it with the fact that they are being creative, brave and courageous as they are usually obscured by the explicitness of the weak image and role they are supposed to play. In this regard, women from Chuñuchuñuni explicitly talked about their weakness, vulnerability and poverty while in the practice they showed exceptional capacities and strength to overcome any adversity.

Selecting five different case studies and conducting a classificatory dynamic in two focus group discussions I understood what Long (2001) describes about epistemic communities. Despite they share roughly the same sources and modes of knowledge, they are different internally and their adaptability to change depends on that diversity. Instead of generalizing, integrating and systematizing women's practices in order to get a single knowledge system, in epistemic communities, heterogeneity is the key to innovation and adaptability. Therefore, women's practices should never be tested into a collective classificatory process as their uniqueness provide

the necessary tools to be applied in a single life-world that is not necessarily shared by any other entity. Focus group discussions, in contrast, provide a huge variety of contributions, that when wisely elicited and conducted can provide collective explicit explanations to tacit and uncovered individual descriptions.

Women's cultural practices<sup>28</sup> in the context of climate uncertainty were grouped taking into account women's gender constructed roles and activities. In this sense, they were grouped in practices developed in livestock management, care and reproduction of the family unit, income generating activities, farming activities and traditional and socio-cultural activities. Many of their practices couldn't be explained explicitly, meaning that they are so embedded in their daily lives that the reasons were taken for granted and lost explanation. In this sense, for women of Chuñuchuñuni explicit is the same as implicit because they practice what they know and know what they practice. As Sherwood et al. (2009 and Sherwood et al. 2009) explains, "we learn and know more than we can explain". In addition he reflects that "not talking about something doesn't mean not knowing about it". In this sense, women's practices showed to be tacit and implicit which are being transferred from generation to generation through practices and not through words, as it is embedded in people's making.

In the other hand, the practices that women showed in confronting climate variability differed greatly depending on their age, social status, place of birth, economic status, production system, conditions of life and daily activities. Activities related to farming, taking care of the family and socio-cultural activities regarding the relationship with the community showed similar acknowledgement within the diverse women. But activities related to the specialization of a particular task (as livestock management, local knowledge of nature or income generating activities) showed diversity among the different case studies.

When placed at the interface of climate and development, women become a difficult target to achieve if the professional-led, project-based actions include only male and from men's perspectives activities. When workshops were male led (as both of the project implementers are male), at male daytimes (meaning at times where men can skip their farming activities to attend workshops, while women cannot escape to their activities of animal and family care), where only male activities are discussed (for example when talking about agriculture referring only to cultivating the land and not livestock management, handicrafts production activities or the not commoditized household activities), then "development" takes off far away from women's ground, thus their attendance and interest reduces to the minimum.

Nevertheless, resources for women are there in development projects, therefore something have to creatively be organized to spend it. Women's concerns are then selectively utilized, by development agencies and community leaders, in setting the agenda to obtaining access to those resources, while not necessarily representing the interests of women themselves. In one example we discussed in Chapter five, the foreign view of climate based vulnerability was defined in four

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<sup>28</sup> Cultural practices referred to practices that are implicit

explicit categories (ecological, technological, economical and socio-cultural vulnerabilities), while women used a different taxonomy based on more holistic concepts, with less explicit categories as vulnerability is embedded in their daily life and practices and showed to be an implicit principal of surviving in the Central Highlands of Bolivia.

The same happened with the conceptualization of climate variability and climate change, while the development agencies understood it including only the meteorological indicators that present number and facts of severe climatic risks, women from Chuñuchuni perceived and described them through the observation of their local environment embedded in their daily activities and interweaved into their responsibilities. For example they described the late out spring of grasses through the observation of their thin animals and the number of them passing away; they talked about the intensity of storms, hail and frost affecting their health in the daily journeys of shepherding or water eroding the grasses available for their animals; or they talked about the change of the river level that would not allow them to cross it to reach the market.

The implications of these existing gaps separated women from the development projects. It was difficult to understand how the projects would reduce vulnerabilities resulting from climate variability and climate change when the same conceptualizations differed from the local perspective. This situation placed into question the notion that there was a single best pathway forward in addressing concerns over climate variability framed by the development agencies. It also began to expose me to the underlying competing realities and politics of development in practice.

During the preface I described that pure social research or pure biological research was not for me, because I felt they were too separated from the people and their real needs. While trying to get into the world of development I attempted to heal this shortcoming. Nevertheless, the same as in the academic world I realized that in the world of development in practice repeats the same disconnection from the real world and people's needs. There's the same dichotomy between the thoughts and the actions. There's a differentiation between the professional or the expert and the lay. There exists a big gap, which is strategic and problematic, promoted by the titles. The gap is strategic because the professional or the scientist doesn't exist without that gap.

This institutional crisis needs to be healed finding our human common essence. The opportunities to build bridges among development bureaucrats and local people are far beyond any expensive assistentialist measurement, it is just at our doorstep. Taira Isabela helped me identifying those opportunities. She opened me the possibility to connect with the women beyond my titles and my activities, beyond the colour of my skin or the language I spoke. She unexpectedly built a bridge that allowed me to cross over the social gap between the women of the community and me. She taught me we should find commonalities in practice than differentiations among the people that manage the resources and the people that experience the consequences.

Finally I'd like to comment on a personal learning of going local. If there's something I learnt during this thesis is the richness of detail and the importance of grounding. The first thing I narrowed down was the place of research. From Wageningen, I thought that I was going to conduct my research in the "Ayllu Urinsaya", but after arriving, I realized that would mean conducting research with hundreds of families in five communities spread out across an expansive landscape. At first, I narrowed down my research population from five to three communities, but the number was still too ambitious. After three months of field work, I settled on working with five families in a single village: Chuñuchuñuni.

The second thing I learnt was to narrow down my research questions. I started with six research questions. Besides getting to know 1: what are women's roles and activities, 2: what practices, activities and knowledge they use in confronting climate variability and 3: what would happen in an exchange session and in a process of classification of women's practices, activities and knowledge in confronting climate variability; I also wanted to 4: find practices, activities and knowledge that would have changed (comparing old women, younger women and adolescents' girls); I also wanted to find out 5: how knowledge is managed and transmitted; and finally I wanted to include a 6: sensorial analysis of women's perceptions of temperatures, flavours, smells, etc. to develop their practices to confront climate variability. Eventually, I reach the conclusion that "less could be more", in the sense that provided the limitations of my field work, I would gain greater insight into my research by going "deep" with a small number of questions than "shallow" with a larger number. Despite the learning, during the writing an extra question jumped into my analysis trying to shed light on the social process and politics involved in placing women's practices in an interface of climate and development.

The third thing I narrowed down was the number of cases I was going to research. I started thinking that ten families was a good number to analyze, but later on I realize that again it was too much for too short time, so I reduced it to five. Again I considered that "less could be more", and I tried to go "deep" with a small number of families than "shallow" with a larger population.

What I finally learn after so many narrowing downs is that a research that wants to be representative of a particular understanding, doesn't really need an extended number of communities, cases or questions, but to go very deep into few cases and to analyze and interpret them detailed and carefully.

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Don Valerio Rodriguez

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Doña Candelaria Franciscano

Doña Eduarda Terrazas

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Participants in workshop on “Salud, Nutrición y Alimentación Sana” in November 2010

Participants in workshop “Diagnóstico de la comunidad de Chuñuchuñuni, December, 2010)

Board and members of the artisan’s association

## ANNEXES

### Women's activities within practices in confronting climate variability

#### Livestock management

- Selection of the place for shepherding depending on the wind and cold season
- Selection of the place for shepherding knowing the place of water sheds for animals
- Selection of the place for shepherding knowing the fox migration
- Knowing the differences of fox varieties
- Plastic covers for baby animals
- Keeping baby's sheep at home
- Powder milk for baby sheep
- Maiz Caldos for baby sheep
- Chuño skins or grained Maiz for animals
- Collpa preparation for cattle
- Organic waste for porks
- Minerals and salt for llamas
- Alfalfa for baby sheep
- Barley and oat for sheep
- Mothers capture to avoid babies death
- Curing broke bones
- Curing sheep white eye
- Curing sheep diarrhoea
- Curing sheep malnutrition
- Capando Donkeys to avoid their fights
- Animals' birth control

#### Care and the reproduction of the family

- Tradition of tithing babies
- Breast feeding duration
- Sheep milk for children or cheese transformation
- Number of births' control
- Husband care
- Sleeping on the side while pregnant, if not the baby get asphyxia
- Shepherding association
- Family support for shepherding
- Food processing technology: freeze-dried potato and oca and charque
- Contributions for shared breakfast at school (and in wawawasi)
- Communal Potatoes for teachers to increase their income

- Obtaining clean water from contaminated rivers
- Rain water collection
- Communal water system
- Ahorro para la compra de terrenos y construcción de casa en la ciudad (migración parcial)

### **Income generating activities**

- Sale of animals to obtain cash
- Sewing
- Skirts fabrication
- Weaving to sell products
- Selling work force in the community (teacher, cooker, translator)
- Part time migration: Part time or temporary jobs in the city
- Put up a store in your front room
- Market commercialization
- Artisans' association belonging
- Getting organized to get financial support and projects

### **Farming activities**

- Communal Cultivations: holding as many plots as possible in different zones to maximize altitude, sun exposure and soil fertility differentials
- Combining crop
- tinkering with planting dates and crop varieties to match changing rainfall (1ra, 2da y 3ra siembra)
- Terracing
- Fallow Rotation: Rotational multi-cropping systems
- Seeding in two different communities
- Seeding in two different risk places
- Siembra y guano
- Aporque y cosecha

### **Traditional and socio-cultural practices**

#### **The communitarian and socio cultural field**

- Reciprocity practices: ayni, minka and umaraqha
- Tradition to elect only men jilacata that with his Poncho will protect the fields from hail and frost

## **Local knowledge connected to the relationship with Nature:**

### **Knowledge of Bioindicators**

- *Animal Bioindicators*
- Bioindicators: fox
- Bioindicators: chino-chino insect
- Bioindicators: kapurito insect
- Bioindicators: fish
- Bioindicators: birds
- *Plants Bioindicators*
- Bioindicators: waych'a
- Bioindicators: qh'uta
- Bioindicators: muña
- Bioindicators: Laqhu
- Bioindicators: ulala
- Bioindicators: sank'ayu

### **Other Nature elements**

- Bioindicators: moon
- Bioindicators: stars/ qhutu
- Bioindicators: clouds
- Bioindicators: rainbow
- Bioindicators: ice
- Bioindicators: Wind precedence brings rain or frost

### **Knowledge of Plants**

- Knowing toxic plants for animals
- Knowing sheep llamas' food herbs
- Knowing people' food herbs
- Knowing people' medicinal herbs
- Knowing plants' medicinal herbs
- Knowing animal' medicinal herbs
- Knowing animals' milk stimulating herbs
- Plants for stain

### **The traditions and spirituality field**

- Tradition to celebrate *Todos Santos* to skip bad luck in the family and production
- Weddings tradition and prosperity

- Tradition to recognize cattle and prosperity
- Tradition after death by thunders to skip bad luck
- Tradition to defend from hail: green straw burning
- Tradition to defend from hail: alcohol in the 4 cardinal points
- Tradition to defend from hail: a black manta in the roof or crop field centre
- Tradition to defend from hail: death dog's head in centre of cultivar
- Tradition to play the *pinquillo* to call the rain
- Communal fasting