

Networking for development in the Bolivian Andes

NGO Chakana in action



M. Sc. Thesis by Hindertje Heemstra

September 2006

Communication and Innovation studies



WAGENINGEN UNIVERSITY
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Networking for development in the Bolivian Andes: NGO Chakana in action

A case study of the communicative processes between Chakana and the other actors within three project-networks of NGO Chakana

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September 2006

Master Thesis Communication and Innovation submitted in fulfillment of the degree of Master of Science in International Development Studies at Wageningen University, the Netherlands.

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Abstract

This master thesis is the result of a five months research of the project-networks, and the communicative processes within these networks, of NGO Chakana in the department of La Paz, Bolivia. The study is carried out in cooperation with the NGO Chakana in three of its development projects: the construction of a 'Centro Artesanal', irrigation in the valley of 'Achocalla' and irrigation in the community 'Monte Rojo'. This study is aimed at exploring the relation between on the one hand Chakana operating in a network-environment with communicative processes between Chakana and the other actors and on the other hand the performance of this NGO in carrying out these projects.

The theoretical framework that is used to guide this study consists of two parts. On the one hand network and network analysis and on the other hand the communicative processes Sharing of Knowledge, Social Learning and Framing. The communicative processes influence the way Chakana is carrying out their projects. By giving insight into these processes, the performance of Chakana can be improved. This will increase the efficiency and effectiveness of their rural development projects.

The main focus of this research are the organizations and their communication with Chakana in the three development projects. The research describes and analyzes their objectives, resources, connection with Chakana and the way their communication with Chakana is taking place during the running time of the projects. This research has focused on the shocks and problems that took place in the networks to be able to see the communication patterns that stay hidden in a situation without problems and shocks. The analysis is descriptive and aimed at giving a detailed insight in what happened between Chakana and the other actors in the network during the running time of the projects.

The fieldwork consisted of a five month study of the three projects. Because of an internship at the office of Chakana it was possible to get a complete picture of what happened in the project-networks. Interviews, observations, daily work on the office of Chakana report-reading and project-visits were part of the methodology.

The three project networks are characterized by the diversity between the actors involved. The beneficiaries, the rural communities that benefit from the project, are actively involved with the development of the projects. The cooperation between Chakana and the other actors starts relatively late in the process; when the work on the project is beginning. In the stadium in which the project proposal is developed, Chakana has not yet activated their relations with all actors involved in the project. Other actors involved are the donors that have a remote place in the network and the municipalities of the project-areas. The communication relationship between Chakana and the other actors becomes visible through the existing ties and flows. These ties and flows between Chakana and the other actors determine the role the actors play in the network. The maintaining of the communication relationships is difficult in the Bolivian context where reliable communication technology is lacking and distances are big. Chakana as network-coordinator has to put a lot of effort in reaching the other actors in the network by traveling to project-sites, visiting municipalities or phoning and emailing with foreign actors in the network. The description and analysis of the network can be seen as the

external part of this research. The internal part is formed by the communicative processes between the dyads of Chakana with the other actors involved.

The exchange of knowledge depends on the expectations the actors have of the importance of certain knowledge. Knowledge played the role of being a resource actors have access to. A distinction has been made between tacit and explicit knowledge. For example the local communities can rely on tacit knowledge that is part of their culture. It was difficult for them to share this knowledge because it required participation, interaction and understanding of the Aymara language. Actors in the network were not always aware of the potential of their knowledge resources. Social Learning is important for all actors involved because they can use the new knowledge and skills to improve their personal position and performance in the network. Cultural differences and different frames hamper social learning between actors. Also the relatively short running time of the projects caused that social learning and reframing were not fully taking place between actors.

Prologue

Ever since I traveled in Venezuela and Brazil in 2004 I knew I wanted to go back to Latin America to improve my Spanish and do research about the way development projects are carried out. During this trip and my master studies in Wageningen I heard about a lot of development-projects, some were very successful and others had failed. I wanted to know what factors could play a role in the performance of the NGO who carried out a development project aimed at the improvement of the living conditions of local people.

My background was social and political studies of the environment and I have always been interested in the way NGO's work to reach their objectives. I started to orientate myself on the possibilities of doing research about the work of NGO's in Latin America and got in contact with Hilvert Timmer of NGO Chakana. Hilvert had founded Chakana together with two friends in 2002 to contribute to the development of the rural indigenous people in the Bolivian Andes. Chakana was a young and dynamic organization that was growing very fast. By looking at the communicative processes that occurred in their networks for development, I wanted to contribute to their professionalization and the expansion of the organization. The chair group of Communication and Innovation Studies covered this relation between development and the communicative structures of a NGO that was operating in a network environment. Rico Lie guided my work during the preparation of my fieldwork and thesis, supported me when I was in Bolivia and in the period that I wrote my thesis. I experienced this cooperation with Rico as pleasant and inspiring, for which I am very thankful.

My special thanks go to the team of Chakana in the Netherlands and Bolivia who helped me during the preparations of this research, my internship at the office of Chakana and my research in Bolivia. During the preparation of my stay in Bolivia they helped me with finding relevant literature, making contacts and giving information of the work of Chakana. Because of their enthusiasm, energy and support I went well prepared to Bolivia. During my stay I could always rely on their advice and support. In Bolivia I found myself very welcome in the office of Chakana. The executive director of Chakana, Hernan Huaycho helped me from the beginning with getting used to the Bolivian culture, showing me the work of Chakana in the field and making contacts with relevant people for my research. Thanks to his efforts and enthusiasm I was able to carry out this research and have a wonderful and unique experience in La Paz, Bolivia. I think the work of Chakana is very useful and contributing to development of the rural communities in a positive and sustainable way. Without the people who assisted me in Bolivia this research would not have been possible. It is not possible to mention everybody personally but I want to thank everybody who contributed to this research by investing their time, sharing their work and experiences or talked to me in interviews. I hope I can contribute to a step forwards in their process of development.

Last but certainly not least I want to say thanks to my family and friends for their support while I was in Bolivia but also when I got back and wrote this thesis. Their support and enthusiasm for what I was doing, motivated me to continue with working through my results and writing this thesis.

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Chapter 1 Introduction of the Research Topics

1.1 Introduction

Once the centre of the proud and blooming Inca Empire but now one of the poorest regions in the world: the Bolivian Andes. A lot of development efforts have been done in this area since the sixties of the 20th century and the projects that have been conducted vary in a wide geographical and topical range. Bolivia has only eight million inhabitants and the amount of money spend on development per capita is huge. According to a development worker I met in Bolivia every Bolivian citizen could have driven a Volkswagen and could have had his own house if this money for projects would have been spend properly. With this research project I hope to contribute to the insights that can improve the quality of development projects that are carried out by NGO Chakana to improve the living conditions of the people in the Andes. For this thesis I have spend four months with the non governmental development organization Chakana in La Paz to learn about the organization and gather the information I needed to write this master thesis. There are a lot of organizations like Chakana that are concerned with development in Bolivia; national and international NGO's, governmental organizations, grass-root organizations or companies. All these players in the field of development are related to each other in networks because they can not accomplish their goals on their own. To look at the work of NGO Chakana I used therefore the concepts of *Network*, *Knowledge-sharing*, *Framing* and *Social Learning* to analyze the way the different stakeholders in the network around NGO Chakana are related and cooperate to contribute to rural development in Bolivia. I also wanted to know how knowledge is transferred within these networks and if the rural people participate in knowledge sharing for their development. Local and indigenous knowledge can be enriching for the development, planning and implementation process. It is therefore important that grass-root organizations and other local development actors contribute to the exchanges of ideas, experiences and knowledge.

Before the problem statement is dealt with in §1.4, I will pay attention to the context in which this research project is located.

1.2 The indigenous people of the Andes

One of the indigenous ethnic groups that live in the Bolivian Andes are the Aymara people. The Aymara are located mainly on the Bolivian and Peruvian Altiplano, centering around Lake Titicaca. The history of the Aymara has been characterized by shifting pressures from dominant groups. Prior to their conquest by the Inca around 1430, the Aymara are thought to have been organized into a series of independent states or sub-tribes, which were probably also dialect groups. They had a big and blooming empire with the city of Tihuanacu as the religious and political centre. The collapse of this empire and their incorporation into the Incan Empire resulted in a significant degree of Incan acculturation up to the Spanish Conquest, beginning in 1535. Further fundamental changes in Aymara culture took place during the Spanish colonial period. From around 1820 to the present time, the Aymara have been under the rule of the Peruvian and Bolivian Republics, and pressures toward Westernization have continued. Many dramatic changes have occurred within the last 25 years, as both the Bolivian and

Peruvian governments have undertaken programs of land reform and programs aimed at rural development and the incorporation of indigenous populations into the national mainstream. The majority of Aymara are dependent on agriculture for at least part of their subsistence. Animal husbandry is a secondary activity, with sheep, llamas, cattle, and alpacas being the main domestic animals. Fishing is widespread, but its economic significance varies regionally. In a few areas around Lake Titicaca, it is the dominant activity. Migratory labor of various types (most of the time from the mountains to the subtropical Yungas), part-time craft specialization and marketing round out this picture of major economic activities. In and around La Paz the majority of the people are from Aymara origin. They speak the Aymara language and the practice of their culture is embedded in everyday life. The Catholic religion for example is a mixture between Spanish Catholicism and the local religious traditions that have existed for centuries (online encyclopedia Wikipedia).

1.3 Political background of Bolivia

Beside the historical and economical background of the Aymara people, the political background of Bolivia in general is relevant for the context of this research. There exists an economic and social tension between the modern society and the indigenous people of the Andes. This tension is openly visible in the societies of the cities of La Paz and neighboring El Alto. Indigenous people stand up to fight for their rights like better living conditions by blocking roads to La Paz as a political pressure instrument. The tension between modern society and the Aymaras also exists in the rural areas but less visible than in the cities. The rural Aymara people have little resistance against the power and culture of the modern society as a whole, while they are confronted with it more and more. Because of political reformations and decentralization in the nineteen nineties the political power stretches out even to the remote Aymara villages. Decentralization – the transfer of functions, responsibilities and financial resources to lower levels of government – has become a quite common element of public policy in most developing countries. Decentralization is expected to have a positive effect on the development process by reducing the inefficiency associated with centralism, making local government more responsive, increasing intra-regional equity and promoting greater local participation (Nijenhuis, 2002). The increasing popularity of decentralization should be interpreted within the wider context of state reform and democratization. The belief in a strong central state has weakened considerably in recent decades, as the failure of the state to respond adequately to the needs of the population became apparent, in particular in the provision of basic services. Also, the tendency towards democratization, which began in the early 1980s, raised questions about a broader context for development, and the role of the population in local decision-making (Nijenhuis, 2002: 21). Bolivia launched its decentralization process in 1994. One year earlier, Gonzalo Sánchez de Lozada had become president after conducting a highly ambitious election campaign, the *Plan de Todos* (Plan of All). This plan contained a number of drastic reforms, including the privatization of a number of public-sector companies, the improvement of land tenure and the pension system, and the introduction of bilingual education. The decentralization model was at the root of all these reforms.

There are several reasons why the decentralization effort had far-reaching effects in Bolivian society, and particularly in rural areas. Before 1994, the concept of municipality was confined to the towns and urban settlements, leaving the rural areas out of the political-administrative structure. Now the territory of the municipality encompasses both urban and rural areas. Along with the rural population, women and the indigenous population are specifically mentioned as target groups. The aim of

decentralization policy in Bolivia is to increase the population's participation in the local decision-making process. (Nijenhuis, 2002: 17). As Nijenhuis shows in his research, the Bolivian case illustrates that the contribution of decentralization to the reduction of inequalities both within and between municipalities is quite disappointing. Decentralization has resulted in a more equal distribution of funds between municipalities compared to the pre-1994 situation and in an improvement of the investment capacity, a first condition to increase development opportunities, but existing differences between resource-poor and resource-rich municipalities have not been evened out. Nor has decentralization reduced inequalities within municipalities or ensured that different groups within municipalities have equal access to development opportunities. The population in less accessible areas receives relatively fewer projects and fewer investments. The villagers are not able to stand up for their rights because of lack of knowledge of the Rural Aymara concerning their rights (political and social) as a Bolivian civilian. As long as the rural Aymara are not able to gain political power and resources they stay dependent on other actors for their social, economic and agricultural development. By involving in networks and exchanging their knowledge, the Aymara can strengthen their social-economic position in society which can lead to more political influence. Knowledge, for example about environmental and agricultural systems, can function as a resource in rural development projects. The Aymara communities consist of poor farmers and knowledge as a resource can strengthen the position of the Aymara in the network: they have something to offer. Although the rural Aymara farmers are hardly represented in the local government, a wind of change, as the local newspapers call it, is blowing through the country. On the 18th the December 2005 the Bolivians have chosen Evo Morales as their new president. Morales is an indigenous Indian, and head of the socialist party, Movimiento al Socialismo (MAS), that made the promise to stand up for the rights of the poor indigenous people in the country as well as in the cities.

1.4 Problem statement

Development of the Aymara People in Bolivia

With this research I hope to contribute to the economic and social development of the Aymara people in Bolivian Andes. Although this is a very abstract and idealistic goal to reach with a master thesis I think that providing more insight in the way development initiatives take place, can help to improve the processes of development, although on a small scale. In the former paragraph was shown that the situation of the indigenous people in Bolivia needs to improve in order to change the poverty and underdevelopment people are faced with. One of the main objectives of NGO Chakana is to contribute to the development of these rural Aymara with Agro-Ecological and Socio-Economical projects. By looking at possibilities for improving the performance of NGO Chakana and providing the organization with recommendations I hope to contribute in an indirect way to the development of Bolivia.

Performance NGO Chakana

NGO Chakana is working in the field of rural development in Bolivia and meets difficulties in working together and involving other organizations. One example is the municipality in project areas. Although there is a budget available for rural development, the municipalities are not enthusiastic in sharing and participating in the development projects of Chakana. This raises questions because the municipalities benefit financially and practically from cooperation with development organizations. A second problem Chakana faces is that the knowledge transferred in the projects is not used by the rural

people who should benefit from it. The cooperation with the beneficiaries is sometimes problematic and threatens the planning and implementation of projects. Thirdly there have been problems in communicating the development of the project to the financier of the projects. This has led to a decrease in trust in Chakana. These are signs that the network around Chakana faces communicative problems of the understanding and the sharing of knowledge to reach development goals. This can be seen as a problem for the organization because Chakana wants to grow and become a big actor in Bolivian development. The organization is standing at a transition point at the moment and needs to structure its management and activities in order to be able to make the transition to a more professional organization. Chakana is operating since 2002 and needs to change and become more professional for its existence. The Bolivian employees work voluntary on the projects and it is necessary to find resources to pay these people for what they are doing. Therefore Chakana needs to find structural resources of income and that is only possible if they conduct their projects in a professional and efficient way. This research aims at contributing to this process of professionalisation by focusing on the way Chakana is functioning in the network for development. Communication, social learning and framing between actors concerned with the same subject can contribute to a better performance of the actors in the network. The overall goals of Chakana are socio-economic development of rural communities and these goals can be reached easier or more efficient if the actors involved with development cooperate together in a network of sustainable relations. When more insight is generated in the actors connected to Chakana, recommendations can be done for increasing the efficiency of communication for reaching Chakana's development goals. These tensions and problems in the network of Chakana lead to the following research objectives and research questions which I will present in the next paragraph.

1.5 Research Objective and Research Question

As said before there are a lot of development-organizations that try to improve the situation of the Aymara people in the Bolivian Andes. By focussing in this research project on one organisation and doing an in-depth analysis of this organization I hope to get insight in the communicative processes that occur between the development organization and the other actors involved with rural development. This will lead to recommendations to Chakana so that they will be able to improve their functioning and communication with other actors in their future projects.

This leads to the following research objective:

The objective of this research project is to give insight in the influence networks, and the communicative processes within these networks, have on the performance of Chakana in executing their development projects in order to give recommendations to Chakana so that Chakana can improve their contribution to rural development in the highlands of Bolivia.

The research objective aims at isolating a well-defined problem within the project context, to which the research can make a significant contribution (Verschuren et al., 1999).

This research objective leads to the central research question:

How do the project-networks of NGO Chakana and the communicative processes within these networks influence the performance of Chakana in executing their development projects in Bolivia?

Chakana is carrying out development projects together with other actors like the municipality or local organizations. The actors involved with these projects are

cooperating with Chakana in so called project-networks. These are networks that are formed around a development project that is carried out by Chakana. Next to insight into these networks, this research is aimed at giving insight into the communicative processes that occur between Chakana and the other actors in the network. Communicative processes are derived and defined from the theory that will be discussed in the next chapter.

1.6 Structure of this thesis

In the next chapter the theory that forms the backbone of this research will be presented. This will lead to the sub-questions that are derived from the central research question on the one hand and from the theory on the other hand. Because these questions are based on the theory, they are located in the final paragraph of the theoretical chapter. In the third chapter the methodology that was used to answer the research questions is discussed. In the fourth chapter I will present NGO Chakana and give insight into the development projects that were the central focus of attention in this research. This chapter forms the basis for the analysis in chapter five and six in which theory and practice come together. In the final concluding chapter I will give answer on the central research question based on the insights of all chapters together and give recommendations to NGO Chakana.

2.1 Introduction

The postmodern idea that social and cultural reality, as well as social science itself, is a *human construction* inspired me to write this theoretical framework. This concept means that reality does not exist independent from the observer and the paradigm underlying this assumption is called social constructivism. According to Kim (2001) reality is constructed through human activity. In the case of NGO Chakana all members of the network constructed around the development projects invent together the properties of their world at that moment. The reality that matters to me in this research is therefore the interpretation of the project by the different actors. Therefore I need to know how these people and organizations are related and how they interact to construct their reality.

This chapter presents a review of the current literature on network-theory and – analysis – as well as communicative processes that occur between the actors in the network and is written with the practice of development projects in Latin America in mind. The theoretical framework is constructed around two parts. The first part concerns network theory and analysis and the second part deals with three communicative processes within the network: sharing of knowledge, social learning and framing. The offered theory will lead to the research sub-questions and a research framework.

2.2 Network theory

2.2.1 Network society

A social network is a simple concept: nodes connected by ties. The nodes are represented by social actors like individuals, groups, communities, companies, countries etc. The ties may be any communication relationship existing between the nodes or units; for example kinship, material transactions, flow of resources or support, behavioural interaction, group co-membership or the affective evaluation of one person by another (S. Wasserman, J. Galaskiewicz e.a., 1994). The concept of networks is easy to understand in most cultures around the world because human contacts, for example in families, working places, friendships etc., occur in networks. The different networks of individuals and organizations are the building blocks of our modern society. The concept of the ‘network society’ encompasses elements of several discourses that were raised in the twentieth century and is used to understand and characterize an evolving range of interrelated social, political, economical and cultural forces. The concept of network has become very popular in social sciences in recent times. It’s flexibility, and in many senses it’s ambiguity, enables researchers to deal with phenomena of change which are difficult to contain within the boundaries of formal bureaucracies or nation states or the individual actor. Referring to networks provides a tool to assess the social location of specific actors as well as to identify general structural patterns from a relational perspective (Diani & McAdam, 2003). The term ‘network society’ applies to societies that exhibit two fundamental characteristics. The first is the presence in those societies of sophisticated technologies of networked communication and information management/distribution. These technologies form the basic infrastructure mediating an increasing array of social, economic and political practices. The second characteristic of network societies is the reproduction and institutionalization throughout those societies

of networks as the basic form of human organization and relationship across a wide range of social, political and economic configurations and associations (Barney, 2004).

“Networking is about organizations, institutions and individual actors joining forces around on a common concern” (Creech/Willard, 2001:19, in an ICCO publication, 2004). In the literature you can find a lot of descriptions with a variety of authors of what networks should be. I will use the different definitions as derived from the ICCO publication (2004) about “Networking for learning” to come to a complementary description of the concept of network. The box below shows the definitions that were quoted in ‘Networking for Learning’ (2004) to give an insight in the ways networks are perceived in literature.

- *Plucknett (1990)* – a network can be defined as an association of independent individuals or institutions with a shared purpose or goal, whose members contribute resources and participate in two-way exchanges or communication.
- *Barney (2002)* - Networks are comprised of three main elements: nodes, ties and flows
- *Nelson/Farrington (1994)* – Information exchange networking is a collaborative process of information exchange, around a central theme, carried out by actively interested parties.
- *Creech/Willard (2001)* - Networks are broadly understood to be a “combination of persons (or organizations), usually dispersed over a number of geographically separate sites, with appropriate communications technology.”
- *Anne Mische (2003)* – Networks are multiple, cross cutting sets of relations sustained by conversational dynamics within social settings.

Figure 1: network definition box

The concept of the network society suggests that an increasing number of contemporary social, political and economic practices, institutions and relationships are organized around the network form - flows between nodes connected by ties – though the precise configuration and character of these networks vary depending on how they combine the variable qualities of these three essential elements. Behind the growing interests in the process of networking are a few drivers identified:

- The emergence of information and communication technology in the 1980s and 1990s has made networking much easier. Global information exchange and learning with people from different parts of the world has become accessible for large parts of the world. In the Bolivia this is only relevant for people living in the cities with access to the internet and communication technology like cell-phones.
- A ‘sense of urgency’: “the growing complexity and inter-relatedness of major social-economic and environmental problems and the failure of some of the narrow approaches to solve issues like environmental degradation and poverty alleviation makes multi-stakeholder and wide-spread learning unavoidable and highly needed” (Creech/Willard, 2001).
- “Civil society wants to upgrade their performance through collective action. When they perceive a lack of access to relevant knowledge to be a critical factor hampering their work. Networks are strong because they fortify creativity and critical thinking through dialogue and exchange” (Engel, 1993).
- Intentions of civil society actors to improve their performance and increase their policy leverage – locally, nationally and internationally.

As said before the nodes in a social network are persons, groups or organizations and the ties between these nodes are formed by social contacts, exchanges of information, political influence, money, joint participation in projects etc. The notion of networks has become very important for development as well. The conventional development paradigm, which was based on the premise that poor countries can be propelled along a development path by knowledge (and capital) emanating from the rich, has been replaced by a new emphasis on the need for more balanced relationships between aid-donors and recipients and the importance of local knowledge for development (Scarf/Hutchinson, 2003). Development interventions are enmeshed in social networks, formal and informal, involving individuals and organizations. Their aim is to affect the lives of people within those networks, and those marginal to those networks. Development interventions can be seen as changes within a network of actors because it is aimed at improving for example living conditions of actors involved in these networks. The fact that actors are included or excluded from a network also changes the network itself. The acknowledgement of networks provide the opportunity for organizations to learn from each other and build on each other's strengths because networks require a communication infrastructure to support information sharing, collaboration and communication between network-members (Creech and Willard, 2001).

The above indicates that connectedness among people and organizations is a vital aspect of the social capital an individual or community can rely on. Connectedness can occur in five different contexts:

1. *Local connections*: strong connections between and among individuals and within local groups and communities.
2. *Local-local connections*: horizontal connections between and among groups within communities and between communities – these connections can become platforms for new higher level institutional structures.
3. *Local-external connections*: vertically oriented connections between local groups and external agencies or organizations, which can be either one-way (top-down) or two-way.
4. *External connections*: connections between and among individuals who are operating within external agencies.
5. *External-external connections*: horizontal connections among external agencies, leading to collaborative partnerships and integrated approaches to development.

In this research the local connections within organizations and the local-external connections are the most important forms of connectedness (Pretty, 2002).

For these connections in a network applies that: (a) the more linkages the better; (b) two-way relationships are better than one-way; and (c) linkages that are subject to regular revision will be more suited to current conditions and needs than historically embedded ones (Pretty, 2002). Connectedness can also occur with individuals or organizations outside the network. These units are not interdependent or connected to the network in another way but still have a link with actors that form the network. The concept of connectedness can therefore be useful to analyze the external relations of the actors within the network. Although there are no strict boundaries that define the network, in this research a distinction needs to be made between actors with a relation connected to the network and external relations. One way of dealing with this contradiction is the concept of soft systems (Röling, N. In: Wheelbarrows full of frogs, 2002).

A network where knowledge is exchanged between stakeholders can be seen as a knowledge system. In soft systems approach analysts do not assume systems to exist. Rather they see social actors as creating and maintaining social interaction as if they were

systems, through situation analysis, dialogue and collaboration to guarantee for example certain outcomes like sustainable development. The purpose of a system was no longer assumed to be naturally or scientifically determined but instead, understood as an emergent property, interactively brought about by the stakeholders themselves. In their eyes systems have to do with multiple stakeholders, different worldviews, intense social interaction and social problem solving: they are never static, never closed but always open and on the move. As a result systems have no clear set boundaries and many different metaphors can be applicable to their understanding, so that they are soft in the very real sense of the word (Leeuwis & Pyburn, 2002: 56). Soft system thinking has evolved on the same line as network theory; it focused only more on processes within the network. Multiplicity and diversity were recognized as basic tenets of successful knowing systems, while collaboration among social actors was found to be the exception rather than the rule (Engel, 1991).

2.2.2 Network-analysis

The above described theoretical understanding of networks leads to the practical social network analysis (SNA). Network analysis is the mapping and measuring of relationships and flows between people, groups and organizations. Social Network Analysis provides formal, conceptual means for thinking about the social world (Wasserman and Galaskiewicz, 1994) and is based on the assumption of the importance of relationships among interacting units. The essence of human behavior is the interaction through which one individual exchanges information with one or more other individuals (Rogers and Kincaid, 1987). These interpersonal relations are the primary units of analysis when analyzing the network. As such the social network perspective encompasses theories, models, and applications that are expressed in terms of relational concepts or processes. Actors and their actions are viewed as interdependent rather than independent, autonomous units. The basis for the focus on relational concepts is the proposition of social psychology, sociology and social anthropology that individual behavior is influenced through relationships of the individual with others. The networks in which an individual or organization is embedded thus offer a basic explanation of the choices and behavior of this individual (Rogers and Kincaid, 1987). Relational ties among actors thus are primary and observed attributes of actors are secondary (such as race or ethnicity of people, daily activities, responsibilities or experiences of people). There are several key concepts at the heart of the network analysis that are fundamental for the discussion of social networks (Wasserman and Galaskiewicz, 1994). The concepts that are relevant for this research are: actor, relational tie and flow. To look at these key concepts various existing and available techniques to visualize, analyze and model networks can be used and combined.

Actor: As stated above, social network analysis is concerned with understanding the linkages among social entities and the implications of these linkages. The social entities are referred to as actors. Actors are discrete units like individuals or collective social units like organizations. The use of the term actor does not imply that these entities necessarily have the ability to 'act'. They are linked to other entities and therefore have their own place within the network. Actors are the origin or destination of a tie within the network. The description of actors can be useful to get clues about the weight of actors within the network and the distribution in terms of power, size, income generating etc. Actors act on the basis of their functional role and the network- and goal-orientation. Interests, rules and power relations determine the role of actors in the network. Actors are at the core of

each economic and social activity and the drive to obtain, control and optimally use resources is found with every social actor (Kamann, 1998).

Relational tie: Actors are linked to one another by ties which have a social character. The defining feature of a tie is that it establishes a linkage between a pair of actors. In a professional setting in which projects are carried out, ties have a financial, professional, friendship, colleagues, dependency, patron-client, appreciation or controlling character. Ties can be seen as the infrastructure of the network through which exchange of resources is possible.

A linkage or relationship establishes a tie between at least two actors. When understanding ties among these pairs, the dyad is the unit of analysis. A dyad consists of a pair of actors and the ties between them. The tie is unique for every pair and says something about the interaction between two actors. Relational ties define relations. By analyzing the type of tie something can be said about the relation that is established by that tie. When material resources are transferred between two actors, the relation between them can be for example professional or patron-client. The same way ties say something about the roles the actors connected with that tie play in the network.

Flows: Flows go from one actor to another using the infrastructure provided by the relational ties. Examples of flows are materials, money, knowledge, services, activities, support, power etc. Flows together with relational ties form the communication relationship of the network. Flows say something about the power relations in the network. The ability of an actor to send flows to other actors and the amount and weight of these flows are an indicator of the importance and role of the actors sending and receiving flows in the network. The flows between actors also say something about the dependency between actors. Therefore the flow can be an instrument to exert power in the network by deciding the frequency and amount of the flows running from one actor to another.

The development of policy and innovation to reach development goals is situated such networks of independent actors and therefore I will describe the characteristics of a policy-network in order to come to an analysis of the network organized around the rural development of the Aymara-people in the La Paz region.

A network exists when the following conditions are met:

- Presence of multiple actors with their own differing goals, visions and interests (multiformity). There are several reasons for the differing views of stakeholders. One of them is the conflicting cultural values of actors in a network. When talking about sustainability for example some groups feel that mankind has been given the responsibility to protect and look after nature, while others feel that nature is there to be exploited by man (Leeuwis, 2004). People in a society and/or a community are characterized by many differences, from which different interest emerge. Men may, for example, want a project to build a new road while women prefer better health care facilities or a new well. Often these differences involve struggle about the use of and access to scarce resources such as land, water, subsidies, jobs, economic opportunities etc.
- The different actors need each other in reaching their goals, there is interdependency among actors. The interdependencies can be different in intensity between the different actors but the interconnectedness stays. The actions of one actor influence the possibility of action of the other actors. Because of this interdependency, every actor has it's own specific role in the network.

- The actors have a relative autonomy in their actions. They use a strategy conducted by the goals they have. Although the relations in a network are strongly influenced by the factor power, no party can rule or solve problems alone.
- The processes of interaction between the different actors in the network are characterized by intertwinedness of the goals and complexity of their relations. Some actors will form coalitions within the network to stand stronger against powerful parties.
- Relational ties (linkages) between actors are channels for transfer or "flow" of resources (either material or nonmaterial)
- Relations and interactions between the different stakeholders are sustainable in nature but also have a dynamic character; within the network cultural changes occur by inclusion and exclusion of actors.

(Driessen, P.P.J en P. Glasbergen (red.), 2000).

The actors in the network must be able to communicate with each other in order to achieve common goals. But the ability of relevant stakeholders to communicate with each other can be hampered in various ways. In the highlands of Bolivia, physical distance may form an obstacle. Relevant stakeholders for the development process may be spread over different parts of the country and this can hamper negotiation and contact seriously. Effective communication may also be affected significantly by institutional and organizational difficulties: that is, stakeholders must somehow be organized in order to be represented, strike deals with and allow effective communication between representatives during the negotiating process.

Within the scope of this research the second principal characteristic of networks, interdependency among actors, can be explained by the fact that development organizations like Chakana operate in turbulent and uncertain environments, over which they attempt to gain control. Because critical resources, like the funding for projects, are often controlled by other organizations, organizations must find ways to ensure a smooth and predictable flow of resources from other organizations (Wasserman and Galaskiewicz, 1994). Organizations will try to sustain and strengthen their relations with important other organizations. If all actors involved with this relationship building agree, the network gets more and more institutionalized. These consequences of network ties and flows are a key issue in demonstrating the value of network analysis because the network itself becomes a resource for the different actors.

The network can be seen as an arena in which all actors play their role in a game to reach their personal objectives. The type of game the actors play is based on their interactions and the rules of the game. They use strategies and techniques to play the game optimally. The game can have different characteristics like that of a conflict, a negotiation, forming of coalitions, cooperation, restriction, ignoring, competition or avoiding behavior. The strategies or techniques can be the expansion of power, increasing security, risk-management, the avoidance of responsibility etc (Driessen, P.P.J en P. Glasbergen (red.), 2000). In the network, actors can switch roles depending on the situation and the objectives they have with certain actions. Thus actors do not play the same role in the network all the time but they can also play different roles at the same time. Depending on the ties actors have, they play their unique role in cooperation with other actors. Roles can have, among others, the following characteristics: leading, coordinating, cooperating, dependent, controlling, passive, pressing and observing. When carrying out a development project, the work has to be lead by an expert who can tell what the other actors have to do to succeed the project. All the activities that have to

be done, need to be coordinated. Some actors are dependent on others and play a dependent role to get for example resources. Actors who have the power of contributing with resources, can play a controlling role in the network to guarantee the reliability of the work done. Without exerting power, this role becomes observing. Actors can also exert pressure on others to reach certain objectives by forming coalitions or using their resources.

2.3 Processes within the network

2.3.1 Sharing of Knowledge

Knowledge is defined in the dictionary as a clear and certain perception of something; the act, fact or state of understanding. Knowledge involves both knowing how, which is generally more tacit knowledge, and knowing about, which is more explicit knowledge (Grant, 1996). Knowledge is of key importance in development projects. On the one hand there is standardized knowledge that tends to be carried out by professionals. This kind of knowledge is important because it is adequate in many local contexts and based on academic findings. But you need also the local knowledge for development pursuits in the respective local environments. The additional and more specific knowledge that local residents have about their own environment often enhances the relevance, effects and sustainability of development work (Dale, 2000). I would like to see these two types of knowledge as interdependent in development projects; they need each other to come to full competence.

But what is understood to be knowledge? First of all the understanding of knowledge is socially constructed by human beings living in societies. Therefore knowledge can be seen as the basic means through which we understand and give meaning to the world around us. There are three key elements in the construction of knowledge:

- the role of language and discourse
- the role of institutions
- the role of different types of social power

(Goldblatt, 2000).

Language is a social phenomenon and no description or explanation of the world can be created without using a certain language with its social consequences. Language is the means by which communication and sharing in the network can take place. But language is something more than the words people use, also understanding and interpretation are expressed in language. People can speak the same language but still talk about different things by using the same words. Institutions are equally important in shaping the content and standing of knowledge systems because they determine who has access to specialized knowledge languages (like medical training) and who has socially sanctioned and legal authority to make pronouncements on a given subject. The production, dissemination and legitimation of knowledge require access to and use of resources: economic, political and cultural and these resources are rarely equally distributed (Goldblatt, 2000). Access to and the claim for knowledge is very important in achieving development in the network society. Access to knowledge means empowerment because all knowledge production is situated; all knowledge is enmeshed in the operations of power. According to Giddens(1976:111) power is: 'the capability of the actor to intervene in a series of events so as to alter their course'. In the context of this research it is important to talk shortly about this relation of knowledge and power in which knowledge can be seen as a form of agency. In chapter 6 of Knowledge and Perception Cees Leeuwis (2004) cites the notion of human agency by Long which:

'attributes to the actor (individual or social group) the capacity to process social experience and to devise ways of coping with life, even under the most extreme conditions of coercionAgency – which we recognize when particular actions make a difference to a pre-existing state of affairs or course of events – is composed of social relations and can only become effective through them.'

(Long, 1989:10)

Availability and access to particular knowledge can enhance or limit a social actor's capacity to exert a particular type of agency. In this sense, having access to relevant and valid knowledge is by definition 'empowering' (Leeuwis, 2004). Knowledge is in this view seen as a resource that actors can draw upon in dealing with the world around them. As is the case with other resources, like capital or land, not every actor has equal access to this resource. Therefore it is important for the development of the rural Aymara communities to have access to useful knowledge. At the same time knowledge that is available in the communities can be seen and relied upon as a valuable (common) resource. The ability to exchange this resource in a network can therefore be seen as an accumulation of power and embedding in society.

Implicit and Explicit Knowledge

Implicit or tacit knowledge is the understanding of how to do things, something we know and apply. Knowledge and action are therefore two sides of the same coin: a lot of knowledge seems to be stored in our bodies and in the things around us, and is expressed through our actions without or even consciously or actively reflecting on it. It is created by doing, by personal trial, error, reflection and revision, but it is difficult to articulate what that 'how to' actually is. The transfer of tacit knowledge is therefore through shared processes in addition to the physical or recorded content. In a network context, creating and sharing tacit knowledge requires collaborative work techniques together with the establishment of long-term relationships and trust. Thus, a lot of knowledge is embedded in practical routines, contextual experience, skills and physical memory (Leeuwis, 2004). This implicit knowledge refers to an individual's contextual surroundings that are imbued with and shape collective values, normative behavior, roles and customs – in short an individual's culture and values (Creec, 2001). Therefore implicit knowledge can only be made partly explicit and/or transferable to others, but this usually requires considerable effort and energy and, obviously requires the co-operation of the person with the knowledge (Leeuwis, 2004: 96). Explicit knowledge can be transferred much easier because it refers to the knowledge that we are aware of, have reflected upon and can easily capture in language. Leeuwis (2004) explains explicit knowledge by referring to Giddens discursive consciousness that is described as:

'What actors are able to say, or to give verbal expression to, about social conditions, including especially the conditions of their own action; awareness which has a discursive form (Giddens, 1984: 374)

Among social scientists there is a growing recognition that knowledge can play an important role in poverty alleviation. The president of the World Bank is quoted in a chapter of *Wheelbarrows full of Frogs* (Leeuwis, 2002) saying: "we used to think of capital as a scarce force in production and of the transfer of capital as the key instrument for growth. Knowledge is now as, if not more, important a factor in development, and this trend is to intensify" (Wolfensohn, 1997 in: *Wheelbarrows full of Frogs*, 2002). An essential element in the exchange of knowledge is the human ability to communicate, learn and accumulate knowledge. Nonaka (1994) included these learning aspects of knowledge exchange in an approach in which knowledge is viewed along two

dimensions – social-individual and explicit-implicit (Nonaka, 1994). In this work, knowledge is defined as an understanding of how things work or should work, which can be an implicit model or representation or an explicit and communicable set of rules, procedures and policies. In addition this knowledge can dwell in an individual or in their social relationships such as communities of practice (Bierly e.a., 2000).

In the agricultural context of the Bolivian Andes different types of knowledge are needed for developing solutions to different development problems. Each type of knowledge may be developed by a different group of persons or institutions or can only be developed jointly by different actors through a process of social learning. Social learning and the willingness to share knowledge go hand in hand. This sharing of knowledge is important for agricultural development for several reasons mentioned by Anne van den Ban in *Wheelbarrows full of Frogs*. The first one is synergy I mentioned earlier which means that together different actors will be able to produce more knowledge than each can produce on its own. The second reason is that different actors are better able to gather or generate different types of knowledge. For farmers this means that part of their necessary knowledge comes from research and a big part comes from the experience of the farm-family. It is important to include this practical knowledge of farmers in the development of better agriculture because as a group, farmers have more brainpower than that of the researchers and government officers involved in agricultural development.

Knowledge in Aymara culture - Yachay

As said in the former pages the term knowledge is used to describe the intrinsic ability of individuals or groups to carry out actions. Culture is an important background influence in the construction of knowledge and the existence of multiple realities. Culture is therefore an important factor in describing knowledge and is understood to be:

‘a set of values, beliefs and feelings, together with the artifacts of their expression and transmission (such as myths, symbols, metaphors, rituals), that are created, inherited, shared and transmitted within one group of people, and that, in part, distinguishes that group from others’ (Cook & Yanov, 1993: 379).

Cultural diversity exists because people have differences in values, norms, behavioral patterns, concepts, beliefs, artifacts and technologies that exist between different communities of actors (Leeuwis, 2004). Based on their cultural background, people can have a totally different outlook on the world. Jacobson used the concept of culture as situated cognition to explore the link between culture and learning and states that this concept challenges conventional assumptions that knowledge can be abstracted from contexts in which it is used, and can be learned apart from those contexts. He suggested that knowledge is something that exists in interactions among individuals, their activity and the context in which that activity takes place. Jacobson states that “in order to learn, it is necessary to become embedded in the culture in which the knowing and learning have meaning”. In the network around Chakana the different cultural backgrounds of the actors involved thus have implications for the sharing of knowledge. Before knowledge can be communicated it has to be clear in the networks what is meant by knowledge and what perceptions and beliefs are practiced by the actors.

The most frequently used term to refer to knowledge in Quecha and Aymara languages is Yachay. This term is explained by several authors in ‘Knowledge and Learning in the Andes (Stobart e.a., 2002). The noun refers to the Andean shaman or ‘knower’. Cesar Itier proposes that the yacha- is related to yachaku-, literally “to become involved in knowing”. This should be interpreted ‘que una planta llega a su plena desarrollo’ (for a plant to reach its full growth’) (Itier1993:102) . This interpretation of the

root yacha- is congruent with the dialogic nature of the Andean learning process of progression through the life cycle. In this process the acquisition of knowledge is inseparable from experience of the human life cycle. Knowledge is required because and when it is relevant, and increases through experience as a part of growing to maturity (Crickmay, 2002). To know has to do with achieving a fuller state of being, in the sense that it is a process through which persons or states of affairs become 'other' than what they were before the process was undergone. Knowledge is a network is only relevant when different groups can share it for the common purpose. Sharing knowledge and learning are two sides of the same coin and therefore I will go deeper into the concept of learning in the next paragraph.

2.3.2 Social Learning

Only an integrated approach to the process of development, bringing together all stakeholders (practitioners, researchers, policy makers, activists), can address the complexity of development projects. At the same time the processes of interaction within the network of actors should foster a sense of ownership of the founding concepts and approaches, ensuring that the project developed is appropriate to the local situation and capable of replication with existing (or realistically achievable) resources, institutions, and policies. Social learning and networks are two concepts that need each other to exist: social learning can only occur in a social environment that has network characteristics and vica versa can networks only exist if the different parts communicate and accumulate knowledge (learning). In this paragraph the concept of social learning will be explained but the theoretical basis of social learning is still weak and scattered over different fields of social sciences like social psychology, sociology and organizational sciences. It is beyond the scope of this research to analyze and weight all definitions but I will come to an understanding of social learning that will be useful in analyzing the communicative processes that occur between members of the network around the development projects of NGO Chakana.

The different stakeholders in a network should be aware of the fact that their performance can be made more efficient in order to reach goals earlier or easier. To reach this, communication can be an important integrating mechanism in networks with high diversity of groups and cultures. Integration is the combining of elements into a unified result. When the integrated product is something bigger than the sum of its parts, it can be considered synergistic. By integrating the diverse strengths of the various groups in a network, solutions and strategies can be developed that produce greater results than the simple addition of each contribution alone. One process is an absolute prerequisite for integration of different cultures: effective communication. The successful transmission of meaning as it was intended from each actor to others in the group is essential for any integration to take place. Unless actors are aware of and understand the different elements they have, they cannot combine the elements effectively. But the transmission of meaning among people who have very different ways of viewing the world is difficult and requires interactive communication and learning among the different stakeholders in the network (Maznevski, 1994). Interactive communication and social learning are therefore essential elements of networks to reach synergy. And synergy can be seen as an important reason to join and cooperate in a network.

Effective learning occurs when interaction occurs and that makes learning a social matter. Learning can also be viewed as an individualistic activity which engages a person in the acquisition of skills and knowledge. But learning takes place within social and cultural contexts that determine what and how we know and learn (Smith, 2006). The socio-cultural context as well as the social relationships and experiences of the learner

influence the learning process. The definition of learning used by Falk and Kilpatrick (2000) captures this learning in the social context. Learning is understood to be the process of acquisition or reconfiguration of skills and knowledge resulting in a change in behaviour and/or a capacity to function using new knowledge, skills, values and attitudes within networks. The notion of learning captures the link between understanding and action necessary to cope with for example community development. Understanding of other meanings and viewpoints can be transmitted by communication but learning is a step further in the interaction between stakeholders. Learning can be seen as the continuously development of knowledge and the ability to use it. But in the scope of this research, individual learning is of less importance. In this thesis I place the focus of learning on participation in networks and this has implications for the understanding of learning. For *individuals* it means that learning is an issue of engaging in and contributing to the practices of their communities. For *communities* it means that learning is an issue of refining their practice and ensuring new generations of members. For *organizations* it means that learning is a way of sustaining the interconnected networks through which an organization knows what it knows and thus becomes effective and valuable as an organization. In this view knowing involves active participation in communities. Learning as participation takes place through engagement in actions and interactions. Through these local actions and interactions learning reproduces and transforms the social structure in which it takes place (Wenger,1998). In a network individuals collaboratively construct a common grounding of beliefs, meaning and understandings that they share in an activity. Sharing in an activity can take place while with for example the construction of an irrigation canal and this means that learning is situated. "Situated learning is learning that takes place in the same situation in which the knowledge is deployed , such that the skills and knowledge are acquired in authentic settings of use" (Smith, 2006: 33). Smith and Smith quote Barab and Duffy (2000: 26) in their book as the following expression of this issue: "In general, situative perspectives suggest a reformulation of learning in which practice is not conceived of as independent of learning and in which meaning is not conceived of as separate of the practices and contexts within which it was negotiated. When looking at learning in the project-networks of Chakana the practice of carrying out a development project in a Bolivian community thus has to be taken into account. Situated learning in a community of practice, like a development project, enables an expert to provide a legitimisation of new knowledge acquired by the learner. "This legitimisation is crucial to the development of knowledge and understanding through the recognition of learning and the assurance that an acknowledgement by an expert may provide" (Smith, 2006). Thus situated learning can be helpful to transfer knowledge and meaning from an expert to for example the local community to carry out the development project.

According to Engel (1997) networks represent 'communities of ideas', a space for like-minded people to interact on the basis of common interests, mutual trust and anticipated concern. Not so much the manufacture of products and/or services, but social learning, communication and sense-making are the 'core business' here. By focusing on 'mind' rather than 'matter', networking helps create a fundamentally new quality for human cooperation, and enhances inclusive thinking, creativity and dialogue (Engel, 1997). The missing link in this approach is how to incorporate these ideas in the minds of the actors in the network. The actors that are gathered around the common concern of a development project see the project as core-business and not the learning aspects between the actors themselves. But learning can help to succeed in carrying out the project effectively and efficiently and therefore should be stimulated. But making learning, communication and sense-making the core business of the network is not

feasible in the development reality because the product is at least as important as the process.

2.3.3 Framing

Intersubjectivity is a shared understanding of the world among individuals whose interaction is based on common interests and assumptions. These common interests and assumptions form the ground for their communication (Rogoff, 1990). In other words communications and interactions between people, and groups of people, require socially agreed-upon ideas of the world. Through this agreement of what the world looks like according to this particular group of people social meanings are constructed and intersubjectivity arises. But an agreement is not reached just like that. Social meanings and knowledge are shaped and evolve through negotiation within the communicating groups (Gredler, 1997). Intersubjectivity can therefore be seen as an important social feature in a community or network. People are supported by intersubjectivity to extend their understandings of new information and activities among the group members.

Culture influences the construction of knowledge and meaning in a community. Cultural and historical factors form the basis for common interests and assumptions among people that lead to intersubjectivity among the community-members. Culture as a shared system of meanings is learned, revised, maintained and defined in the context of people interacting (Spradley, 1980). This explains why sharing of knowledge is easier between members of the same cultural background. When the members of the community are aware of their intersubjective meanings, it is easier for them to understand new information and activities that arise in the community (Gredler, 1997). Meanings are handled in, and modified through, an interpretive process by the person dealing with the things he encounters. People's interpretive processes can be captured in frames. People need to reframe their ideas constantly to come to an understanding of other people and reach intersubjectivity between actors in a network.

Theory on framing is cognitive and stands out in terms of understanding the process of knowing and why people are said to have different 'views' on reality. Framing involves shaping, focussing and organizing the world around us and refers to the process of constructing and representing the world around us. We construct frames by sorting and categorizing our experience and weight new information against our previous interpretations (Gray, 2003). A frame reflects our interpretation of what is going on and how we see ourselves and others implicated in what is happening. In this sense framing is an interpretative process that helps us to understand and clarify what we are experiencing. From a communicative perspective framing refers to talking about a topic or issue in ways that identify a particular domain within that topic, temporarily ignoring other topics. The communicator creates a structure in which a frame refers to the negotiator's relatively stable belief system about overarching goals or needs (Drake and Donahue, 1996). In the article of Drake and Donahue four communicative frames types are addressed: factual (focus on appraisals of reality), interest (future desires and aspirations), value (disagreements over right and wrong) and relational (centre around the emotional tie between disputants). The theory of communicative framing contents that:

- disputants in conflict select a dominant frame to express their issues in dispute;
- disputants in conflict tacitly negotiate frames as they interact, with each frame as a proposal to approach the issue in a particular manner;

- Frame convergence is associated with disputant's ability to reach substantive agreements in their conflict.

Another perspective suggests that frames are social constructs; they represent agreed-upon 'ways to make sense of a situation' (Gray, 2003). When two or more people define a situation the same way, they are socially constructing it. When we frame an activity, like rural development, we develop interpretations about what the activity is about, why it is occurring, the motivations of the parties involved and how conflicts should be settled. Frames shape what parties think about issues and influence their preferences for whether and how a dispute should be resolved. Once an individual or group has adopted a frame, like one that helps to define identity, the frame colours the way a person defines what is real and what is not. Frames can also shape what we believe 'ought to be' or 'should' be. If we conform to the expectations set up in our frames, we can justify our own behaviour as "correct" or "good". Moreover we are likely to blame others who fail to live up to our expectations (Gray, 2003). Framing is an important mechanism in a network around rural development because framing plays a significant role in creating a common cause or vision among participants and reach intersubjectivity. There are different frames a social group or individual can use in constructing reality. I will mention a few that were analyzed in the case studies conducted by Gray (2003). Gray's research is about framing in environmental disputes but I think the analysis can be very useful in this research to look at the frames of the different stakeholders involved with rural Aymara development. Gray states the following about framing and reframing:

"Identities of people are framed by thinking about themselves as belonging to certain social categories that have given characteristics. Identities can be based on demographic characteristics (e.g. race, gender, and ethnicity), location (where they are from and where they live or work), their role (as a farmer or social reformer), the institutions with which they associate (local government employee) or their interests. Reframing occurs when stakeholders change their frames: that is when they develop a new way of interpreting or understanding the issues in the network. In order to reframe one's understanding of a situation, some degree of perspective taking is required. Perspective taking involves standing back, observing and reflecting on the fact that there is more than one way to view issues. Reframing depends on the ability to entertain a perspective other than one's own, to weigh the relative merits of each perspective and to select the most preferable one. Reframing is promoted because of the assumption that getting people to use different frames or perspectives, their repertoire of interpretations and possible actions will be expanded in any situation. In order to come to reframing, social learning in the network is requisite. When different cultural groups want to arrive at coherent innovations, as is the case in the rural development projects in Bolivia, individual learning does not suffice but simultaneous learning of interdependent stakeholders is needed. In order to arrive at coherent practices, multiple actors need to develop complementary or overlapping understandings of the world and the problems faced as a basis for effective coordinated actions (reframing)."

Thus learning is a condition for framing and reframing within networks. Learning in the context of innovation and rural development is done by adults who are involved in farming and/or other livelihood activities and who are confronted with changing circumstances and problems that require innovation (Leeuwis, 2004). In these situations people learn from experience and this is a very powerful type of learning: conclusions drawn by people themselves on the basis of their own experience tend to have a greater

impact than insights formulated by others on the basis of experiences that learners cannot identify with. This learning by doing occurs from a continuous interaction between thinking and action: concrete actions result in certain experiences, which are reflected upon and subsequently generate cognitive changes, from which new actions can emerge, etc (Leeuwis, 2004: 149). But learning isn't automatically a collective or social process. Essential for social learning is the convergence of understanding based on co-creation of knowledge and co-learning. The parties involved in a network slowly develop overlapping or at least complementary goals, insights, interests and starting points and also build mutual trust and feelings of dependence and responsibility (Leeuwis, 2004-b). This is not learning in the sense of knowledge transfer or teaching; rather it is about the development of different perspectives on reality through interaction with others. This is very important for the empowerment of Aymara people; get insight in the frames of reference of other stakeholders and gain understanding for their own cultural traditions and knowledge. Gray (1997) states as well that exploration of different perspectives is vital in a learning process because it is an important route to reframing: learning to look at a situation and one's own role in it in a different way. Active learning is a way to get a form of intersubjectivity between the members of the network. Besides the different cultural backgrounds of the members, a meta-culture is needed to communicate efficiently to reach rural development. Intersubjectivity can be seen as a precondition for this meta-culture which can be reached by reframing. The members of the network have to deal with and combine two kinds of intersubjectivity; between the community they represent and the newborn intersubjectivity between the stakeholders in the network.

2.4 Summary and considerations

In this study I used Plucknett's definition of a network as an association of independent individuals or institutions with a shared purpose or goal, whose members contribute resources and participate in a two-way exchange of communication. The network is the central element in this thesis around which all other processes are situated. It is therefore important to identify the different elements of the network (nodes, ties and flows). The network tells something about the social location of the different stakeholders involved with rural development in the Bolivian Andes. The drivers identified behind the existence of networks are:

- Information and communication technology: Role internet in communication between stakeholders. In the Bolivian Andes communication technology plays a marginal role. People have access to mobile phones and some actors communicate through internet.
- Sense of urgency: complexity and interrelatedness of development issues
- Upgrade performance civil society through collective action
- Increase policy leverage of civil society actors → transcend their limited or isolated level and to make them heard or noted within the regional society on the basis of proposals or suggestions for development policies. This is important to reach empowerment of the Aymara actors.

I identified two important connections between the stakeholders in the network. The first are the local connections that occur within communities. The second are the local-external connections which are vertically oriented and between local groups and external agencies and organizations. The network is socially constructed and looked at from a soft system approach, the different worldviews of the stakeholders are important to get insight in the multiplicity and diversity of the network. Other characteristics of the network form

of organization are the interdependency between the stakeholders, the relative autonomy they have, the intertwinedness of their goals, existing coalitions and a sustainable character of relations and interactions.

To increase the quality of communication between stakeholders, meaning should be transmitted and reframing should occur. This increases the synergy of the network which can be seen as the sum of the parts is more than the addition of each contribution alone. Transmission of meaning means that the stakeholders have to dare to share and have the willingness to be open-minded and have enough confidence in one's own work to expose it to others and have the humility to understand one's own position as one among many. There can be several reasons for organizations or individuals to participate in a network. I hope to trigger the reasons of all the stakeholders involved with Chakana for development to get insight into the frames and cultures available between the cooperating parties.

One process that I identified in the network is the sharing of knowledge between the different stakeholders. Language and frames are again important for the actors to understand each other. Understanding and interpretation are expressed in language and therefore it is important to understand what people mean with their words. Knowledge is seen as a resource and therefore the access and availability of knowledge in the network is important. I made the distinction between tacit knowledge and explicit knowledge. Tacit knowledge is the understanding of how to do things and is expressed through actions. Tacit knowledge can be shared through collaborative work-techniques. The sharing of tacit knowledge needs trust and long-term relationships and is embedded in individual values and cultures. Explicit knowledge is what actors are able to say or give verbal expression to. Both knowledge types require learning between actors who share the knowledge. Learning is a way to reach synergy between the stakeholders who share the knowledge and by learning different types of knowledge are able to be gathered and accumulated. Culture is an important factor in describing knowledge because cultural background influences people's outlook on the world. Cultural differences must be considered in order to communicate with each other. This is when reframing and learning come into action. In order to exchange knowledge between different groups of people, a meta-culture has to be developed out of all the different worldviews involved in the network. In order to understand Aymara culture and get insight into the Andean notion of knowledge I used the term Yachay. Yachay means that the acquisition of knowledge is inseparable from experience in the human life cycle. Knowledge is increased through experience and not through transmission of experience of others. Rural Aymara people who live in remote villages share a common culture. This cultural background forms intersubjectivity in a group and this intersubjectivity is necessary to transmit knowledge and learn from each other. Intersubjectivity can be seen as a shared understanding based on common interest and assumptions that form the ground for communication. Therefore it is interesting to look at groups that share intersubjective meanings in the network around NGO Chakana. Meanings can be shared between groups through social learning. Learning can be seen as the continuous development of knowledge and the ability to use it. But in the scope of this research, individual learning is of less importance. A lot of researchers are involved in learning processes between individuals and organizations. Learning concerns dilemma's that arise from the interplay of aggregates of individuals and their natural environment and because the resolution of these dilemma's requires collective action, and is therefore characterized as social learning. A constructivist approach underlies social learning: reality doesn't exist independently, instead reality is socially constructed. But learning isn't automatically a

collective or social process. Essential for social learning is the convergence of understanding based on co-creation of knowledge and co-learning. The parties involved in a network slowly develop overlapping or at least complementary goals, insights, interests and starting points and also build mutual trust and feelings of dependence and responsibility (Leeuwis, 2004-b). This is not learning in the sense of knowledge transfer or teaching; rather it is about the development of different perspectives on reality through interaction with others. This is very important for the empowerment of Aymara people; get insight in the frames of reference of other stakeholders and gain understanding for their own cultural traditions and knowledge. Which constitute resources, and only if these exist the capacities and the will or motivation to seize the opportunities" (pp. 32-33). Such consideration means that "the power to name must be accompanied by the power to act" (Breton, 1994, p. 36).

2.5 The Research Framework

The linkages between the different parts of the theory offered in this chapter become visible in the research framework. This research is built up around two frameworks; (1) the network analysis (figure 2.2) and (2) the communicative processes that occur between Chakana and the other actors in the network (figure 2.3). The first framework analyzes the network around three development projects of NGO Chakana. These projects will be explained in detail in chapter four. The network characteristics are located outside the network because they form the external description of the network. They need to be analyzed for every project-network to be able to compare the different networks and discover if the characteristics influence the internal structure of the network. In Chapter five these network characteristics will be analyzed.

The development projects are located in the centre of the framework because they are considered to be the common around which the actors are connected with Chakana and each other. Actors are located outside the projects because they form the network together with the projects that are considered the common concerns. The actors can be individuals as well as organizations and can have several characteristics that are unique for that actor. Within actors local-local connections exist while actors have vertical external connections with other actors. All actors in the network are connected to the development projects of Chakana in one way or another. The flow together with the relational tie represents the connection that can occur between Chakana and the actors in the network. The lines between Chakana and the actors and between the different actors are presented differently. The reason for this is that the lines between Chakana and the actors are considered primarily and the other lines secondary. Communicative processes between Chakana and the actors that are connected to them are the other object of analysis. This leads to the second framework that is actually a close up of what happens inside the first. The dyad and their interaction is the unit of analysis in this framework. The two actors, Chakana and another actor in the network, are connected by a flow and a relational tie and this line is influenced by three communicative processes: social learning, framing and the sharing of knowledge. There is interaction between the connection and the communicative processes. They influence each other while happening and therefore a double arrow is drawn.

The hypothesis of this research is that when the communicative processes occur between Chakana and the other stakeholders in a network environment, the NGO will be able to reach their rural development goals in an efficient and appropriate way. The network framework and communicative processes-framework come together in the relation between the actors as well in the actors themselves. The relation between two actors, the

dyad, is the most appropriate level of looking at the communicative processes in the network.

The hypothesis leads to the following assumptions that are included in the framework:

- Chakana is the spider in the network around the development projects.
- The interaction between the different stakeholders is based on the common concern, i.e. the three development projects of NGO Chakana;
- There are two levels of analysis: the network and the communicative processes within the network;
- Actors have different frames and to exchange knowledge in an effective manner, social learning and interactive communication must take place;
- Characteristics of the actors and the ties and flows between actors define the role every actor plays in the network.
- Shocks and problems in the network are an indicator for the performance of Chakana
- When the actors interact optimally, the development projects proceed in an effective and desirable manner.

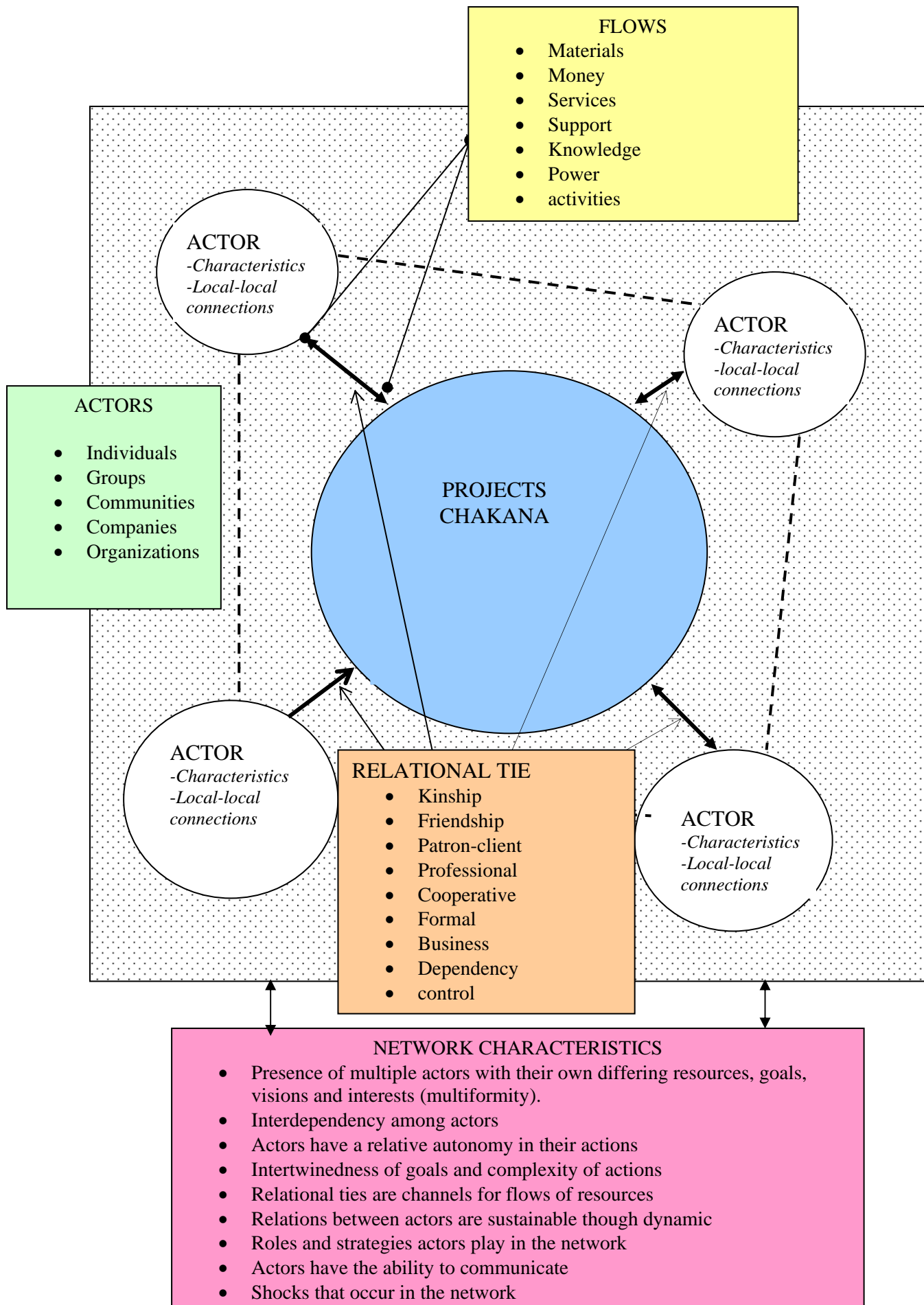


Figure 2: The Research Framework: Network

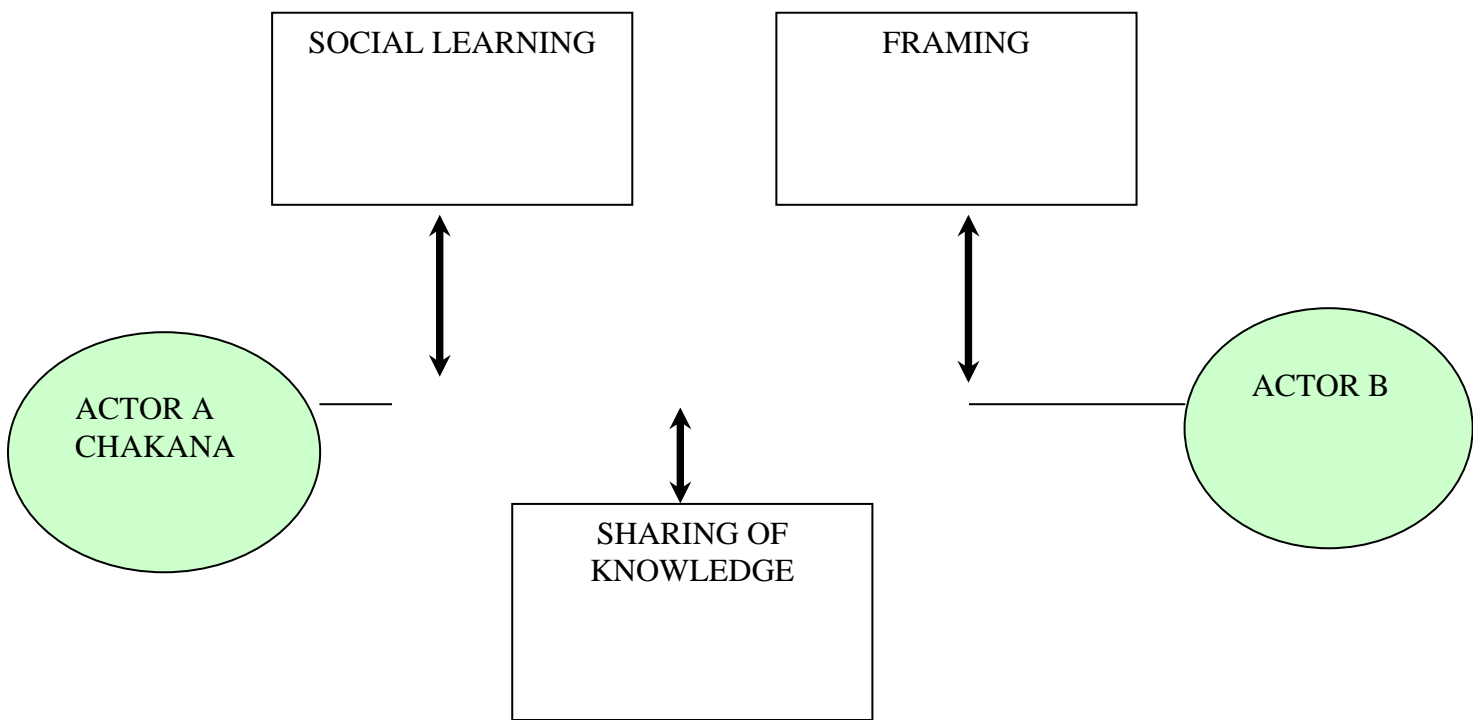


Figure.3: The Research Framework: Communicative processes between the dyad in the network

2.6 Research questions

The theoretical framework as presented in this chapter will represent the glasses through which I am going to look at the research project. The research questions that I am going to ask to answer my central question and meet my objectives are derived from this theoretical framework. This explains the location of my research questions in the theoretical part of this thesis.

Central research question as formulated in chapter 1:

How do the project-networks of NGO Chakana and the communicative processes within these networks influence the performance of Chakana in executing their development projects in Bolivia?

In general

- 1 *What are the characteristics of NGO Chakana?*
 - 1.1 How is NGO Chakana organized?
 - 1.2 What are the objectives and methods of NGO Chakana?

Projects

- 2 *What are the characteristics of the development projects NGO Chakana is carrying out in the period October 2005-February 2006?*
 - 2.1 What kinds of projects are executed by NGO Chakana in 2005/2006?
 - 2.2 Where in Bolivia are these projects located?
 - 2.3 Who are the beneficiaries of these projects?
 - 2.4 What is the planned running time for the projects?
 - 2.5 What are the reasons for NGO Chakana to conduct these projects?
 - 2.6 What organizations and individuals are involved with these projects?
 - 2.7 What activities need to be done for these projects?

I will answer these Chakana- and project-oriented questions in chapter four. The project oriented questions will be answered for the three projects, Irrigation in Monte Rojo, irrigation in Achocalla and the construction of an Artisan Centre, Chakana is executing in 2005-2006. These insights will form the background for the analytical part of this thesis.

Network

- 3 *What are the characteristics of the project-network around NGO Chakana for the development of Rural Aymara?*
 - 3.1 What actors can be identified in the project-networks of Chakana?
 - 3.2 What are the characteristics of these actors?
 - What resources do they control?*
 - How are they organized?*
 - What are their objectives concerning the project?*
 - What are their experiences in working together and working with NGO's?*

3.3 What relational ties exist between Chakana and the actors in the networks?

When was the tie established?

What kind of tie is it?

How are the ties maintained?

How much contact takes place between Chakana and the actors?

How does Chakana evaluate the relation with the actors and vice versa?

How sustainable will the tie be?

3.4 What flows can be identified between the dyads of Chakana with the other actors?

3.5 What roles do the different actors play within the networks?

3.6 What strategies do the actors use to exert influence in the networks?

3.7 How dependent is Chakana on the different communication relationships with actors in the project-networks?

4 *How do the project-networks of Chakana perform?*

4.1 What general shocks can be identified during the execution of the projects?

4.2 What problems concerning the communication between the actors can be identified during the execution of the projects?

4.3 What are the strengths of the projects?

4.4 What coalitions have been formed between stakeholders?

4.5 What kind of synergy do the actors experience in the network?

Research question three and four about the network and its functioning will be answered in chapter five of this thesis. The next questions are about the communicative processes between the actors in the network and will be answered in the sixth chapter.

Sharing of Knowledge

5 *What role does the sharing of knowledge play in the project-network?*

5.1 What knowledge for reaching the project objectives is considered important by the different actors in the network?

5.2 To what knowledge do the different actors have access?

5.3 In what way do the actors in the network think of knowledge as a resource?

5.4 What knowledge within the network around Chakana can be considered tacit knowledge?

5.5 What knowledge within the network around Chakana can be considered explicit knowledge?

5.6 What means of communication are used by the different actors for the exchange of knowledge and communication within the network?

5.7 What language is used for communicating about knowledge?

5.8 How do people in project areas perceive the knowledge they receive for development?

Social Learning

6 *How does learning occur between the actors in the project-network of NGO Chakana?*

6.1 What new elements are brought in for the different actors while cooperating in the network?

- 6.2 How is knowledge transferred into action in the project-networks?
- 6.3 Has there been a change of behavior of the actors within the network during the execution of the projects?
- 6.4 Did the actors in the network use new knowledge, skills, values and attitudes during the execution of the projects?
- 6.5 Are the actors aware of the different elements in the network?
- 6.6 How are the different actors engaged in actions and interactions?
- 6.7 How is meaning transferred within the network?
- 6.8 What has Chakana learned from the interaction with the actors in the network?

Framing

7 How does framing occur within the project-networks of Chakana?

- 7.1 What different cultures are represented in the project-networks?
- 7.2 What intersubjective meanings, perspectives of reality and frames concerning the development projects can be distinguished within the networks?
- 7.3 Till what extent has an overlapping frame been developed between the actors in the project-networks?
- 7.4 Does reframing occur with the different actors who are concerned with Aymara development?

Chapter 3 Methodology

3.1 Introduction

In this chapter I will give an overview of the activities done and steps taken to answer the previous stated research questions and explain the choices made for the research strategy. The answers on the research question tell something about (a part of) reality. Every researcher should strive for accuracy and eloquence which means that statements and conclusions are valid and reliable. But in qualitative research there are no generally accepted procedures and criteria to determine the quality of research. Therefore it is important for the researcher to secure the quality of his research by determining the validity and reliability. Talking about validity and reliability the researcher is looking for a qualifying check or measure for the quality of his research. In quantitative research the reliability of a research depends on the replicability or repeatability of the results of a study using a similar methodology. But qualitative research produces findings arrived from the real world and therefore the researcher has a role and involvement within the research project. This makes the research unique and impossible to replicate. “Qualitative research is seeking illumination, understanding and extrapolation to similar situations and that makes credibility, transferability and trustworthiness useful criteria to determine the validity of the research” (Golafshani, 2003). Quality in qualitative research has the purpose of generating understanding. A good qualitative study is aimed at understanding a situation that would otherwise be confusing. In the previous theoretical chapter I talked, among others, about the constructivist paradigm with the most important assumption that reality and truth do not exist but are constructed by social actors. Knowledge is seen as socially constructed and might change depending on the circumstances. “Diverse constructions of reality are possible and engaging in multiple methods will lead to more valid, reliable and diverse constructions of reality. Multiple methods of data collection and data analysis are called triangulation” (Golafshani). Triangulation strengthens a study by combining methods and is therefore a strategy for improving the validity and reliability of research. In the remaining of this chapter I will discuss the research strategy and the research material on which the findings of this research are based.

3.2 Research model

In figure 4 the research model is presented. The model shows the different steps undertaken and the corresponding chapters of this research. This is not a linear model. All steps taken were iterative which means that every step was influencing the former and latter steps taken in the research. This model will now be explained shortly. To give an answer on the research questions, suitable theories have been chosen. An analytical framework has been built based on these theories. With this analytical framework, three development projects of Chakana have been analyzed and compared. This has led to the conclusions of this research and recommendations for NGO Chakana. Throughout the process the theory and analysis were adapted to new insights.

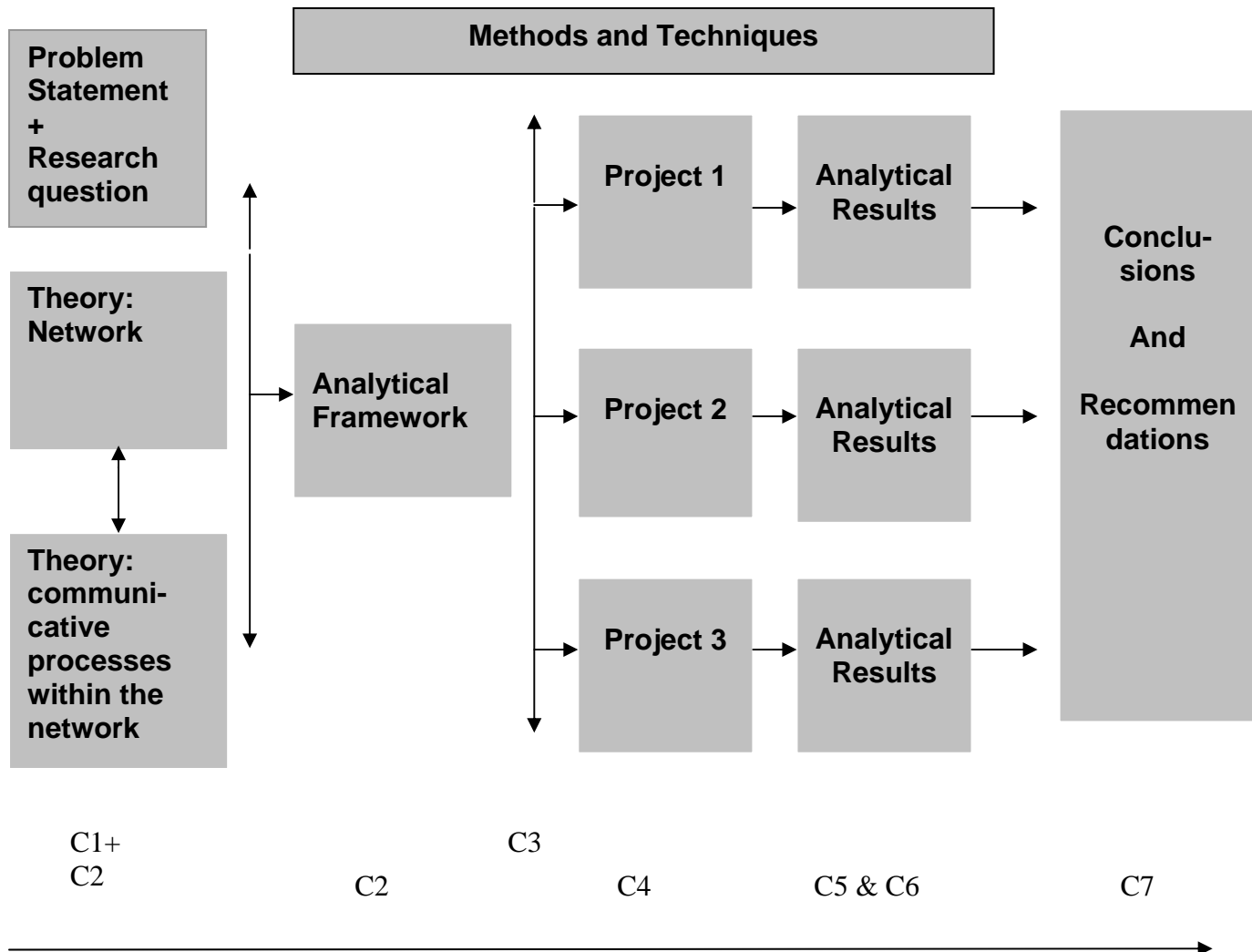


Figure 4: The research model

3.3 Research Strategy

A research strategy consists of all related decisions about the way the research is conducted. This means the gathering of relevant material and the translation of this material into answers on the research questions (Verschuren en Doorewaard, 2003). In the next paragraphs I will pay attention to the following concepts: the research design, data sources and operationalisation of the key-concepts. But at first I would like to explain the purpose of this study. This is an explorative study to gather an in depth analysis of the way communicative processes the network of a development organization influence the functioning of this organization. I do not want to generalize my findings to other organizations that operate in network for development but try to explain why some processes and events happened the way they did for NGO Chakana. Chakana is the central element in this research around which the concepts of network, sharing of knowledge, social learning and framing are situated.

3.3.1 research design: ethnographic casestudy

The research strategy that has been applied is that of an ethnographic case study from a constructivist's perspective. The case study is meant for the diagnosis or analysis of a specific situation. Because actors in the network and their behavior and ideas form the backbone of this research, it can be considered actor-oriented. With this research

design it is possible to get insight in the way processes occur in practice and why they occur in that way and no other (Verschuren and Doorewaard, 2000).

Three projects of NGO Chakana have functioned as cases in this research and therefore it can be considered a multiple case study. The projects were all carried out in the period October 2005 till February 2006. I chose these three projects for several reasons. At first they were carried out at the same time and in the period I did my internship at NGO Chakana in Bolivia. Therefore it was possible to observe the process of carrying out the projects. It was possible to compare all stages like the initiation and the daily work on the project. Second the projects were located in different regions. One of the projects was located far from the city and therefore the factor distance played a role compared to the other projects that were located in a valley close to La Paz. The third reason was that the projects had different themes. Two projects were irrigation projects while the other one was the construction of a social centre. The irrigation projects were carried out for local organizations while the Artisan centre was carried out for an organization of women. This means a variety in beneficiaries. All projects had in common that they were coordinated by NGO Chakana. Because I only looked at three projects it was possible to do an in-depth analysis. When I had chosen for more projects carried out by several NGO's I could not have done the kind of exploratory research I have done now. By looking at three projects and comparing them, the influence of the context on the communicative processes becomes visible. But because of the small amount of research units (three projects) and the variability between the projects, it is not possible to generalize the results. This means that based on this research no statements can be made of the influence of communicative processes on other development projects. The external validity (the generalization) gets bigger when the amount of research units increase but because of the nature of the research strategy, the external validity can never be very big.

Because the subjective aspects of meaning and interpretation play a big role in organizations, ethnographic elements of constructivism and learning are included in this approach. This makes this case study of the projects of Chakana also participatory action research. My internship at the office of Chakana in La Paz was an important element of my research. From October 2005 till February 2006 I participated with the activities of Chakana on a daily basis. I assisted the executive director of the organization and was present on the office during working hours. When the executive director went to the field or visited other organizations, I had the opportunity to join him to observe the cooperation between Chakana and the other actors. I developed an understanding of the meaning the different actors attach to the working field of Chakana. I participated in activities, asked questions, ate strange foods, learned a new language, watched ceremonies, took field-notes, interviewed informants etc. When I carried out my structured interviews, I spoke an advanced level of Spanish that I learned in Bolivia. My internship with Chakana and the research period afterwards can therefore be seen as ethnographic fieldwork. According to Spradley (Spradley, 1980) fieldwork involves the disciplined study of what the world is like to people who have learned to see, hear, speak, think and act in ways that are different. Both questions and answers must be discovered in the social situation being studied. I have looked at the activities carried out by NGO Chakana to find my other social situations and respondents later in the research project. The research has been carried out in social situations. Every social situation can be identified by three primary elements: a place, actors and activities. Any physical setting can become the basis for a social situation as long as it has people present and engaged in activities. The social places I identified are the development projects of Chakana in 2005-2006. I got information about these projects on the website of Chakana, from the people

who work for Chakana and in the records and administration they keep. In the first period of my internship and research I have spend my time at the office doing document analysis and visiting the project sites. Not only the projects but also the office of Chakana in La Paz itself can be seen as a social situation with actors and activities. In this layered view Chakana is part of a bigger body of organizations. During my whole stay in Bolivia I have gathered the data for this research. The collection of data has therefore been a continuous process with a constant switch of the researcher between observation, analysis and reflection (Wester, 2004).

To answer the research question I first provided insight in the project-networks of NGO Chakana. To analyze the communicative processes between Chakana and the other actors, it is necessary to get insight in the network- context of these processes because the networks form the context for the communicative processes. I have analyzed the actors, their motives to cooperate in the network, their ties with Chakana and the flows that are exchanged with Chakana. This can be seen as the external part of the analysis. The second and internal part is formed by looking at the communicative processes that occur in these networks. The performance of these networks is analyzed by looking at the shocks that occurred during the running time of the projects. This means the internal and external shocks, like problems and constraints, that affected the network while carrying out the projects (Kamann,1998). Now all ingredients are present to look at the influence the network and the communicative processes within the network have on the performance of Chakana.

3.4 Data Collection

The primary source has been the organization Chakana. I have spend five months (September 2005 till February 2006) at the office of Chakana in Bolivia and talked daily to the volunteers working for Chakana. I had the possibility to do a literature review of existing documents of Chakana in the office in La Paz. Other sources are observations during meetings, field observations, and informal talks with people visiting the office of Chakana, visits to other organizations and semi-structured interviews. To collect the data about the project-network of Chakana the emphasis laid on the people and organizations connected to Chakana during the running time of the projects.

The interviews

The interviews I held are semi-open interviews guided by topics. The interviewee knew about the connection the research had with NGO Chakana. The connection between communication and the projects of Chakana was explained to make clear the purpose of the interviews. I faced two problems with doing the interviews. At first the concept of interviewing was not clear to some of the interviewees and at second the language was a barrier. Therefore the research is biased. But the interviews are valuable as long as not too much emphasis is put on the results because they give an indication of the reality and opinions of the interviewees.

The topics treated in the interviews were:

- Organization and objectives;
- Connections with Chakana;
- History and experiences with development projects;
- Communication with Chakana;
- Opinions and experiences about carrying out the project;
- Attitude towards the cooperation with Chakana;

- Sustainability of the relation;
- Interdependency;
- Exchange of knowledge;
- Learning;
- Culture and meaning (Framing).

The operationalization of these topics and the key-concepts of this research will be explained later in this chapter.

The main problems were the ambiguity, abstractness and overlap between the concepts of social learning and framing. Often it was needed to translate these concepts by asking indirect questions or giving daily examples.

Another problem was the selection of the interviewee. I chose the people I wanted to talk to strategically. I had spoken with the executive director of Chakana to find my key-informants. The criterion was that my key-person had worked together with Chakana to carry out the project and that he or she was familiar with the organization or group they represented. To get information about the cooperation in the network I needed to speak with the representatives of the actors in the networks. Some of these people could not be reached due to bad weather conditions that made travelling impossible. This was not always possible but I tried to compensate this deficit by holding informal interviews and doing observations during field visits. The topics of the informal interviews were planned beforehand but the people to talk with were not. I visited the project-sites to talk to the people who were present.

Field observations

Field observations were carried out by seeing the content of the work carried out by Chakana and the other actors and their cooperation for the projects. By visiting the projects it was possible to observe the communication, cooperation, exchange of knowledge and learning between Chakana and the other actors. Not only the project-sites were visited but also the town hall, the other institutions involved and the local people. Because of my internship I was taken to all meetings and could make field notes because I had a passive role at those meetings. During these visits it was possible to talk to the people in an informal way to get information for this research. With these observations and informal talks, the results of interviews could be cross-checked. Also the content analysis of documents became more structural because some concepts and principals became easier to recognize and place into its context. Visiting and getting to know the projects increased the realism of the description during analysis and reporting.

In table 1 the activities and collected data are described.

Field visits	interviews	Informal talks
Office Chakana	Hernan Huaycho	Hernan Huaycho Pepe Marin Jaime Zenteno Representatives Local communities Representatives Women's organization Representatives VMF

Monte Rojo, Chuma		Local people Teacher of the school President of the village
Japari, Achocalla		Local people President of the zone Maestro's
Sojsana. Achocalla		Local people Maestro
Centre of Artesania	Francisca Condori Emmitteria Carillo	Women working on the site Maestro
Town Hall Achocalla	Mayor Maribel Valdez Ing. Lima	councillors
Office Chuma La Paz		Counillor Gumeyinda
German Embassy	Andreas Langenstein	
Cepas Caritas	Carmen Almendraz	Project-coordinator
Van Malsen Foundation (private house representative, hotel)	Christel van Malsen Angel Socrates Andrade	Julia

Table 1: data collection

3.5 Key concepts and Operationalization

The central concepts in this research are derived from the central research question:

How do the project-networks of NGO Chakana and the communicative processes within these networks influence the performance of Chakana in executing their development projects in Bolivia

- Communicative processes (abstract concept)
- Networks of Chakana (concrete concept)
- Performance of Chakana in reaching their development goals (abstract concept)
- Project areas (concrete concept)

The theoretical part is build up with two blocks: network-analysis and communicative processes in the network. The research focuses on the network around NGO Chakana that is constructed around three development projects. The projects have been carried out in 2005-2006 and form the external part of the analysis. The network is formed with actors who are directly involved with the three development projects. The communicative processes between Chakana and the other actors in the network form the internal part of the analysis.

Major drawback of this methodology is the relatively small amount of time in which the research is carried out. To see patters in the communicative processes or analyze the development of the network, it is necessary to participate and do research for a longer period of time than was available for this master thesis. Next to the time problem there is the problem with the language difference between the Dutch of the researcher and the Aymara and Spanish that is spoken by the actors in the network. It was not possible to see the nuances of the spoken language because the level of Spanish was not advanced enough to understand all details in the conversations with research objects.

The key concepts are operationalized in aspects and dimensions and can be seen in table 2. The reader can see what has been researched in this research. How this has been done, is already mentioned in the former paragraph. The analysis of the central concepts has been done according to the aspects and dimensions that are presented this table 2. The indicators/dimensions were derived from the theory and from the situation in Bolivia. By talking to people I developed an understanding of what the communicative processes meant for the people involved. I tried to make a complementary picture of all key-concepts by combining these two approaches. For the purpose of this research project the concept *networks of Chakana* is understood to be the nodes, ties and flows connected to the project-activities of NGO Chakana in the period 2005-2006.

Table 2: Operationalization of the key-concepts

<i>key concept (concrete)</i>	<i>aspects</i>	<i>Dimensions / indicators</i>
Project-Networks of Chakana: Oktober 2005-february 2006 <ul style="list-style-type: none"> • Centro Artesanal • Irrigation Achocalla • Irrigation Monte Rojo 	Nodes - Actors	<ul style="list-style-type: none"> - Development organizations - Governmental organizations - Foreign donors - Aymara contact persons - Indigenous / Local organizations - Individuals working with Chakana
	ties	<ul style="list-style-type: none"> - Professional; working relation - Financial; transfer of money - Personal; relation based on the personal situation of the actors, like study-contacts. - Juridical; relation based on juridical matters like contracts - Friendship: relation based on liking - Patron-Client; relation based on the assistance a patron gives to a client. - Dependency: relation based on dependency between two actors because power or resources are not equal between two actors - Appreciation: relation based on the positive judgement of an actor's behaviour.
	flows	<ul style="list-style-type: none"> - Money - Materials - Knowledge - Influence - Power - Labour - Supervision - Technical assistance
	Roles	<ul style="list-style-type: none"> - Leading: decision-making power - Coordinating: coordinating activities, flows of resources and contacts within the network - Cooperating: cooperation to reach network objectives. - Controlling: guarding the quality and

		<p>expenses of the project</p> <ul style="list-style-type: none"> - Depending: an actors agency depends on behaviour and decisions of other actors - Passive; not actively involved with the work on the projects. - Pressing: persuading other actors to exert certain behaviour. - Observing: watching the development of the project without contributing to or controlling this development.
<i>Key concept (concrete)</i>	<i>aspects</i>	<i>Dimensions / indicators</i>
Project areas	Chakana is involved in the development project	<ul style="list-style-type: none"> • Person working for NGO Chakana spends time and resources on the project • Chakana has decision power in the project.
	Located on the Bolivian Altiplano	<ul style="list-style-type: none"> • Village • Part of a community • Urban area
<i>key concept (abstract)</i>	<i>aspects</i>	<i>Dimensions / indicators</i>
Communicative processes	Sharing of Knowledge	<ul style="list-style-type: none"> • Meaning and importance • use • Tacit • Implicit • Yachay • Exchange
	Social learning	<ul style="list-style-type: none"> • Understanding and action • accumulation of knowledge • accumulation of skills • accumulation of values • accumulation of attitudes • actor's ability to use knowledge • mutual understanding
	Framing	<ul style="list-style-type: none"> • culture • meaning of activities • meaning of the project-objectives • transmission of meaning • framing and perspectives on reality • reframing of meaning • reframing of roles and positions • language
<i>key concept (abstract)</i>	<i>aspects</i>	<i>Dimensions / indicators</i>
Performance of Chakana in reaching their development goals.	Shocks	<ul style="list-style-type: none"> • satisfaction of the people involved in the project • Problems: budgetary, technical, communication • Delays • constraints • active involvement of actors

Chapter 4 The Research Area

This chapter functions as the background for the analytical part of this report. Chakana operates in Bolivia and therefore I will start with giving information of this Latin American country. In the second paragraph the organization, objectives and methods of NGO Chakana are explained. In the third paragraph the location and characteristics of the development projects NGO Chakana was executing in 2005-2006 will be explained. In the fourth and final paragraph of this chapter the development projects that were the case-studies of this research will be introduced. The area of research can therefore on the one hand be seen as the geographical region where the projects are located and on the other hand as the organization and projects that were the central point of attention in this research.

4.1 Bolivia

The Republic of Bolivia is a land-locked country in the hart of South America. Bolivia presents a sharp contrast between high, bleak mountains and plateaus in the west and lush, tropical rain forests in the east. The Andes is very wide in Bolivia. Two cordilleras, the western one tracing the border with Chile and the eastern running north and south across the centre of the country, are divided by a high plateau (altiplano), most of it 3,660 meters above sea level—barren, windswept, and segmented by mountain spurs. Despite the harsh conditions this altiplano is historically the population centre of Bolivia. The capital city of La Paz is scrolling down a valley with views on the snowcapped peaks of Illimani (6,457 meters). The government of Bolivia is seated in La Paz and about 1 million people are living in this densely populated valley (www.wikipedia.org). Right next to La Paz on the altiplano lays the city of El Alto. A lot of poor farmers have settled to seek their fortune here in past decades which make El Alto the fastest growing city of Latin America. The enormous amounts of slums with a lot of social, economical and ecological problems are inhabited by indigenous people.

More than half of Bolivia's population is indigenous, although the citizens of European descent (some 5% to 15% of the people) or mixed European and native ancestry (about 25% to 30% of the population) maintain economic, political, and social hegemony. The predominant native languages are Quechua and Aymara; they and Spanish are Bolivia's official languages. A few indigenous groups have remained isolated from European culture, like the Aymara Indians who live in the Andes and on the Altiplano. Most of the population is Roman Catholic, although many people of indigenous descent retain the substance of their pre-Christian beliefs. A small but extremely active Protestant minority also exists.

Bolivia is one of the poorest countries in South America and is experiencing a time of difficulty and uncertainty. In 2003, various political and social disturbances have escalated with serious consequences, culminating in the resignation of President Gonzalo Sánchez de Lozada in October 2003, and the appointment of Vice-President Carlos Mesa as President. The current administration inherits a difficult economic, political and social climate, which is compounded by long-term issues, such as profound inequality, an economy that has been adversely affected by the region's recent economic slump, and widespread public disenchantment with corruption. In December of 2005 Bolivia has chosen it's first indigenous president: Evo Morales.



Figure 5: Map of Bolivia

4.2 Non Governmental Organization CHAKANA

NGO Chakana is a small Dutch-Bolivian non governmental organization that was established in La Paz, Bolivia, in 2002 by two Dutch and two Bolivian people. Chakana means bridge in the indigenous Aymara language and the word refers to the ancient Andean cross that stands for the connexion between the micro and the macro cosmos and values like balance, equality and complementary. The symbol of the Chakana can be seen in the logo of NGO Chakana with the colours of the Wipala, the flag of the indigenous people of Bolivia.



Figure 6: Logo of NGO Chakana

4.2.1 The organization of Chakana

The policy and decisions of Chakana are made by a board that consists of three people: an the executive director in Bolivia, in the Netherlands a secretary who is also responsible for the planning and monitoring and also in the Netherlands a head finance who is responsible for budgeting and project development. Because the board consists of two Dutch members and one Bolivian member they are not able to meet on a regular basis. Besides the board, a lot of other people are active for Chakana in Bolivia as well as Holland. Until now everybody is working for Chakana on a voluntary base. The Bolivian people working for Chakana occasionally can get income by executing projects for Chakana and hiring themselves as experts. In Bolivia Chakana is run by two technicians. They are Agronomists and supervise the technical part of the development projects. Their fieldwork is most of the time part of the project proposal which provides them with a little bit of income for their work. The administrative part of the projects is most of the time not budgeted in the proposals. At the moment Chakana faces a period of transition and change because the organization is growing and becoming more professional. The Dutch part of the organization is busy with finding sustainable finance that will able NGO Chakana eventually to pay a few employees on a monthly base and secure the future of the organization. Because Chakana gets more experience with conducting development projects in the Bolivian Andes and their contacts expand in Bolivia as well as in Holland, they are able to execute more as well as bigger projects. This brings more stress and responsibility for the people conducting the projects. To pay the employees is a way of structuring the growth and existence of the organization. The executive director in Bolivia for example is working fulltime but voluntary for Chakana to help making Chakana a bigger and more professional organization. By doing this he hopes to get a paid job with ONG Chakana in the future.

The contact between the Dutch and the Bolivian part of Chakana is the weak chain of the organization. The people of the board are not able to meet on a regular base. The Dutch board of Chakana tries to visit La Paz at least once a year but this is still far too little to speak through all details of the organization. Once in a while they talk to each other by phone but most of the time the communication goes via internet. This means that Hernan has to write down all the events that happen weekly within the organization and send this to the Dutch part of Chakana. When the projects are executed, a lot of things happen and the situation changes all the time. This means that the people of Chakana Bolivia have a lot of work coordinating the projects and they also have to write everything down and send this information to Holland. By sending Dutch interns to Bolivia, the coordination and communication between the two parts is getting more structured and institutionalized. Formally every month an information letter about the execution of the projects is send to Holland but in practice this is very hard to accomplish and the Dutch part of Chakana doesn't get as much information as needed. This is also what happens the other way around. The Bolivian part of Chakana is hardly aware of what Chakana Holland is doing. There exists also an agreement to send every two months a management inform about the organization. In this inform is described what every employee has been doing during the past two months, what were the strengths and weaknesses of the communication between the Dutch and the Bolivian part of the organization, how much money has been spend on what, etc. This management inform is a good way of communicating general information and problems and therefore generate an overview of what happens within the organization next to the more practical information about the projects.

4.2.2 Philosophy of Chakana

Chakana tries to implement their own philosophy and strategies with the development and execution of projects in Bolivia. One important strategy is the participation and responsibility of the community during the execution and evaluation of the project. When the project has finished the responsibility of the maintenance and use of the project is transferred to the community but Chakana keeps giving constructions for the sustainability of the project. Another strategy of Chakana is getting attention for the situation of communities in the remote countryside of Bolivia. One way of achieving this is cooperating locally and regionally with other organisations in Bolivia as well as in Holland. By working for example together with the local governments Chakana tries to get the money that is meant for the communities on the right place. In Holland the people working for Chakana organize events to make the public conscious of the situation of the rural Aymara people in Bolivia. The third strategy that is mentioned by Chakana is the maintenance of the local Aymara culture. But nevertheless Chakana also strives for gender equality also when this means that some local traditions have to be broken. Chakana also tries to think of her projects in a scientific way. In stead of only listening to the wishes of the community, Chakana tries to make a problem diagnosis within the community to find out whether the project that is wanted is realistic and can be sustainable in time (www.chakana.nl).

4.2.3 Chakana in action

Most of the projects of Chakana are located within a day travelling from La Paz. Although more remote villages and communities are more in need of development-projects it is very difficult for practical reasons to carry out a project in such remote areas. There has to be a road for the transport of materials and the people working for Chakana need to supervise the project and be able to travel to the project site. The activities conducted by Chakana are diverse but most of them have to do with preparing and executing development projects. In the first stage of a project people of the villages visit the office in La Paz with a request for a project and to talk about the possibilities of carrying out this project in their communities. Most of the people come to Chakana because they know of another project that has been completed by Chakana in another community. Together with the community a project proposal and technical study is developed and when this proposal is ready Chakana starts looking for finance. As a non governmental development organization they are always dependent of external finance like governments, development funds etc. Chakana is trying to find the financing partners by showing a thorough project proposal. Most financing organizations have a list of data they want to see in the project proposal of the project they are going to finance. Chakana is reacting on these demands of bigger organizations to generate finance. When all parties have agreed with and signed the project-proposal the construction work can begin. The agreement is made juridical bounding by a contract, a 'convenio', in which all obligations and rights of the parties involved are described. When the execution of the project has started the people working for Chakana Bolivia have to make a lot of visits to the project-site to supervise the work of the community and solve the problems that arise during the work. Chakana always works with communities that contribute with their labour and, for example, local material to the projects but this cooperation is not always without problems. Some people don't want to work on the project or don't bring the materials necessary for the construction. When the project has finished, Chakana keeps in contact with the community to evaluate the project or update the knowledge of the people. In case of the construction of greenhouses in the communities of Patascachi and Kishuarani

in the municipality of Chuma in 2002, Chakana returned often to the project to give courses about commercializing vegetables or new techniques to grow crops.

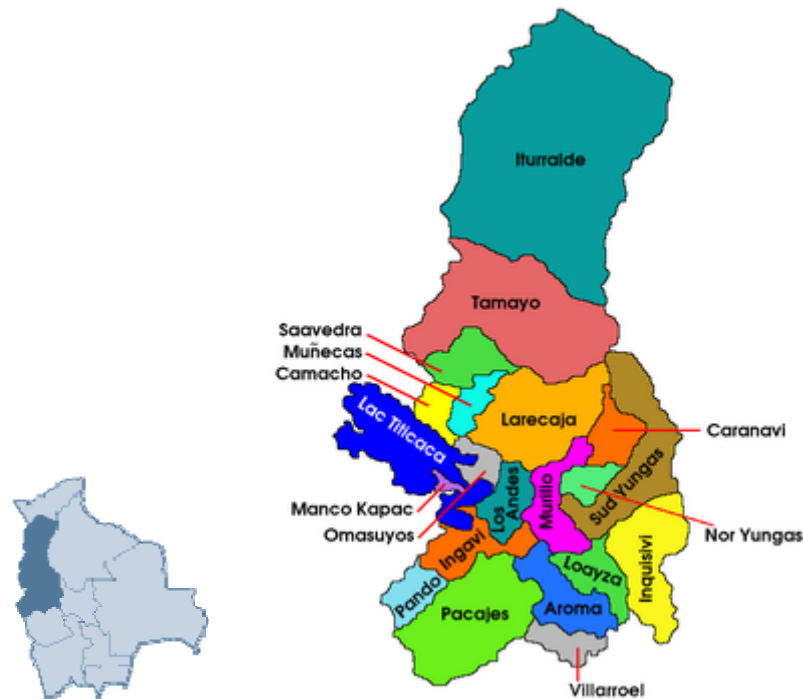


Figure 7: Department La Paz (source: wikipedia.org)

The development projects that Chakana carries out most of the time are agricultural in character. Chakana has a lot of experience with and knowledge of the construction of irrigation canals. On the Altiplano and in the valleys of this part of Bolivia, there is always a lack of water in the dry season which runs from April to December. Sometimes there is water, like a river, available but this water has to reach their fields for irrigation. With the construction of an irrigation canal, the people will be able to increase their agricultural production. Another type of project that Chakana has often conducted is the construction of greenhouses. People living on the Altiplano cannot grow a lot of diverse crops for their livelihood. They most of the time eat potatoes, corn, beans and the animals they keep around their farmhouses. But with a greenhouse they can grow a much more varied diet with tomatoes, herbs, fruits etc.

4.3 Research Area: Achocalla and Monte Rojo

The three projects of Chakana that functioned as case studies in this research were carried out in 2005-2006 and are located in the department of La Paz; two in the municipality of Achocalla and the other one in the village of Monte Rojo, municipality of Chuma. The valley of Achocalla has about 18000 inhabitants of which 54.55% forms the working population. Achocalla is situated approximately 30 kilometres from the city of La Paz and is divided in a valley-part and an Altiplano-part. Achocalla faces therefore a great diversity in climate and landscape because the Altiplano is the high plane with an altitude of 4000 meters above sea-level and the deepest point of the valley lies some 1000 meters lower. It is possible to travel from La Paz to the valley in one hour by public transport. The road to Achocalla is bad; the access from the city of El Alto down to the valley is a mud-road. The majority of the people that live in this valley and on the Altiplano are farmers of Aymara origin that live from their farm and the selling their agricultural surplus on the markets in the cities of El Alto and La Paz. Because the valley

has a pleasant climate and is located close to the urban centres, there is a tendency of rich people moving from La Paz to the Achocalla. Therefore Achocalla faces a process of change and urbanization at the moment.

In 2004 Chakana conducted for the first time a project in Achocalla, in the village of Marquirivi. This project was about the construction of a 4 km long irrigation canal and was financed by the German Embassy. At this moment Chakana is conducting two projects; irrigation in the Zones of Japari and Sojsaña and the construction of a Artisan Centre in the community of Carcanavi.

The third project is carried out in the village of Monte Rojo that belongs to the municipality of Chuma and the department of La Paz. The department of La Paz, which has about the size of Holland, exists primarily of Altiplano, a high plain 3800 meters above sea level. From this Altiplano a lot of fertile valleys are scrolling down that are suitable for agriculture because their climate is friendly and the altitude is lower. Monte Rojo is located on a hill slope, 220 km from the city of La Paz. The road is in very bad condition which means a 6 hours drive on a bumpy road to reach the village. Monte Rojo is a small village with just over a 100 inhabitants. The latest count was in 2001 but since then newborns are compensated by people moving to La Paz which makes the population relatively stable in size.

Community	Men %	Women %	Total %
Monte Rojo	48	52	100

Table 3: Inhabitants Monte Rojo (Source: local authorities, 2001).

The communities belonging to the municipality of Chuma are predominantly agricultural and some live for part of their subsistence of fishery on Lake Titicaca. The agricultural practices in this region are traditional which means that people work on the land only with a plough and their own hand labour. They cultivate a variety of crops like potatoes, corn, unions, carrots and beans. Some households have a cow or grow guinea-pigs or goats for their daily diet. In the village of Monte Rojo 40 families live that will benefit from the project that is conducted there by Chakana. The village of Monte Rojo is very small but for fills nevertheless a regional function because there is a primary school, the road crosses the village and the municipality promised the village electricity in 2006. This makes Monte Rojo not that remote for Bolivian understanding.

4.4 Chakana’s Development Projects

Chakana has been carried out three development projects in the period of November 2005 till February 2006: (1) the building of a Centre of Artesania, (2) Irrigation in Achocalla and (3) Irrigation in Monte Rojo. These three projects functioned as case studies in this research and will be discussed in next paragraphs. These project-descriptions will form the basis for the analysis in chapter five and six. The following research-questions were asked in chapter two and will be answered here:

- What kinds of projects have been executed by NGO Chakana in 2005/2006?
- Who are the beneficiaries of these projects?
- What is the planned running time for the projects?
- What are the reasons for NGO Chakana to conduct these projects?
- What organizations and individuals are involved with these projects?

- What activities need to be done for these projects?

The organizations that carried out the development projects together with Chakana and thus form the actors in the network will be explained in more detail in chapter five.

4.4.1 Centre of Artesania 'Mujeres de 24 de Octubre'

The first project that will be discussed here is the construction of a Artisan Centre. This Centre of Artesania is a social centre for women where local crafts and arts are made and women can meet to develop themselves. The main goal of this project is the construction of a building in Carcanavi, a community in the valley of Achocalla, where groups of women from all of Achocalla can make artesanía. Artesanía are products made with traditional materials and methods from, in this case, the Bolivian Andes. Most products are textiles like for example clothes, blankets and hammocks with traditional motives. The women can make their artesanía and sell it on the market in La Paz or export it to western countries. The groups of women are organized in the organization 'Mujeres de 24 de Octubre'. The different groups are women who represent communities and villages all over the municipality of Achocalla. Because 200 women are members of the 'Mujeres de 24 de Octubre' this project will, when the centre is successful in the future, benefit a lot of communities all over Achocalla. The project consists of two parts: the first part is the construction of the building and the second part will be the use of the building and the making and selling of the artesanía. I have looked only at the first part of this project because the second part has not yet begun.

This project is a cooperation between three institutions; the Van Malsen Foundation (VMF), Chakana and the women's organization 'Asociación de Mujeres de 24 de Octubre'. VMF and Chakana got in contact with each other in the Netherlands and the two organizations decided to work together on this project. The organizations involved with this project will be discussed in more detail in the next chapter. In December of 2004 the project proposal was approved by the organizations and the preparations for the construction could begin. The design of the centre is typically for these regions, only traditional materials are used and the plan is in the shape of the Andean crux. The building will have two floors and several rooms for different activities. The women hope to place computers there as well so they can learn how to deal with computers and doing their administration. The exterior of the centre is a sign of respect for the Aymara culture and history so that the people living in the valley can be proud of this building (see figure 4.4 for the plan of the centre).

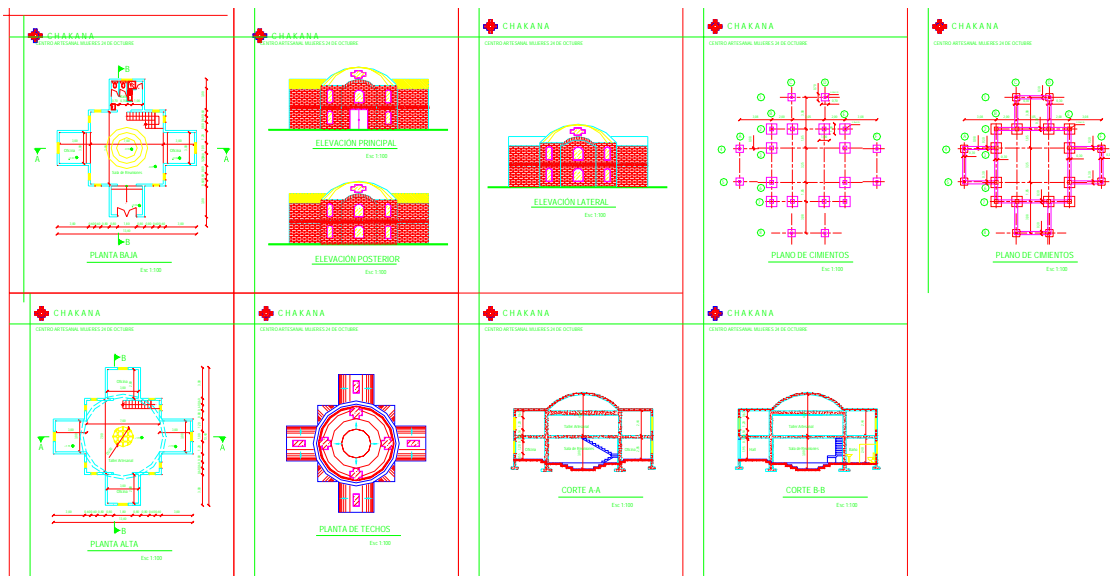


Figure 8: Plan of the “Centro Artesanal”

Project activities and achievements

The activities of this project can be split up in a project-proposal part and an execution part. The women of ‘Mujeres de 24 de Octubre’ had contacted the Van Malsen Foundation and Chakana with their wish of building their own Artisan Centre in Achocalla. Van Malsen Foundation and Chakana have initiated this project by developing the building plans and looking for finance for this project.

When the project proposal was completed, Chakana presented the plan in a meeting with the municipality of Achocalla, the representatives of the Van Malsen Foundation and the ‘Mujeres de 24 de Octubre’. In this meeting the project was approved by all parties. They agreed that the Van Malsen Foundation would buy the terrain in Carcanavi, Achocalla, where the Centre is going to be constructed; The Municipality would pay for 20% of the construction costs and Chakana the other 80%. A few weeks after this approval the municipality of Achocalla, with Dr. Ochoa as mayor, withdrew their plan to co-finance 20% of the construction of the centre because they considered it a private instead of a public project. The argument of the municipality was that this project would not benefit the whole community but only the women-organization. New funding had to be sought for the 20% of the project that lacked finance. The total costs of the project are \$13430 and the Van Malsen Foundation decided to help out with financing the 20% so that the project could be conducted. The preparations for the project took almost 9 months and in November of 2005 the project could finally start. The planned running time of the project was estimated on five months.

The board of the women’s organisation signed a contract with Chakana in which they obliged themselves to contribute to the project with their manual labour and the deliverance of the local materials needed for the construction.



Figure 9: People working on the “Centro Artesanal” (6-1-2006)

After everything between the institutions was arranged, the ‘maestro’ who has to build the building had to be contracted. A maestro is somebody who has a lot of knowledge and experience in building houses or other kinds of technical constructions. In this case the maestro needed to have knowledge of traditional building methods and materials. In the budget was \$1500 available for the hiring of a maestro and after a few conversations with different maestros, Chakana contracted one for four months. The maestro built himself a little house on the terrain of the project so that he didn’t have to travel to the site six days a week.

Chakana was responsible for the coordination of the project-activities and for the buying of the materials needed for the construction. The Van Malsen Foundation was responsible for the coordination with the groups of women who worked on the project. In November 2005 the first stone has been put and from that moment the materials were brought to the side, the maestro lived on the location and the building activities could start. In February 2005 the construction was delayed and finished for 70%.

4.4.2 Irrigation in the Zones Japari and Sojsaña, Achocalla

This project was aimed at the improvement of the already existing irrigation system in four communities in the valley of Achocalla and the construction of a big water tank to safe water for irrigation. This tank was build big enough to serve for potable water in the future as well. The beneficiaries of this project are estimated on 1175 persons: 235 families with an average of 5 persons per family (perfil de proyecto, NGO Chakana, 2005).

Irrigation is one of the most important conditions for the agricultural production in Achocalla. Without irrigation, little water ever reaches the fields. This need for water has increased more and more in Achocalla because the region is facing a process of urbanization and intensification of their agriculture. Intensive agriculture means that the plots of land are used continually without periods of rest. This is only possible if the ground is irrigated all year round and the old traditional irrigation system cannot provide in this need anymore (perfil de proyecto Riego Japari – Sojsaña, Chakana 2005). People rely more and more on intensive agriculture for their existence. They grow vegetables like for example carrots that need a lot of water during their growth. They sell their products on the markets in La Paz and El Alto and when their production increases they will be able to earn more money. People living in these zones of Achocalla need the extra

income because the costs of their lives did increase with the upcoming urbanization of Achocalla and the increasing contacts the people have with the cities of La Paz and El Alto. The old system of irrigation that the people used dated from 1952. At that time there was an agricultural reformation in Bolivia when a lot of agricultural infrastructure was built. Since this time only a few changes have been added to irrigation canals and the system is not sufficient anymore to cover the needs of the people. From the primary canal a lot of small canals were leading to the fields but a lot of this water never reached the field because it infiltrated into the ground. The most important part of this project is therefore to build a 4km canal of cement to replace the earth one. With a cement canal, the water can stream much faster and no water will infiltrate the ground. At some places the canal was built in L-shape instead of U-shape to lead the water running from the mountain into the canal. The project can be seen as two small projects because of geographical, social and technical reasons. The canals are constructed in the Zone Japari and a watertank is constructed in the Zone Sojsaña. The communities are different and don't work together on the project. The zones are not close to each other (one hour walk) and constructing a canal is different and less specialized than constructing a watertank.

This project is financed by the Roman Catholic organization Cepas Caritas and the municipality of Achocalla. One of the conditions of Cepas Caritas in financing a project is the cooperation with the local authorities. The local communities in Achocalla solicited for this project in the annual development plan of the municipality. Cepas Caritas had advertised in the local newspaper with a call for project-proposals. Chakana decided to use this project in Achocalla to get the finance from Cepas Caritas because there was the demand from the local people, the project was known by the municipality and Chakana has experience in carrying out irrigation projects.

Project activities and achievements

The technicians of Chakana did the research for this project needed to write the project-proposal. Cepas Caritas chose to finance the proposal of Chakana because of the professionalism of the document. The executive director of Chakana knew the project-manager of CC and he helped Chakana by providing the criteria for the selection of the projects. This helped Chakana to write a good proposal. After Cepas Caritas and the Municipality had approved the proposal, the project was initiated with a traditional ceremony. A representative of Cepas Caritas, the mayor of Achocalla and the board of councilors were present at this initiation meant to lay the first stone. The ceremony was organized by the local organizations of the Zone Merced-Japari. They had provided speeches, dinner and music.

The three sectors Uni Tarcamaya, La Merced Churupampa and Rincón Japari form together the zone Merced-Japari. These communities worked independently on the project. Together they constructed 4 kilometers of canal. The communities each had their own work-committee. This committee had the responsibility to organize the work on the canal. The traditional head of water-affairs in the community, the Alcalde de Agua, was part of this committee and the contact-person for other organizations. Every day a group of people (men as well as women) worked on the canal. Chakana hired a professional 'maestro' to coordinate the work. The local people had the task to assist this maestro and excavated the ground, made the cement and build the construction. The people worked together and every day one of the families provided the lunch for that day. The activities that were needed to build the water-tank and irrigation channel are the organization of the work, the excavation of the channels, buying of cement and other construction materials, bringing local materials to the site and technical supervision.

In Sojsana the people constructed the water-tank fast, without problems and with a good organization. The responsible maestro had a lot of experience and was able to motivate the people of Sojsana. They made a scheme in which they described in detail who was going to work when and on what. Another task that needed to be done was guarding the materials that were laying on the site. Two men had to sleep in the cabin on the site every night. Also for this activity the people of Sojsana divided the responsibility among every family.



Figure 10: Watertank in the Sojsana

4.4.3 Irrigation in Monte Rojo

This third project of Chakana carried out in 2005-2006 is about the construction of an irrigation system. Chakana carried out this project in cooperation with the German Embassy, the municipality of Chuma and the local community. In the next table can be seen what every organization contributed to the project. The contributions are valued in Bolivianos but the local people only contribute with non-monetary resources like labour and local materials. The costs of labour, transport and administration Chakana made for this project, are not taken into account in this table because the Embassy does not finance these activities. In reality Chakana participated with more than 4% to the project.

Institute	Estimation in Bs.	Participation(%)
German Embassy	82.631,00	50,00
Municipality of Chuma	39.900,00	24,00
Communities Monte Rojo and Timusi	37.200,00	22,00
CHAKANA	7.210,00	4,00
TOTAL	164.941,00	100.00

Table 4: Participation per institute project irrigation Monte Rojo.

The villagers of Monte Rojo have access to a water source, a river called the ‘Cascada de Monte Rojo’, but this stream is located high on the mountain. The water is coming from a permanent well so that the people are not depending on the rainy season

for their water but have access all year round. They use this water for irrigating their lands and there already exists an old system of canals made of earth leading from the well to the fields. These canals are of poor quality and can not irrigate all the land belonging to the village. The problem with an earth canal like this is that a big part of the water is infiltrating in the ground and never reaches the fields so that the amount of water that can be used is minimal for agricultural production. The project that Chakana executes in Monte Rojo is about improving this irrigation system so that the people of Monte Rojo can increase the quality and quantity of their agricultural production. The whole village will benefit from this project because every family is dependent on agricultural production. In figure 4.5 an overview of the project can be seen.

The original project proposal also included the village of Timusi in the plan. But the villagers of Monte Rojo didn't want them to share in the project and therefore the project was conducted with only half of the beneficiaries. The first problem was that the two villages couldn't agree about the amount of investment and labour that they would contribute to the project. The second problem was that the canal and the storage tank would go through the fields of Monte Rojo to Timusi. The farmers of Monte Rojo would lose hectares of their cultural land to the canal and wanted compensation for the loss. In Timusi people have more land but no water so Monte Rojo asked for some plots to compensate for the loss on their own terrain. Timusi refused this offer and the two villages decided not to cooperate together. The project was split up in two parts and only Monte Rojo was enthusiastic for executing this project. Chakana therefore changed the project proposal and decided to build only an irrigation canal from the river to a water tank that belongs to the village of Monte Rojo. The first part of the project proposal is the construction of approximately 1000 meters of canal from the river to the water tank of Monte Rojo. The terrain is has a vast cover of plants and trees, there are a lot of rocks on the way and the path is steep and irregular. The second part of the project proposal is the construction of the water tank that will distribute the water to the different terrains of Monte Rojo. In the figure can be seen how the infrastructure is build. On this map is clear that only a little part of the original project is executed (from the stream to the water tank, marked with the green square).

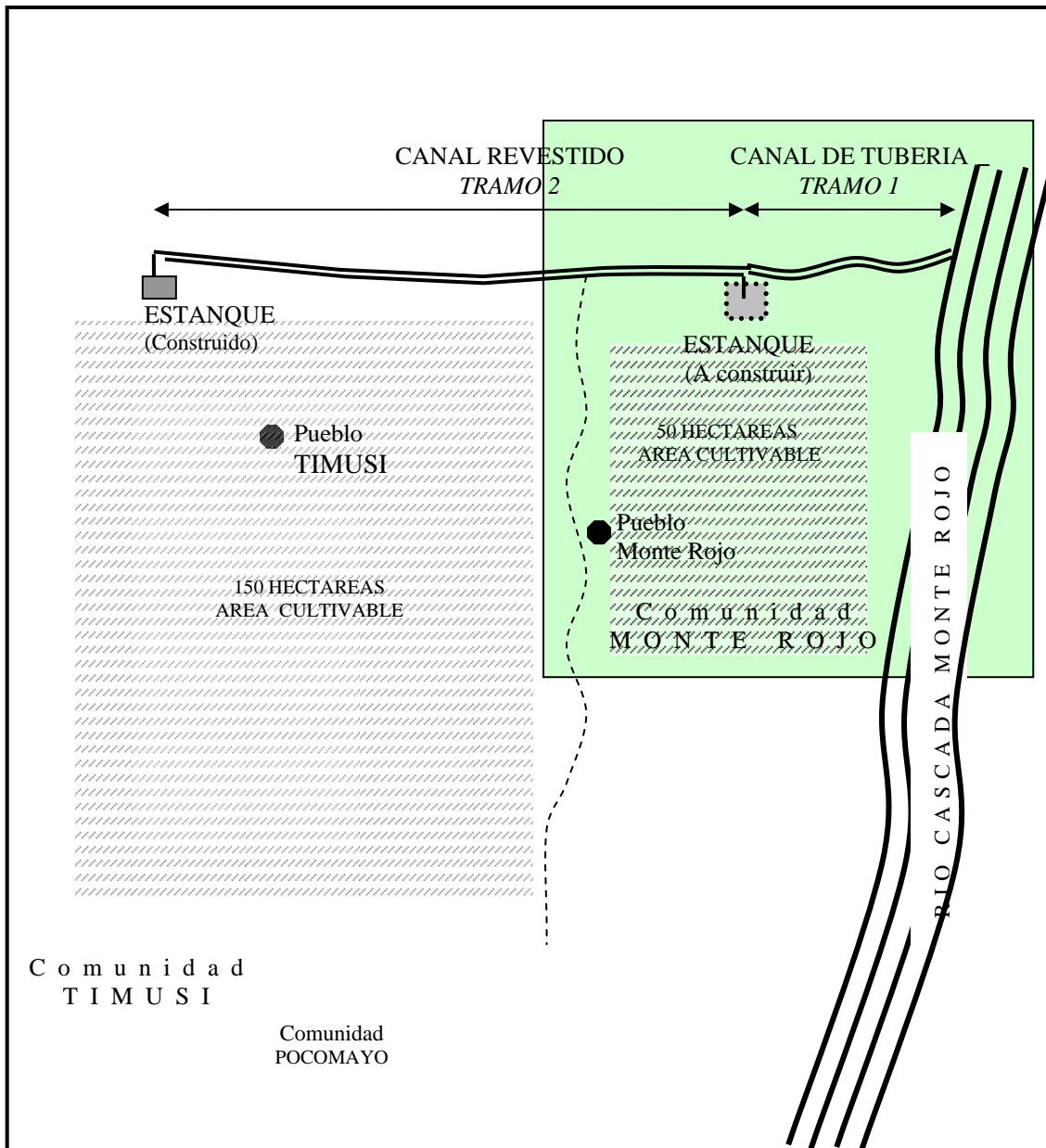


Figure 11: Irrigation in Monte Rojo

Project Activities and Achievements

When Chakana had developed the project proposal together with the responsible of the village, Freddy Lopez, they showed it to the German Embassy and the municipality of Chuma. When both parties agreed in financing this project, a delegation of Chakana, a representative from the municipality and a lawyer went to the village of Monte Rojo to present the plans and sign the contract. The meeting was held in the indigenous Aymara language and people could ask questions about the content of the project. That day the village agreed with the proposal and the project-commission was funded. In the following weeks Chakana sent two technicians to the village to do the research needed for the project. A month after signing the contract, the work could begin. The municipality of Chuma looked for and hired a maestro with experience to coordinate the construction of the canal. The project was initiated with traditional rituals and a big meal with the whole community. The same day the truck with bags of cement brought the first part of the materials needed for the construction. After this first meeting in November, Chakana did not have much contact with the village about the construction.

A month after the initiation the second truck with materials was sent to the village. From the end of December the road was too bad to travel to Monte Rojo. In this period the project commission of the village reported that the work on the canal was stopped because there were problems in the village with the technical part of the project. The villagers had agreed with the proposal of Chakana but during their labour they wanted to change the technical details of the project. The terrain was covered with wood and rocks and the excavation was hard work. The villagers decided that they did not need the irrigation system that Chakana developed for them. On the lower slopes of the mountain they had experience with a canal with less volume and they thought that canal was good enough. They decided to change the route of the canal, make it smaller and skip the tank and still have a valuable project. The maestro discussed these plans with Chakana and they decided to continue the project like the local people wanted it. Chakana had little choice because it was or continue the project like the village wanted it or stop it. The new technical design was acceptable but not preferable. The technicians of Chakana had calculated the size of the canal based on measurements of the amount of water that was coming from the well in the wet season. By approaching this scientifically, Chakana wanted to guarantee the sustainability of the project. More details of this problem will be discussed in chapter five in the analysis of the shocks that happened in the network. From December till February Chakana was not able to visit the village and supervise the project because of the very bad state of the road. The jeep that Chakana uses could not reach the village because the river and heavy rains had swept away parts of the road. Chakana had to trust on the experience and professionalism of the 'maestro' in executing the project.

4.5 Summary

In this chapter I have introduced Chakana and the three projects they have carried out simultaneously from October 2005 till March 2006. Some of the projects were not finished yet in March but the scope of this research is only these 5 months. This was the most important period because the work had to be done to realize the different projects. This research has been carried out from the viewpoint of Chakana as central actor in the network to be able to do recommendations to the organization. Therefore Chakana is introduced in this chapter as part of the basis that is required for the analysis of the network and the communicative processes between Chakana and the other actors in chapter five and six.

In the next table 4.5 an overview has been given of the different organizations that work together with Chakana on the projects. This table is the basis for the next chapter in which detailed attention is paid to the different actors, their reasons to cooperate in the network, their communicative relationships with Chakana and the shocks that took place while carrying out these projects.

Project Title	Beneficiaries	Running Time	Organizations	Activities
CENTRO ARTESANAL	'Mujeres de 24 de Octubre': 200 female members	First fase: January 2005-2006	<ul style="list-style-type: none"> - Chakana - Van Malsen Foundation - Mujeres de 24 de Octubre 	<ul style="list-style-type: none"> - project development - buying of land and materials - hiring of maestro - coordinate the participation of the women - construction of the centre - using the centre
IRRIGATION ACHOCALLA	1175 persons in four communities in Achocalla	November 2005-march 2006	<ul style="list-style-type: none"> - Chakana - Cepas Caritas - Municipality of Achocalla - Local organizations 	<ul style="list-style-type: none"> - Project development - technical research - buying of materials - coordinating local participation - excavating and construction of canals and water restore - technical supervision
IRRIGATION MONTE ROJO	40 families	November 2005-april 2006	<ul style="list-style-type: none"> - Chakana - German Embassy - Municipality of Chuma - Local organizations 	<ul style="list-style-type: none"> - project development - technical research - buying and transport of materials - clearing the land - excavating and constructing the canals - technical supervision

Table 5: Development projects NGO Chakana

5 Project-Networks of Chakana

5.1 Introduction

In this chapter the project-networks around NGO Chakana that were the case studies of this research will be analyzed by answering the third research question that was asked in chapter two (p.33). The analysis is qualitative and meant to give an insight in the functioning of all actors in the network during the running time of the projects. The research framework of the network (figure 2, p. 31) will serve as frame for the text in this chapter.

The projects are the common concern around which the different actors have joined forces. In chapter two I discussed the different conditions that have to be met before you can talk of a network. The first one was the presence of multiple actors. In the three project-networks of Chakana nine actors with different views and backgrounds are gathered around the common concern of the projects. The second condition was that the actors are interdependent of each other to reach their objectives. In the project-networks all actors are needed to carry out the project and they are therefore interdependent in reaching their objectives. The actors still have their own autonomy to act and this is the third condition for a network. The goals of the actors are intertwined and their interactions are complex. I have looked at groups of actors and their interactions are complex because within these groups individuals with their own goals and local-local connections are acting as well. The relational ties between the actors are characterized by the flows that run through these channels. The relations are sustainable during the running time of the project but are also dynamic and subject to change.

In the next three paragraphs the actors, their characteristics and the ties and flows between them and Chakana are identified for each of the three development projects. These paragraphs will guide the tables 5.1, 5.2 and 5.3 that can be found in the appendix of this thesis. In the tables can be seen what flows come into the different organizations and what flows leave the organizations. The ties that are used to transfer the flows are also identified. The insight into the actors and network dynamics as they occurred during the running time of the projects leads to the roles and strategies the actors played in the networks.

The performance of Chakana is analyzed by doing a shock-analysis of each project-network. The internal and external shocks that affected the network during the running time of the projects will be discussed. This means looking at the threats and challenges for the entire network and those for the actors in control. I will focus on the general and communicative problems that have occurred while the projects were carried out. Problems are considered to be discrepancies between what is desirable for Chakana and what is happening. Problems are the weaknesses of the network because they arise when the actors are not interacting optimally. The problems that occur while carrying out development projects can have different characters like; financial, communicative, cooperative, coordinative, power and set backs. The development of a project is desirable if the work on the project is happening like it was devised in the project-proposal.

The conclusion of this chapter will not be presented in a separate paragraph but in chapter seven together with the conclusion of chapter six and the answering of the central research question.

5.2 Centre of Artesania, Achocalla

The network around the project Centre of Artesania is formed by Chakana (Bolivia and The Netherlands, Van Malsen Foundation (Bolivia and The Netherlands) and the women's organization "Mujeres de 24 de Octubre".

5.2.1 Van Malsen Foundation

The Van Malsen Foundation is a Dutch NGO that was funded in 2002. The organization is named after Christel van Malsen, who funded the organization and who is responsible for the communication with Bolivia and finding funds for the projects. The Van Malsen Foundation is organized around a Dutch part as well as a Bolivian part. In Holland four people form the board and in Bolivia two people work for the Van Malsen Foundation; Angel Socrates Andrade and Julia Valancia Mendoza (www.vanmalsenfoundation.nl). The VMF finances projects in Achocalla because Achocalla is located close to La Paz and can be easily reached. Another reason is that poverty is still wide spread among the inhabitants of Aymara origin. Some communities don't have for example access to water and electricity. Next to this the government of Achocalla doesn't invest much in their villages. Most of the schools lack for example windows or proper learning material or communities don't have access to drinking water.

There have been several reasons for VMF to contribute to the Centro Artesanal. At first it was a follow-up for the tailor-lessons they had organized for a few years. The building would provide a space for the tailor activities and VMF planned to buy machines and store them in the building so that every member of the women-organization could use them. Second the objective of the VMF was to carry out a project that fitted in the policy of the VMF and help the rural indigenous women in Achocalla. Thirdly by contributing to the centre VMF hoped to get known as a development organization in Achocalla to get a social basis for their activities in the valley.

The chairwoman, Christel van Malsen visits Bolivia at least once a year to coordinate new projects, look for funding and evaluate running projects. Until VMF cooperated with Chakana, they had experience in working together with the NGO Ayni (Interview Christel van Malsen, 2005). This cooperation was evaluated positive and transparent. The VMF has also experience in working together with the municipality of Achocalla Sometimes this was a positive experience because the municipality was supportive and cooperative but sometimes it has also been negative. Most of the time this was caused by the bureaucracy and the unwillingness of the municipality to contribute with resources they promised to deliver.

Resources:

The most important resource VMF has contributed to the projects is money. The VMF contributed to the construction of the Artisan Centre at first by buying the terrain. When the municipality withdrew their finance, the VMF filled the financial gap and with their money the iron was bought that was needed for the construction, the costs of the transport of material were covered, the machinery for the equalization of the terrain was hired and the materials needed for the plumber of the building were bought. Although the VMF financed a big part of this project, the contribution will not be sustainable for the network. As a small organization, VMF always has to look for funding for the projects. Because of the deficit in the financial planning of the building of the centre, VMF is not enthusiastic to contribute more financial resources to this project. Besides the financial resources, VMF can rely on human resources. VMF is able to pay two Bolivian employees and these representatives of VMF can spend a lot of time coordinating the projects. They are responsible for spending the money and reporting to the Dutch people

of VMF. They receive the project proposals from the communities in Achocalla and translate them to Dutch to send to VMF in the Netherlands. Next to these financial and human resources the Van Malsen Foundation has a good network of relations in the valley of Achocalla. Because they carried out several projects for women-groups, schools and villages they are known and respected by the villagers. Also within the municipality VMF has contacts with the mayor and several other officials. The experience and practical knowledge VMF gathered with carrying out projects in Achocalla is a resource because it helps carrying out projects in amore efficient and effective way. The pitfalls and Bolivian ways of doing things are known and can be taken into consideration beforehand. Van Malsen Foundation has no knowledge about the technical parts of projects and needs to work with external parties who have this kind of knowledge to carry out for example drinking water projects.

Ties with Chakana

Chakana and the Van Malsen Foundation (VMF) were both active in the valley of Achocalla and heard of each other's existence from the local people. When the representative of the VMF, Angel Socrates, was visiting the valley in 2004, he met the executive director of Chakana, Hernan P. Huaycho. Chakana as well as the VMF are Dutch-Bolivian organizations so the Dutch representatives of the organizations got in contact with each other as well. From this moment the relational ties between both organizations were developed. Together with the organization "Mujeres de 24 de Octubre" the idea of a Centre of Artesania was developed. Chakana had experience with technical projects in Achocalla and the VMF wanted to finance a project for the women's organization.

When looking at the different ties that exist between both organizations it is necessary to distinguish between the different parts of both organizations. The relations occur between Chakana-Bolivia and VMF-Bolivia, Chakana-the Netherlands and VMF-the Netherlands, Chakana-Bolivia and VMF-the Netherlands and VMF-Bolivia and Chakana-the Netherlands. From the beginning the ties between Chakana and VMF were professional; they worked in the same field of development in Achocalla and could combine their resources for a big project. When all parties involved discussed and approved the project proposal the VMF bought the terrain where the centre was going to be constructed. Chakana and the municipality of Achocalla would pay the rest of the project-expenses. But when the municipality withdrew from the project, VMF decided to fill the financial gap and pay the 20% of the project that was part of the municipality. From that moment the tie between VMF and Chakana became financial as well. Chakana was responsible for the executive part of the project, so the money needed was send from VMF-The Netherlands to Chakana-The Netherlands. VMF and Chakana made appointments about the frequency of sending information about the development of the project. Because VMF had a big stake in the funding of the project, they wanted to be involved with the carrying out of the project. VMF wanted to institutionalize the relation by asking for a report about the development of the project every two weeks. This tie formed the infrastructure for communication about the project-development and existed between Chakana-Bolivia and VMF-the Netherlands. The flow that was exchanged through this tie was information about the development and expenses of the project. Problems, which will be explained later in this paragraph, with the carrying out of the project arose and VMF-the Netherlands contacted Chakana-the Netherlands to ask for clarification. From that moment the tie became more professional next to the financial tie that already existed. In Bolivia a direct working relation existed between the representatives of VMF and Chakana. They met frequently in the office of Chakana and

on the project-site to discuss the development and the problems that arose. Knowledge, experience and information were exchanged through this tie. Information about the development of the project was the most important flow between the organizations but they also shared their knowledge about the groups of women to improve the carrying out of the project. Another type of tie that existed between Chakana-the Netherlands and VMF-Bolivia was based on friendship. People active for Chakana could use the network of VMF and their Bolivian representatives in the valley of Achocalla to find a community for doing research. This tie was not maintained anymore during the running time of the project. The mentioned ties between the different parts of the organizations were maintained by e-mail contact, phone and meetings in the Netherlands and Bolivia. During the running time of the project the ties were maintained with difficulty by both organizations. There were no frequent or regular meetings between the Bolivian representatives of VMF and Chakana to coordinate the project. The ties between Bolivia and the Netherlands worsened because of the problems that occurred with the project and the different expectations both parties had from the professional, financial and direct-working relations. The representative of the VMF mentioned the difference in culture and approach between the two organizations as a pit-fall for the cooperation. Next to the relations between the organizations there were relations between individuals within the organizations. At first there were the local-local connections within Chakana. In Bolivia the executive director of Chakana worked alone on the project. He sometimes had help from other volunteers working for Chakana but this was not on a regular basis. Within the organization he had only connection with the Dutch representatives of Chakana. Within VMF there were more local connections because two people worked on the project in Bolivia and they had regular contact with the Dutch representatives of the organization. Both organizations have evaluated the relation as difficult because they were disappointed in the outcome the relations had brought them. The carrying out of the project faced a lot of difficulties that caused a worsening of the relational ties between the organizations in quality as well as quantity. This has consequences for the sustainability of the ties between Chakana and the VMF. During the running time of the project they will still have professional and financial ties. The project exists of two parts and the first part of constructing the centre is not yet finished. Both organizations have to consider if they still want to maintain ties during the next steps of the project.

5.2.2 “Mujeres de 24 de Octubre”

The “mujeres de 24 de Octubre” is an organization of women that live in Achocalla, on the altiplano as well as in the valley. The organisation exists since 2002 and the women have organized themselves around geographically oriented groups. The reason for the women to start an association is to cooperate together and facilitate women to develop themselves. In 2004 the ‘Mujeres de 24 de Octubre’ got a juridical status and became an official association. Every village has a group that is member of the association and these groups are represented by a president that is the responsible and contact person for the general board of the organization. When a group wants to become member of the ‘mujeres de 24 de octubre’ they have to pay an entrance fee of 600 Bs (\$75) for the whole group, no matter the size of the group. For small villages with a group of only a few women this fee is difficult to pay. At this moment about 200 women are member of this association.

The general board consists of 7 women that are elected by the members of the association in 2002. This board of women meet frequently but not on set times. They know each other also informally because the Bolivian custom requires that they invite each other for parties, weddings etc. Therefore the bond between the women is strong.

Nevertheless they have little experience in running an organization. There are no structured meetings and promises are broken all the time. This became visible with the construction of the Centre Artesanal when the president, Doña Francisca, who is the first responsible person of the organization, didn't show up for weeks, there was no communication and the women didn't deliver the materials needed for the construction. As a president she is responsible and a role-model for the other women. As a result the other groups didn't show up on a regular base as well, didn't meet up to their promises and they were dissatisfied with the way things went. The following groups that form the women's organization signed the project proposal. There are more groups member of this organization but they did not sign the proposal for the building of the centre because they were not members at that date or had not paid for the entrance fee yet.

Group	amount of members	President
Ñacawi – Callipampa	61	Francisca Condori de H.
Uypaca	22	Emeteria M. de Carillo
Alto Cañuma	21	Dora Gamboa
Merced Japari	31	Lucilia Luisa Fernandez Condori
Huayhuasi	24	Catalina Quispe Vallejos
Carcanavi	26	Isabel Garrillo

Table 6: Members of the 'Asociación de las Mujeres de 24 de Octubre'

One reason for the association to cooperate with this project is that they have a place to meet and work on their artesanía: the organization 'Mujeres de 24 de Octubre' will get a body when they have their own building they can rely on. Until this moment the different groups meet in the private houses of their members where they don't have sufficient materials, like the machines for weaving or the lanes needed. And there are administrative difficulties of the payment of electricity and water they use. In the new centre all groups will pay for the maintenance costs of the building, there will be a computer that they can use for the administration and they will get machines for the making of artesanía.

The women expect to make profit out of the sell of products they can make in the centre. As a member of the "mujerers de 24 de octubre" every group can use the Centro Artesanal that is constructed for the women's organization. There will be a room with machinery where about ten people can work. The groups will have to make schemes for using the building because it will not be possible to host 200 women at once in the centre. The groups are supported by the VMF with tailor classes and they meet to exchange knowledge about weaving and the making of artesanía. A few people only know this art and the women want to regain the knowledge so that they can make products of a high quality and sell these on the market in La Paz. They also organize lectures about the rights of women and other subjects that interest them. Another reason they mentioned was that they don't have to explain what they are doing to their husbands because they have a private place to meet and will be able to do what they want there.

The women have little experience in working together or cooperating with other organizations. They worked together with a NGO to help them register as an association but this was little work and not very cooperative. The different groups have experience in cooperating with the VMF who organized tailor-lessons in the different villages. But the women worked only together on the level of their communities and had no experience in combining the different groups. The women who are member of the association are indigenous farmers without education. Some of them are also active in other local

organizations but most of them have no experience in participating in organizations. But because they live in rural indigenous communities, they have experience in working together in for example their agricultural activities.

Resources:

The 'Mujeres de 24 de Octubre' contribute to the project with the local materials like wood, earth, stones etc and their manual labour. All of this has the economical value of \$2000. This means that every member has to pay \$10 per person, in the form of helping with the work and the delivery of materials. Each member had to come for a few days to work on the building but these human resources were not very reliable for the organization. The women had a little bit of money which they could use for the construction. They got the money from the entrance fees of new groups of women. The members were opposed to contributing more money, like for example every month, to pay the expenses for the project and maintaining the building when it is ready. The women have a board that is responsible and this board can be seen as human resource because they were the address-persons and could communicate project-information to the members of their groups. Other resources the women have in their organization are the knowledge of making traditional artesanía. Not all women still know how to knit and weave traditional textiles but they want to share their knowledge in classes when the centre is ready. They have access to the materials needed for the artesanía like wool, traditional motives, colouring substances etc.

Ties with Chakana

Chakana got in contact with the women's organization "Mujeres de 24 de Octubre" when the women approached Hernan Huaycho with their ideas for their own centre. The women first went to the municipality of Achocalla in 2004. At the municipality they knew of the work of Chakana and told the women to go to the office of Chakana and present their ideas for the centre. From that moment the tie between Chakana and the "Mujeres de 24 de Octubre" was established. From the beginning the tie had the character of a patron-client relationship. The women needed Chakana for funding and technical and organizational support. When funding for the centre was found and a project-proposal developed, the ties became more professional. The women had their responsibilities within the project and were considered an independent organization. The women came to the office to sign the contract and make appointments about the work they would do for the project. The tie was still characterized by dependency; Chakana told the women what to do and they carried it out. The tie was also used to send the materials needed for the construction. The women and the maestro received the materials and arranged a working schedule for constructing the centre. When the women lacked money to buy the local materials they needed, Chakana has lent them the money. This flow of money took place once. Because the development of the construction was problematic, the professional tie was used most of the time to send instructions and solutions from Chakana to the women. The only flow between the organisation of women and Chakana was information about the progress and calls for help for the problems that arose. It proved to be very difficult to maintain the ties between Chakana and the women's organization because of the lack of communication-means, the physical distance to the women and because they were scattered among whole Achocalla. The ties existed between the different members of the board of the women's organization and the executive director of Chakana. During the running time of the project, the tie weakened because communication was difficult and all kinds of problems occurred which made the relation difficult to maintain. The mentality that existed among the women as well as at

Chakana was not to acknowledge problems and difficulties but to turn the other way around and break the tie that causes the problem. The Chairwoman of the “Mujeres de 24 de Octubre” thought that the relationship between the women’s organization and Chakana was very good and that no big problems had occurred during the construction of the centre. Chakana evaluated the tie with the women’s organization nevertheless as difficult and problematic. Chakana has put a lot of effort in contacting the women by calling them, visiting the site and leaving messages to other persons involved. The board of the women’s organization evaluated the tie as positive because they referred to the patron-client relation instead of the professional relation. The women in the board thought that Chakana had helped them a lot (Interview Francisca Condori). Chakana had promised to help the women and Hernan helped them by carrying out this project and building a centre. Both organizations expected different things from the ties between them. The women saw it as a patron-client tie while Chakana referred to the professional relation in which they expected something back. These different expectations as well as the internal problems of the women’s organization will have consequences for the sustainability of the relation. The women were not able to organize themselves properly to oblige to their responsibilities so their ties with other organizations weekend because there was nobody to maintain them anymore. The local-local connections within the “Mujeres de 24 de Octubre” were weak. For the women it was very difficult to maintain them and involve all women needed for the project. The physical distance was a threat for the connections within the organization (interview Francisca Condori). The negative experiences with Chakana threatened the professional tie between them but they are still bonded to the patron-client tie that is established with this project as long as the project is still going on.

5.2.3 Roles and Strategies

Chakana had most weight in this project because they had the responsibility for constructing the centre. Chakana paid also the biggest part of the cost and therefore had a leading and coordinating role within the project. Chakana dominated the development of the project-proposal and did not involve the other actors in this stage of the project. The role of the VMF changed during the project. At first they planned to buy the ground for the center and from that moment to withdraw from the project so that Chakana could do the executing work. But when VMF invested also the 20% of the costs that the municipality refused to pay, the role of VMF changed from the background to taking responsibility for the construction (interview Angel Socrates Andrade, 20-12-05). Chakana seemed not very happy with this change of attitude of VMF because it also changed the role of Chakana. VMF gained weight and importance within the network and therefore the weight and importance of Chakana in the network relatively decreased. Chakana had to adapt their coordinating role to a more cooperating role in relation to VMF. This was discussed and agreed upon but in practice both organizations worked individually. Another characteristic of the game was the conflicts that took place. The conflicts were not spoken out but took place silently. At first there was a conflict between the municipality and Chakana because the municipality did not bring the promised machinery for clearing the ground. This was a silent conflict because the municipality simply ignored the questions of Chakana concerning the machinery and did not give clear answers to the questions Chakana asked. The second conflict arose when VMF had other ideas about the frequency of reporting about the development of the project. VMF wanted an update every two weeks but the representative of Chakana in Bolivia thought that was too frequent because it took him too much time to send a report two times a month. During the running time of the project Chakana did not send reports frequently.

Chakana only gave the information to VMF that concerned the spending of the 20% of the budget this organization contributed to the project. VMF had also contact with the Chakana-the Netherlands to talk about the reports and the problems that occurred. Both organizations thought differently about solving the problems and each other's roles within this project and the conflict froze the relations between both organizations. There was a discrepancy between the roles both organizations played in the projects and the roles they expected each other to play. This was also the case with the third organization, the "Mujeres de 24 de Octubre". The organization of women was not able to fulfill its tasks within the project but Chakana and the VMF treated the women's organization as a responsible cooperation partner. The women played a cooperative role but could not succeed in organizing themselves and that made their cooperation not reliable. In the chapter 6 I will pay more attention to these differences in expectations and frames. The role the women played was also characterized by avoiding behavior. When became clear that the women had to contribute to the project with money and labor some groups withdrew from the project. The chairwoman disappeared for weeks when problems arose. Because the organization was so weak, withdrawing seemed a better option than cooperating or negotiating because the board was not able to mobilize all women for the project. As said before Chakana played a dominant coordinating role at the beginning of the project and did not involve the women in the project plans. This became clear when the women declared to the representative of the VMF that they did not knew about their contribution to the project with money and labor until the plans were ready and presented to the VMF and the municipality (Interview: Angel Socrates, 20-12-05; Francisca Condori, 7-2-06)). When they got informed about their contribution they did not understand what exactly was expected from them. Chakana changed their role towards the women's organization when the construction of the centre began. The dominant coordinating role changed to a cooperative role but at that moment the women did not understand what their responsibilities were and how the role of Chakana had changed. Because the women's organization had internal problems and was badly organized they could not play the role the other organizations expected from them. Their strategy was to ignore and avoid facing the problem. The three organizations were interdependent in reaching their goals in this project. Chakana needed the money of the VMF to continue with this project and VMF needed the experience and technical knowledge of Chakana. They were both dependent on the cooperation and enthusiasm of the women's organization because they were the target-group of this project and had also an important stake in the construction. The women were the most dependent organization in this project because they lacked resources like money, knowledge and organization skills.

5.2.4 Shocks

During the development and the execution of this project Chakana had to deal with several problems. The first problem had financial and cooperative characteristics. The municipality withdrew their finance and cooperation from the project. At first the mayor and councils of the municipality agreed with the project and Chakana had presented the project-proposal to the municipality and the women's organization at the town hall in Achocalla. But the municipality took the whole plan into consideration and came to the conclusion that the project would not benefit the whole community of Achocalla but only the organization Mujeres de 24 de Octubre. The municipality proposed to finance the project if they would become the owner of the land when the project was ready. The Mujeres de 24 de Octubre and VMF did not want to involve the municipality like this in the project and the other actors decided to carry out the project

without the municipality. The problem was solved when VMF promised to pay the part of the municipality.

The second problem was cooperative and again the municipality was involved. The municipality had promised to Chakana and VMF to contribute to the project with machinery. They would send a tractor for two days to equalize the terrain so that the construction of the centre could begin. The tractor came for the first time in November and equalized about 70% of the terrain. The tractor had to come once more to finish the remaining 30% but that never happened. The head of the technical sector of the municipality had several explanations for not sending the machinery but these were not reliable because they changed every week. Chakana as well as the representative of the Van Malsen Foundation went to the municipality to ask why the tractor had not been sent. The municipality even sent a formal letter in which they promised to send the tractor the 12th of December, but it didn't come. Because of the municipality was unreliable the construction was delayed because the excavation of 30% of the ground still had to be done. Eventually the maestro and women who were working on the project decided to excavate the terrain by hand.

The third problem that arose had cooperative, communicative and coordinative characteristics. The organization and the contribution of the work of the women's organization were unreliable for the other actors in the network. Chakana and supervisor could not rely on the contribution of the women's organization. In the project proposal was said that the women would contribute to the project with labour and local materials. But the groups of women that had to come to work on the construction did not show up or showed up with too little women. They seemed not motivated enough to carry on with the project. The groups were almost never complete because the chairwomen could not motivate enough women to contribute to the work. The local materials were also a problem because they could not transport it to the site. Therefore the construction delayed. The explanation the women gave was that they had not known what their responsibilities were until the project-proposal was presented and the women had to sight this proposal. It was not clear to them what they had to do, what they had to contribute and what this would mean for them. They had not realized that this project would cost them time and money. They also had their obligations within their families and did not show up because they had no time to come to the centre. Although the overall problem was the delay in the construction this problem actually had a communicative and cooperative character. Chakana had not consulted or communicated the content of the project to the women's organization. Chakana confronted the women with the project and the board of the organization agreed with the project without realizing what it meant in practice. The contract that was signed with Chakana and VMF obliged the women to contribute their part to the project but they did not have the means to cooperate properly. The different groups that were part of the "Mujeres de 24 de Octubre" were not well organized and had no experience in cooperating with other organizations. The organization agreed with Chakana and the supervisor to come to the centre and assist with the construction but broke their promises all the time. The chairwoman and the rest of the board could not motivate the other women sufficiently to deliver a group to work on the centre every day. The women's organization was not capable to fulfil their promises and responsibilities because they had no internal cohesion, organization, knowledge and experience to be a fully-fledged partner to the other actors. In the theory can be found that institutional and organizational difficulties can hinder effective communication. Actors have to be organized to be represented for example. This was the case with women's organization; because of their organizational difficulties they could

not be represented properly by the board of women. Therefore the base of the organization did not know what was expected from them.

The fourth problem was the communication between the actors in the network. From the former becomes clear that there had not been enough communication between Chakana and the women's organization during the development of the proposal and the carrying out of the project. It was for Chakana very difficult to contact the women because they had no phones, cell phones or other way to reach them and coordinate the work. The only way was to go to the centre and see the women who worked that day on the centre. The women themselves were not able to coordinate the work among their groups because it was hard to communicate. Only two women of the board had cell-phones but they did not work half of the time. Besides the communicative problems with the women's organization, Chakana also had problems with the VMF. During the construction of the centre there was little contact between the representative of the VMF and the executive director of Chakana. They did not share their knowledge about the development of the project on a regular and frequent base. They sometimes called each other or met on the construction sight. VMF-The Netherlands repeatedly asked for more information about the project and the expenses that had been made. Chakana did not send regular reports about the development that led to annoyance at VMF the Netherlands. Chakana-Bolivia did not send regular information to Chakana-The Netherlands either so that both organizations in the Netherlands did not know exactly what was going on and which problems occurred while working on the project. These communicative problems get more attention in the next chapter in which I will look at the relation these problems have with the communicative processes that occur in the network.

The final problem is financial. Because of all the delay at the construction the supervisor, maestro, of the construction wanted more money because he had to work longer to finish the project. The budget was insufficient anymore and the construction of the centre could not be continued.

5.3 Irrigation in Achocalla

The network around the irrigation project is formed by Cepas Caritas, The Municipality of Achocalla and the local, community-based, organizations.

5.3.1 Cepas Caritas (CC)

CC is a development organization connected to the Roman Catholic Church. The main goal of CC is to transfer the ideology and doctrine of the Catholic Church by concrete actions and contributing to the construction of a just and fair society. In practice this means to support good initiatives and values in the line of Christian faith. By financing rural development programmes CC wants to improve the quality of live of poor and marginal people. A nation wide bureau and several regional bureaus represent Cepas Caritas Bolivia. The bureau in La Paz is divided into five programs for which several commissions are responsible. CC finances the irrigation project in Achocalla from the Program 'Desarollo Agropecuario y Nutricional with a budget of \$420573 and a running time from March 2005 until February 2006 (Interview Carmen Almendras, 6-1-06). The budget for rural development was the main reason for CC to cooperate with Chakana. Chakana was selected out of a lot of project-proposals. Chakana had contact with Cartitas before they applied for the finance because the executive director of Chakana knew the project-coordinator of Cartias. He provided Chakana with a checklist for the project proposals so that Chakana could apply properly.

Resources:

CC in Bolivia gets its money from the development fund of the Catholic Church and departments of CC in western countries. Each year they have to send a report with information of the financed projects. The agricultural development program is built up around six themes: production, supply of food, co-finance, micro-business, micro-finance and gender issues. The strategy of CC is to work together with local governmental and non-governmental organizations in reaching their development goals. When financing a project they emphasize on coordination and local participation. They visit the projects to emphasize the importance of this approach and thus contribute with social knowledge about how to carry out rural development projects. CC finances directly to NGO's and signs a standard contract with all relevant parties. They have standard procedures of financing projects. Half of the money is given at the start of the project and the other half after an evaluation report. Their standardised approach with contracts can be seen as an organizational resource. This is considered a resource because it saves a lot of work and ambiguity when standard approaches exist within the organization. Every employee will have the same method in selecting projects and cooperating with other organizations. For other organizations in the network it is a resource because they know beforehand how CC will act and react.

CC has a lot of experience in financing projects and they know a lot of NGO's who work in the field of development. Therefore they have a lot of experience and knowledge in evaluating projects and knowledge about pitfalls and strengths of projects. When CC had approved the project-proposal, a representative of CC visited the communities to talk to the people about the project. They put emphasis on the participation of the local people and the role of the local people in the project-network. CC wanted to show the local people they are an essential element in making the project a success. After two months Chakana had to inform CC about the development of the project by sending a social-economic evaluation next to the technical and financial data. The project of Chakana in Achocalla functioned as a role model for CC and the project-coordinators visited the project with two representatives from Germany to show how CC in Bolivia spends the money from the Catholic Church.

Ties with Chakana

This tie between Chakana and Cepas Caritas is characterized by its mainly one-way direction of the relation. The tie is established between Chakana and the bureau of the program that finances agricultural development projects in the department of La Paz. Chakana applied for the funding Cepas Caritas offered in the newspaper for NGO's to carry out projects. When CC approved the project proposal for irrigation in Achocalla they signed a contract in which the transfer on money was arranged. This established the financial tie between Chakana and CC. But during the preparation of the project also a network-friendship tie existed between the project-coordinator of CC and the executive director of Chakana. They knew each other from university and the project-coordinator helped Chakana with providing the checklist for the proposals and visited the communities together with Chakana. Assistance with applying for finance was the flow that was exchanged through this friendship tie. CC visited the communities to make sure the projects really existed and asked a mid-term and final evaluation of the project development. CC provided Chakana with a standard evaluation form that had a lot of social elements. Chakana was used to give an economical and technical evaluation of the project-development so this social element was new to them. This can be seen as a flow of knowledge and experience of CC to Chakana about what elements have to be taken

into consideration when evaluating a project. Chakana was dependent on this funding of CC and provided the information and evaluation of the project. The tie between Chakana and CC can be seen as a donor-recipient relation. The ties and frequency of contact were institutionalized in the contract all parties involved with this project signed. Chakana had only contact with CC while handing in the evaluation to get the remaining funding of the project. Chakana evaluated the established ties with CC positive because of the reliability and institutionalization. The contract and evaluation forms were standardized so Chakana new which information to send to CC to get the funding. When the project was almost finished a delegation of Cepas Caritas Europe visited the project. Cepas Caritas used this project as a model project because it was close to La Paz and could easily be visited and the local people were very enthusiastic in showing their project. The model-project can be seen as a flow between Chakana and CC because CC used it as a resource. The criteria for CC to evaluate the tie with the NGO's were the transparency and reliability with which the projects were carried out. If CC is satisfied about the project the ties with Chakana can be sustainable in the future because they are willing to finance other projects of Chakana as well.

5.3.2 Municipality of Achocalla

Bolivian municipalities are divided in an executive and legislative power. The head of the executive part is the mayor and the counsellors are head of the legislative part. The amounts of counsellors that work in a municipality depend on the amount of inhabitants in a district. The municipality of Achocalla has five counsellors who have a lot of power. Nothing can be done without their signature. Maribel Valdez is chosen as the mayor in September 2005 after a lot of administrative and political problems in Achocalla. The people in Achocalla don't have trust in the municipality because the politicians have ignored the people, their needs and projects for a long time. In the past the people working for the municipality were corrupt and money never reached the people. Maribel Valdez is motivated to change these negative attitudes towards the municipality by focusing on Agricultural projects. They finance projects and have opened the bureau for agricultural affairs. This bureau of agricultural affairs has to develop projects and innovations for the municipality and look for partner organizations. The reason for the municipality to cooperate with this project is that the project-proposal was already part of the annual plan of 2005-2006. This means that there is already budget available to finance a part of the project-costs if another financing party can be found. Two of the councilors live in the project-area and will benefit directly from this project. This can be a reason the project-proposal was already in the annual plan. The municipality is always looking for parties to cooperate with because they can reach more results with external money than they would have reached alone.

Resources:

The municipality has access to several resources. The most import resource to contribute to development projects is money. The municipality gets money from the central government annually to spend on the development of the districts on their territory. Achocalla gets 6 million Bolivianos to spend on the different policy themes of the communities on their territory. This money is not enough to reach all objectives and therefore they always look for strategic partners. Another resource of the municipality is the knowledge they have. Several technicians work for the municipality and they can contribute to the projects with advice and knowledge. Another resource is the facilitations they can offer. The municipality has machinery for digging that can be used for the projects. A problem is that the municipality has not enough capacity to apply for

the use of this machinery on a regular basis. The municipality knows a lot of people and organizations in the valley of Achocalla. They work together with NGO's on a regular basis and know what projects are needed in the different districts. They can be a mediator between the communities and the NGO's so that projects can be carried out.

Ties with Chakana

The ties between Chakana and the municipality of Achocalla date from 2004 when Chakana had carried out a project for the German Embassy in the valley. The tie was established when the executive director of Chakana, Hernan, got in contact with engineer Lima who was the executive director of the agrarian sector at the municipality. They knew each other from university where they both studied for agronomist. This tie was based on friendship and the study network they maintained. During this first project a financial and professional tie was established with the municipality. Because this tie existed it was possible for Chakana to carry out another project together with the municipality. Together with the municipality Chakana developed a project-proposal for irrigation in two zones in Achocalla and presented this to Cepas Caritas to get the funding. In this phase knowledge and experience with writing proposals was the exchanged flow between both organizations. During the running time of the project Chakana maintained different ties with the municipality. The tie with the administrative department was financial and dependent. Chakana had to go to the municipality to ask for the money needed for the project. The second half of the money was given after two months and again Chakana had to do a lot of effort to get the money from this department. The friendship tie between the executive director of Chakana and the engineer from the municipality still existed and this lead to a professional tie in which the engineers of the municipality gave technical assistance to Chakana. Because the municipality is a very bureaucratic organization Chakana needed contacts that would help them reach goals more efficient. Chakana invested time in arranging a strategic tie with the mayor, Marivel Valdez, who could arrange things outside the bureaucratic system. The municipality provided Chakana with assistance in using their administrative system. The ties with the municipality are maintained by telephone and regular visits to the townhouse. During the running time of the projects most contact took place face to face when a representative of Chakana visited the townhouse. Chakana reported the development of the project on a regular basis to the municipality also to get the remaining part of the money needed for the project. Because of mutual dependency the ties have a sustainable character. The municipality can use the network of Chakana to carry out projects within their municipality while Chakana can get funding from the municipality as well for carrying out projects in Achocalla. They both can double their money by working together in projects. Although Chakana evaluates the ties with the municipality as problematic because the municipality is corrupt and bureaucratic they need this party to carry out projects in Achocalla. The mayor and the head of the agricultural office have evaluated the contact with Chakana positive because they have good experience and think Chakana is reliable and assists in developing their region. Within the municipality the local connections are weak. The municipality had a lot of problems with the mayor who was not supported by the council and corrupt employees. The people working for the municipality lack trust and transparency to act as a stable and unified organization. Not all employees did support the cooperation with Chakana because there were problems with handing out the check. Within the municipality coalitions have been formed with stronger local connections. For Chakana it is difficult to work together with the municipality because they experience the people working for the municipality as unprofessional (Interview Pepe Marin).For this project the local

connections between the people of Chakana were important. Two engineers worked together during the whole running time of the project. The executive director did not delegate the responsibilities for spending the money on the project. The local connection was based on hierarchy within the organization of Chakana.

5.3.3 Local organizations

In the valley of Achocalla exists a long history of traditional organizations. Since the introduction of Agriculture in this region there was the need for communities to organize themselves to share water and pastures. Water is a common but scarce good and therefore rules are needed to use and divide the water among all members of the community. In Achocalla communities choose every year an 'Alcalde de Agua', which literally means a water-mayor. This Alcalde is responsible for the division of water among the different plots of land but also for the maintenance of the system of canals. Every day some families can open the port to the side canal that brings the water to their lands. Every family has water rights that depend on the size of their family and the amount of land they have to irrigate. The community tries to divide the water as honest as possible by choosing a mayor that has this responsibility. Men as well as women can be chosen to be Alcalde de Agua for a year. For this irrigation project the people of the three sectors have founded a commission, the 'Comité de Obra', to be responsible for the work on the whole canal. The Alcaldes the Agua from each sector were presidents of the commission and coordinated the work in the three sectors. The Commission made lists of materials needed and a working scheme for all members of the community.

Because the local population has a growing demand for water, they applied for and cooperated with this project. The existing irrigation systems were not suitable anymore for their production. The population has grown and the pressure on the land has increased. To produce enough crops to fulfil the local demand and make money on the market, on the one hand more water is necessary and on the other that it is available all year round.

Resources:

The local organizations can rely on knowledge, labour and organizational resources. The local people have worked for generations on the same land and used the old irrigation systems for centuries. They developed specialized agricultural and local knowledge. They know for example how much water is available in every month and how much water the different crops need. They also have developed the technical skills to maintain the irrigation system. All people of the different communities contributed to the project with their labour. Every community had a maestro who was coordinating the work on the canals and the water storage tank. The local people made working schemes for every healthy member of the community. They also brought in local materials they collected near the river or on the fields. Their organizational resources have their basis in their traditional organization. Because they are used to the system of the water-mayor they are able to organize themselves and contribute to a project together. The special work-committee was able to divide and structure the work.

Ties with Chakana

The tie between Chakana and the local organizations was established when Chakana read the project-request in the annual plan of the municipality of Achocalla in 2005. The people of the zones Japari and Sojsana had asked for an improvement of their irrigation canals and when Chakana had agreed on the cooperation with the municipality they approached the local communities to tell them of their intentions to look for finance of

their projects. Chakana had different ties with the local organizations in Achocalla during the running time of the projects. The irrigation project was a cooperation between four communities and a president represented every community. Ties existed between these spokespersons of the local communities and Chakana. This tie was patron-client as well as professional in character. On the one hand the local communities are dependent on Chakana, the municipality and CC for their development. They received money and materials to construct the irrigation canals in their communities. On the other hand the communities contributed with their labour and local materials as well. Chakana contracted maestros to supervise the work on the canals. The ties with the maestro's and the communities were also professional and institutionalized in contracts. The materials needed for the projects were brought to the sites by Chakana and guarded by the communities. The executive director of Chakana, together with other engineers working voluntary for the NGO, coordinated the work with the maestro's and visited the communities to evaluate the work. During this running time technical knowledge was an important flow between Chakana and the local organizations. The technicians had to control the work of the maestro's and deal with the technical problems that occurred. But Chakana also helped to solve social problems that occurred while carrying out the project. Another tie that existed between Chakana and the local organizations was based on appreciation. The communities invited the engineers of Chakana for lunch to show their appreciation and gratitude for the work of Chakana.

During the running time of the projects the ties between Chakana and the local organizations were maintained by face-to-face contact. The representatives of the communities visited the office in La Paz but most of the time the executive director went to the project-site to evaluate the work and coordinate with the people. The local people tried to make the ties between them and Chakana sustainable. They proposed other projects in their communities and asked Chakana to look for finance for these projects. Chakana evaluated the ties with the local people as positive because they were willing to cooperate and contribute to the project. Therefore Chakana wants to take further cooperation and maintaining of the ties into consideration.

5.3.4 Roles and Strategies

The weight of the different actors was more or less in balance in this project. They all contributed resources to the project and needed each other to reach their objectives. Chakana was also in this project the executive actor and had the responsibility for completing the project. Cepas Caritas was an important actor because the organization contributed one third of the funding. But CC played a small role in the network because they observed the project from a distance and paid the amount of money needed to Chakana. CC played also a controlling role by guaranteeing the transparency of the expenses and process in a midterm and final evaluation. In the contract was stated that Chakana was obliged to inform CC and the municipality about the economic, technical and social development of the project. Although CC did not play an active role within the project, they visited the project with representatives of CC-Europe. They called the irrigation project a model-project and wanted to show the results to their partners. This approval of CC was a strategy to motivate the local organizations and Chakana to continue their work.

During the work on the project Chakana had a cooperating and coordinating role with the local organizations and the municipality. The strategy of Chakana to coordinate the work was to visit the site often and discuss the development of the work with the maestro's and local people working on the project. Chakana did not play a very dominant role while carrying out this project. They had to negotiate and discuss with the

maestro's and local people who had also their own ideas about the project. When Chakana saw that the local people wanted to change the technical contents of this project, Chakana played a dominant role by claiming the responsibility and authority for the construction of the canals and the tank. After this incident the local organizations stayed with their cooperative and contributive role.

Although the municipality was responsible for more than fifty percent of the project costs, they played a passive role in this project. In the contract that was set up by CC the power of the municipality was minimized because Chakana had to spend all the money on the project. The municipality played a restricted role and cooperated a few times with Chakana and the local organizations by giving technical assistance. Between the different local organizations there was competition for the sympathy of Chakana. They all wanted to establish a sustainable relation to get money for more projects within their community. Their strategy was to try to perform best by working fast and trying to deliver good quality. They also tried to appease Chakana and CC by inviting them to the initiation of the project and offer them food. Especially during the construction the different organizations were interdependent in reaching their objectives. The municipality had to contribute with money while the local organizations had to deliver labor and local materials. Chakana coordinated the work and needed the cooperation of the other actors. All actors were dependent on the money of CC. Without this money, the municipality could not have generated such a big project. The local organizations and Chakana were dependent on CC because the contract forced the municipality to be a trustworthy player in the arena. But CC did not depend on the other organizations in reaching their general development objectives and could also have financed another project in another part of Bolivia. Chakana tried to form a sustainable coalition with CC to secure funding in the future.

5.3.5 Shocks

This project of Chakana passed off without too many problems and the problems that occurred were solved. Especially the construction of the water tank was a success for Chakana. The only problem that occurred in the end-phase of the construction was that too much cement was used for the canals that were running from the tank to the fields for irrigation. The canals were of good quality but the budget did not allow this much cement to be used and for technical reasons it was not necessary to build canals of this quality. Chakana had to deliver more materials to finish the construction. This problem had communicative and coordinative characters. For the supervisor and the people working on the tank it was not clear how much cement they would get and what quality was needed for the canals. The canals from the tank were added later to the project and there was no clear communication between Chakana and the supervisor and the community what technical standards were required.

In the three sectors of Merced Japari more problems arose during the construction of the canals. Every sector had to deal with another problem. In Merced Churupampa there was a conflict between the maestro and the people who had to work with him. The Alcalde de agua came to the office of Chakana to complain about him. The man was not that young anymore and could not work hard. The people who had to help him were afraid that they had to work more days because the old man was not fast enough. Eventually Chakana talked to the maestro as well as the people in a meeting on the site and the problem was solved because the maestro promised to work harder and delegate the hard work to the younger men. At first there was no direct communication between the maestro and the community. The community went to Chakana instead of discussing

the problem with the maestro himself. This indirect communication within the network was a problem for the efficiency with which the project was carried out.

In the zone Rincon Japari the community also had problems with the supervisor because the maestro did not have enough experience to construct the canal. The quality of the cement was too rough, which caused leaking away of water from the canal. A lot of meters of new canal had to be destroyed and rebuilt. The maestro got help from his colleague from the zone Uni Tarqamaya. After his help the quality of the canals was much better. The communication about the technical standards came too late when already a lot of meters canal were finished. Chakana had the responsibility of the supervision of the construction and the problem was that the technical standards were not known for the maestro in Rincon Japari. When he was hired he did not tell that he had little experience with the construction of canals.

Chakana had a conflict with the people in Uni Tarqamaya who had to help constructing the canal. The community had not expected that they had to invest time and materials in the construction of the canal and were not willing to work every day and provide earth and stones for the construction. The second problem was that they were not happy with the location and content of the canal in the middle of the road and wanted on the one hand to change it's direction to the other side of the road and on the other hand to change the proportions of the canal. This measurement caused technical problems for which Chakana could not guarantee sustainability. The executive director of Chakana, Hernan Huaycho, visited the sector to talk to the people and convince them with technical arguments. After a week the people agreed to contribute with their labour to the project and give the responsibility for the technical part to the maestro and Chakana. The problem had cooperative and power characteristics. The community was not willing to cooperate with other actors in the network and undermined the authority of Chakana for the technical details of the project.

The cooperation with the municipality of Achocalla also caused some problems with this project. The municipality had to finance 20% of the costs of the project. Cepas Caritas had opened a special account on name of Chakana where all money had to be gathered and spend by Chakana. At first the municipality agreed but when they had to pay the money, they did not want to give the cheque to Chakana but buy the materials necessary for the construction themselves. Because this was not in accordance with the contract that was signed by Chakana, Cepas Caritas and the municipality Chakana protested against this behaviour of the municipality. They got support from the people of Merced Japari and Sojsana because they have bad experience with the municipality. When Chakana, a lawyer and members of the communities visited the municipality, the mayor eventually signed the cheque and delivered it to Chakana. This problem in the network also had cooperative and power characters. The municipality tried to change the cooperation with the other actors and shift power from Chakana to their own departments. Because of the contract Chakana could prevent this change in behaviour of the municipality.

5.4 Irrigation Monte Rojo

5.4.1 The German Embassy

The German embassy in Bolivia annually finances several small development projects for about 8000 US\$ per project. The embassy receives some 200 project-applications from NGO's but can only support 25 projects a year. The purpose of these development projects is to improve the living conditions of the people, provide them with the basic needs like water or electricity. The budget for development projects is small because the German government finances big development organizations or inter-governmental projects and not their own development projects.

The reason the embassy financed the project of Chakana in Monte Rojo was that they had very good experiences with Chakana in 2004 and wanted to help Chakana with another project this year as well. In 2004 Chakana worked together with the German embassy for the first time when the embassy financed an irrigation project in a community in Achocalla. The cooperation with Chakana was evaluated positively so the Embassy decided to cooperate with Chakana again and finance a project in 2005 as well. The representative of the Embassy, Andreas Langenstein, called Chakana reliable and this was very important for the German Embassy. To get finance two years in a row is very exceptional because every organization can apply for finance only once every four years. The embassy wants to give as much NGO's as possible the chance to execute projects (Interview Andreas Langenstein, 8-2-2006).

Resources:

The embassy only contributes to these small projects with financial resources. Their policy is to finance half of the project and the other half after an economical and technical report. The financial part of the project is very important for the embassy to control because they have experience with corrupt NGO's who use the money for other purposes than the projects. The embassy demands transparency of the books but is not able to control the NGO working on the project. The human resources on the embassy are limited and it is not possible to visit for example all the projects they finance. Because the German Embassy has the policy of helping as much small NGO's as possible they know a lot of NGO's that work in the field of rural development. On the other hand the embassy has access to more financing organizations like big development organizations from Germany and other governmental organizations. Their network is a resource to get in contact with other organizations.

Ties with Chakana

The tie between Chakana and the German Embassy was established in 2004 and since that time the contact-person at the embassy, Andreas Langenstein, has a good relation with the executive director of Chakana. When he just arrived in Bolivia he wanted to get to know the country and the projects of the embassy so he got in contact with Chakana. He went to the project in Achocalla a lot and from this moment the representative of Chakana and the Embassy developed a tie based on friendship. This has led to an invitation of the Embassy to present another project proposal that the German Embassy would finance. But the relational tie established in the network was in the first place financial of the donor-receiver type. The embassy finances projects in two transactions. The first after the presentation of the proposal and the second one after the mid-term evaluation. The tie is maintained through these two presentations and no further contact has occurred between the actors during the running time of the project. Chakana as well as Andreas Langenstein evaluated the tie positive. The criteria

Langenstein used to evaluate the tie are trustworthiness and transparency. He wanted to be sure that the money of the embassy is spend properly and because of earlier positive experiences with Chakana he trusts the money is spend in a right way on the irrigation project in Monte Rojo. To be sure the money is not wasted a control-tie is established with all parties they cooperate with. Not pay the whole amount of money once but in two times after an evaluation and information about the project-development. The tie between Chakana and the German Embassy is not sustainable because Chakana cannot count on funding for a project next year. The embassy has the policy to support as many NGO's as possible and Chakana can apply for funding again in three of four years. The tie between Chakana and the embassy is based on the relation between the executive director of Chakana, Hernan, and Andreas Langenstein and in four years it is not sure if both are still at the same place to continue the tie.

5.4.2 The Municipality of Chuma

The municipality of Chuma is part of the province of Munecas. The municipality consists of the town of Chuma and several little villages that are spread among the valleys and the Altiplano. Because Chuma is remote, the municipality has an office in La Paz as well. Chakana has signed a contract with the municipality in which the conditions for executing the project in Monte Rojo are laid down. The mayor Alejandro Avila Rada signed this contract but the contact person for Chakana is one of the councillors, Gumeyeinda Mamoni. She was present during the visits to the village to represent the municipality. The organization of the municipality is not very professional because the project was not part of the annual plan of the municipality while the municipality has to contribute 20% of the overall project costs. They solved the problem by adding the project to the plan and changing the annual budget of the municipality. The reason for Chuma to cooperate and co-finance this project was that together with Chakana a project was possible that would not have been possible with the budget of the municipality alone. The municipality of Chuma has worked together with Chakana before. Chakana has carried out several projects with greenhouses that were partly financed by the municipality as well. Because Chakana was known at the municipality, the representative of Monte Rojo and Timusi approach Chakana to develop an irrigation project. Chakana signed a contract in which the responsibilities of every party were mentioned. According to the contract Chakana was obliged to present information about the continuation of the project every 30 days to the municipality as well as to the German Embassy. The NGO was also responsible for the planning, administration and execution of the project and providing the technical knowledge needed to construct the irrigation system.

Resources:

The municipality of Chuma also gets an annual budget from the central government to spend on rural development. The municipality owns machinery that need to be used for the project and they can send it to the project-areas. The municipality has a lot of contacts and was able to hire a supervisor with a lot of experience for the work on the irrigation canals. The municipality has not only contacts with the local people but also with other organizations that are active in their municipality. Because there is an office of the municipality in La Paz as well, it is relatively easy for Chakana to contact the municipality. But Chuma is a very poor municipality and they lack sufficient resources to facilitate for example the physical infrastructure needed for the project. In the rainy season the road was destroyed and the municipality was could not repair it during the rains.

Ties with Chakana

Chakana had dealt with the municipality of Chuma before while carrying out greenhouse-projects in remote areas of this municipality. The ties were therefore already established with strategic persons within the municipality. Because a councillor knew of the work of Chakana he approached Hernan to carry out a project in Monte Rojo and Timusi. Like with the municipality of Achocalla the tie between Chakana with the municipality of Chuma has on the one hand financial and on the other hand professional characteristics. The municipality finances 20% of the project and contributes with machinery and technical assistance. The municipality hired the maestro who supervised the construction of the irrigation canal. But the ties are not very strong because the maintenance is difficult. The townhouse is located in Chuma. Chuma is far away from La Paz and the road is bad so the executive director of Chakana is not able to visit the municipality regularly. The municipality has an office in La Paz as well but because of the bureaucracy it is not possible to maintain ties with strategic officials in the municipality via this office in La Paz. Chakana had contact with a councillor of the municipality who visited the office in La Paz and came to the initiation of the project representing the municipality. Hernan did not know this councillor before and the tie was professional to coordinate the development of the project. The tie with the municipality of Chuma can be sustainable because Chakana has already experience and contacts within the municipality. Cooperating in future projects will probably be easier because the ties already exist.

5.4.3 Local organization in Monte Rojo

Monte Rojo lacks traditional organizations, like the 'Alcalde de Agua', that are concerned with the common use of water resources but like in every Bolivian village the village is represented by a president. The local connections within the community were nevertheless strong because it was a relatively small group of people who all knew each other. The president and driving force for the project in Monte Rojo is Freddy Lopez. He wanted to be the mayor of the municipality of Chuma but had to share this function with another candidate from Timusi. Freddy Lopez approached Chakana with the idea of conducting a project in Monte Rojo and Timusi and organized a water committee who got the responsibility of constructing the irrigation canal. The village of Monte Rojo had experience in working together with NGO's. The NGO CADI operated in this area a few years earlier and conducted an irrigation project on the lower slopes of the mountain. The people were used in cooperating with external organizations. When the representatives of Chakana and the municipality of Chuma visited the village, they had prepared a meal to welcome their guests and show their willingness to cooperate. The commission that was raised to coordinate the project had the responsibility of dividing the work, guarding the materials and hold an administration for the use of the materials. The reason for the local organization to carry out this project was that the improved irrigation system would increase their agricultural production considerably.

Resources:

The resources the local population possesses are their labour and knowledge of the local irrigation and agricultural systems. Also their social ties can be seen as a resource because they felt responsible to cooperate and there was a lot of social control. The community bonding was very local because they could not and did not want to cooperate with the neighbouring community.

Ties with Chakana

The ties with this community were established through their president, Freddy Lopez, who approached Chakana for a project. The project-proposal was developed together with this president who was also active within the municipality of Chuma. When the project was approved the a working committee was founded to coordinate the work on the project. This committee was responsible for the project for the part of the community and they were the spokespersons for Chakana. The local organization organized a ritual initiation of the project. Chakana and the municipality were invited to participate in a ritual and have dinner with the village. The local organization wanted to show their appreciation for Chakana and the municipality by inviting them to their village. Before the project could start, a technical research was needed to find out how big the canals should be and how much water was going to run through. The people living in Monte Rojo have contributed with their local knowledge about the water systems and climate in the valley. Two technicians who worked for Chakana went a week to the village to do the research. The flows that were exchanged were scientific and technical knowledge from the technicians and local knowledge and experience from the people from Monte Rojo. They needed each other's information to develop a sustainable irrigation system. The work on the canals itself was supervised by a maestro who was hired via the municipality. He lived in the village of Monte Rojo during the running time of the project and through him the ties were connected to deal with the technical supervision of the project. The ties between the community and Chakana were weak and difficult to maintain. The running time of the project was during the rainy season and the road between La Paz and the village was destroyed. Therefore it was not possible for Chakana to visit the village and check the work on the project or for the villagers to come to La Paz. The flow of technical knowledge and assistance had therefore stopped. The local people used their own knowledge and experience to continue the project and Chakana could not intervene with their technical knowledge. The content of the project was therefore changed to a design that was technically not desirable. The local organization decided that the content of the project would be changed. When the road was still okay, the villagers came to La Paz a few times to coordinate the ordering of the materials needed and discuss problems that arose. The ties were maintained via face-to-face contact because the village had a very bad electricity connection and no phones. Chakana also had contact with the community via the truck-driver who brought the materials needed for the construction to the village. Besides knowledge and assistance, Chakana brought the material needed for the construction to the village. The tie with this village is not sustainable after the running time of the project because the community is too small to apply for new projects that are financed by Chakana and the municipality.

5.4.4 Roles and Strategies

The role the German Embassy plays in the network is that of a controller and observer. The embassy did not play a very strong role because there were only two moments of observing and controlling during the running time of the project. The strategy the embassy uses is to demand a mid-term and final evaluation of the project. They try to guarantee the transparency of the project by giving the first half of the money after presenting the proposal and the second half after the mid-term evaluation. The embassy uses a standard contract to ensure the cooperation of the NGO. The German Embassy was independent from the other actors in the network. They did not need the other actors to reach their development objectives because they could have financed another project.

Chakana played a coordinating and cooperating role in this project because they had the responsibility and had to account for the development of the project to the embassy and the municipality. The dominant role of Chakana weakened during the project because the community could not be reached anymore during the rainy season. Chakana could not control and influence the work on the project anymore and became more dependent on the local organization to carry out the project. The weight of Chakana in the network decreased because they could not exert influence on the project anymore. But the appearance of the weight of Chakana stayed the same because they were on paper the responsible authority for carrying out the project. The local organization played at first a cooperating and following role. Chakana designed the project and the local organization contributed with their labor and local materials. But because the community is remote Chakana could not exert power and control on the activities of the local organization. They started to play a more dominant and innovative role by changing the content of the project. Their strategy was to change the project and tell to Chakana afterwards so that it was not possible for Chakana to influence the plans. The local organization was the most dependent actor in the network. They needed Chakana to buy the materials, the municipality to transport the materials and hire the maestro and the German Embassy to finance the project. But the other organizations were also dependent on the labor and local materials the local organization had to offer. The weight of the local organization was in this project bigger than in the other two because they had more room for maneuver because of the remote location of their community. They were difficult to control and influence from La Paz and had therefore more freedom for own interpretation and innovation.

The municipality of Chuma did not play a strong role in this project. They provided money and assistance and arranged the maestro but did not have any influence on the process. For the municipality it was a good deal to pay 20% of the costs and get a good project for a remote community. They showed their commitment to the project by sending a representative to the initiation of the project in the community. They were dependent on cooperation of all parties because they did not have the resources and means themselves to improve the irrigation system in Monte Rojo.

5.4.5 Shocks

The first problem occurred before the work on the project had actually begun and had a cooperative character. Chakana designed a project-proposal for the communities of Monte Rojo and Timusi but when the proposal was presented in Monte Rojo, the two communities refused to work together on the project. Timusi had withdrawn from the project and only Monte Rojo wanted to continue with the project. One of the actors had therefore cut off another actor from the network. The total amount of beneficiaries had decreased but Chakana and the municipality of Chuma decided to continue with the project. The modification of plans was not communicated to the German Embassy.

The second problem that occurred had cooperative and power characteristics. Chakana had done research in the area and had made technical calculations to decide the measures of the irrigation canals. Also the direction of the canals was decided based on research of the most optimal situation. However after a few weeks the supervisor and the community decided to change the content of the project. On the one hand they changed the direction of the canal and on the other hand the technical details. They did not consult Chakana on this matter and thus ignoring the technical authority of Chakana in this project. The supervisor and community did not cooperate with Chakana because they did not involve other actors while carrying out the project. The local-local connections between the people in Monte Rojo were strong because of the remote

distance to other villages. The people had only each other and needed each other. The connections within the community were much stronger than the local-external connections with Chakana. Chakana could not do anything because Monte Rojo was difficult to reach in the rainy season. It was not possible to visit the community and supervise the project. This problem was caused by the weather and bad state of the road and can therefore be considered as setbacks. The network had severe communicative problems because the community could not be reached and the municipality was not very involved with the project. Again none of the actors communicated the development of the project to the German Embassy during the running time of the project. The changes and problems had to be communicated at the final evaluation when the project already was finished. The embassy could not exert influence on the project because the other actors did not involve this party with the project.

6 Communicative processes in the network

6.1 Introduction

In this chapter the communicative processes between Chakana and the actors in the project networks are the object of analysis. In separate paragraphs I will analyze the roles the processes of (1) sharing of knowledge, (2) social learning and (3) framing between Chakana and the other actors play in the networks. The communicative processes became visible through the shocks that happened in the networks. The analysis of this chapter is therefore referring to the shock-analysis that was done in chapter five. This explains why this chapter is shorter than the former chapter: it is building further on elements already presented in chapter five. Unlike chapter five I will now look at the entire network in stead of at the different project networks because the communicative relations are the central point of attention. In chapter five it was necessary to zoom in on the separate project-networks to gather the insights in the network of Chakana during the running time of the projects. In that chapter the relations were analyzed by looking at ties, flows and characteristics and this chapter can be seen as a deepening of this analysis by looking at the connections with a magnifying glass to be able to see the details of the communicative processes.

6.2 Sharing of Knowledge

In chapter five it became clear that knowledge is a resource in the project-networks. Without the exchange of knowledge it would not be possible to carry out a development project. Knowledge is a resource all actors possess but not all actors have access to all knowledge or are able to share their knowledge with the other actors and thus influence the development of the project. In this paragraph the following research question will be answered:

What role does the sharing of knowledge play in the project-network?

To answer this question I will look at actors and knowledge in the next paragraph. The availability and access to particular knowledge is the central point of attention. Also the way knowledge is perceived by the different actors is important to determine the role knowledge plays in the network. Knowledge is a human construction because it is not something that exists independently from the user and therefore it is necessary to look at the actors' subjective perception of knowledge. In 6.2.2 the proportion and characteristics of tacit and explicit knowledge within the network will be compared. In 6.2.3 I will focus on the exchange of knowledge in the network and the role language, means of communication and power play in this process. The three paragraphs together will answer the research sub-questions that were developed for knowledge in chapter two (p. 30)

6.2.1 Actors and knowledge

Different actors in the network put emphasis on on different types of knowledge. Availability and access to particular knowledge can enhance or limit a social actor's capacity to exert a particular type of agency. The knowledge actors most appreciate is knowledge they can use to increase their agency within the network.

The remote actors in the network, who only finance the project, focus on knowledge about the development of the project. They are interested in the expenses that

have been done, the planning of the project, how the different parties cooperate and how the project develops. They perceive knowledge as information to control the development of the project. Chakana is the central actor who gathers this kind of knowledge and communicates it to the actors who ask for it. Chakana did not communicate all knowledge they have but used a filter to only transfer the knowledge that Chakana thinks the actors should know. Chakana did for example not communicate the changes in the project in Monte Rojo to the German Embassy who financed the project.

The VMF asked explicitly for knowledge about the development of the project but did not get answers they were satisfied with. Detailed knowledge about the development of the project is something Chakana has access to but the organization does not emphasize on this kind of knowledge. The executive director in Bolivia is more occupied with the technical and organizational knowledge to carry out the project. The focus is the other way around, not looking primarily to the remote actors, but to the local actors who are working on the project. Because of the limit resources like time, money and volunteers Chakana could not provide all knowledge the actors required.

Next to the exchange of knowledge to inform the other actors in the network, Chakana exchanged knowledge to carry out the projects. On the one hand technical studies and knowledge about the local situation are important for Chakana to succeed with a project. This knowledge is considered as a resource because people working for Chakana think of this knowledge as indispensable in carrying out a project. On the other hand knowledge of where to buy materials, where to rent trucks, where to get maestro's to supervise the work is important and used every day during the running time of the project. This type of knowledge is not considered as a resource Chakana has access to. This practical and organizational knowledge is concentrated at the executive director of Chakana in Bolivia and the other volunteers working for Chakana in Bolivia. But because the internal connections are weak, this knowledge is not shared and concentrated mainly at the executive director personally. This type of organizational knowledge is also important for the VMF. At first they were in a remote position in the network but when their role shifted, other knowledge became more important. The representative of the VMF had access to knowledge about the women's organization and organizational knowledge about how to arrange things needed for the project. The representative had not the power of bringing this knowledge into action because Chakana was in control with carrying out the project. So although the VMF has access to this knowledge it is not available in the network. Knowledge about the development of the project was also important for VMF and when Chakana did not provide them with the required knowledge VMF took up a more active position in the network so that the representative had access to the knowledge himself. He talked to the women a lot and knew about the problems and the development of the project.

For the local organizations the technical and empirical knowledge of the project was considered most important. They had no access to the technical and theoretical knowledge of the project because they had not studied at university like the engineers working on the project. The empirical knowledge they have access to was gained by experience. People have worked on the land for generations and know how much water for example is provided in every month of the year and what ground is most fertile etc. The local organizations think of this knowledge as a resource but they don't think it has equal value to the technical, theoretical knowledge. For Chakana this knowledge is very important because they know the empirical knowledge is sometimes more useful for the local situation than the theoretical and technical knowledge. Mistakes can be made by calculating how much water is running through the canals but the people have years of experience and know sometimes better what is going on. Technicians calculate the

amount of water that is running from a well based on measurements. But it is not possible to measure the amount of water in several seasons during several years. Local people have this knowledge because they observed the well and the climate for as long they have lived there. Their knowledge is based upon the observations of their ancestors who passed this agricultural knowledge to their children. It became part of the collective memory of the community. Chakana perceived the use of local knowledge different than the local organizations do. Local organizations are also an important source of gaining knowledge of the needs of people and what projects could be carried out for them.

The municipalities had access to a lot of diverse knowledge because of all the people who work there. They have engineers with technical and theoretical knowledge, lawyers with juridical knowledge, financial knowledge and organizational and practical knowledge. But because the people working for the municipality are changing a lot, they do not have sustainable access to this knowledge. The connections between the different people working for the municipality are weak so knowledge is not easily shared and transferred. Chakana has also access to juridical knowledge because there are a few lawyers who help Chakana voluntary. This kind of knowledge becomes a valuable resource because other actors in the network also have access to juridical knowledge. This knowledge can be used strategically for example in cooperating with the municipality. The capacity of exerting agency increased for Chakana because they have external access to this kind of knowledge.

6.2.2 Tacit and Explicit knowledge in the network

Tacit knowledge is knowing how and is expressed through our actions while explicit knowledge is knowing about and is thus an awareness which has a discursive form. All actors in the network have these types of knowledge but not in equal amounts. On the one hand tacit knowledge is difficult to share because some actors are not aware of the fact that this is knowledge and a resource as well. On the other hand, tacit knowledge is accumulated by all actors while carrying out the development projects. The knowledge available to the local organizations has increased because the individual members learned by doing while working on the projects. They worked together on the projects so the accumulation of knowledge is a social process of the group as well. One example is the way the maestro worked with the local people at the irrigation projects. He shared his tacit and explicit knowledge about making cement, digging out the canals, securing the quality of the canals etc. The people working on the project used his knowledge and were able to adapt this knowledge to their existing knowledge resources. They also learned to organize the work and cooperate with external organizations. Knowledge about solving conflicts, organizing work-schedules, being responsible was gathered by trial and error while carrying out the project. The local organizations already had experience in working together because they have traditional organizations who arrange the division of the available water and land in the community. Because of their knowledge-base they were able to recognize the tacit knowledge and to increase their skills and knowledge. The organization of women for example had little experience in, and knowledge of, working together and coordinating the work on the centre. They also learned by trial and error but as an organization they had no basis of tacit or explicit knowledge. Not only proved knowledge to be more difficult to take in by doing it also took more time. They needed explicit knowledge first to be able to recognize the tacit knowledge that was offered in the network. The general board of the women's organization had access to explicit knowledge because Chakana and the VMF offered them a course to do the administration and organization of the Mujeres de 24 de Octubre. With this explicit knowledge of organizing and running an organization, they

could also adapt the tacit knowledge by doing. The board of women did not do this course yet because they lacked time and motivation. Some of the women had explicit and tacit knowledge of making artesanía. The centre was built to teach this skill to the other women. Some of the groups of women already had tailor lessons so for the women's organization this was an important knowledge resource. But they could not use it in this stadium of the project-network. As women and members of a community they had tacit knowledge about contributing labour for a common purpose. The women always brought food when they had to work on the sight. They had tacit knowledge about organizing and bringing dinner for a lot of people. They did not consider this knowledge as a resource but in fact it was. With their knowledge of preparing food they made the working days for the maestro more easy and because every body had to bring food, they felt responsible to come that day.

Chakana was the organization that contributed the most explicit knowledge to the network. With scientific and technical research methods and instruments Chakana was able to measure how much materials were needed, how much work had to be done and what the minimum quality of the work should be. They contributed this knowledge to the network with writing a project-proposal, supervising the work and evaluating the project. The explicit knowledge was used to inform the other more remote organizations in the network. The explicit knowledge did not increase very much because of the projects. The tacit knowledge did because Chakana faced a lot of problems and learned to organize, carry out and communicate a project by trial and error. Chakana already had experience in cooperating with other organizations but in these networks they faced a lot of new problems and experiences. The executive director did almost all the work for the project so he was the one who gathered the tacit knowledge for Chakana. Because people working for Chakana-Bolivia do not work as a team, the knowledge can not be shared within the organization. This makes the knowledge vulnerable for loss if the executive director decides to leave Chakana. One type of explicit knowledge that could grow was about the politics of a network. Chakana experienced that they should not make technical concessions with the local organizations. The local organizations changed the project because their empirical knowledge did not match the theoretical and technical knowledge that was used to design the project. In Monte Rojo the local organizations changed the project and that caused technical and communicative problems for Chakana. The executive director of Chakana, Hernan, said he learned to be stricter with the local people so that they would not change the project themselves. This knowledge shifted from tacit to explicit because the awareness of the knowledge and the discursive character. Because Hernan has carried out several projects he has valuable tacit knowledge of where to buy the materials and who to approach to arrange things. This tacit knowledge is not shared within the organization as well because Hernan does almost all the organizational work himself. He only delegates tasks to the other volunteers that can be carried out without too much insight (tacit and explicit) knowledge of the organization. The other volunteers contribute with their explicit and tacit knowledge about irrigation and agricultural systems but this is not related to Chakana.

The remote organizations in the network, the German Embassy and Cepas Caritas have access to explicit knowledge and have a lot of tacit knowledge within their organizations. This knowledge is not available for the other actors in the network. Cepas Caritas has contributed knowledge to the network by visiting the communities in Achocalla and telling them about the importance of local participation. They tried to exchange explicit knowledge about how to carry out a project. With Chakana they exchanged an evaluation form with a lot of explicit and tacit knowledge. Chakana was not used at making these kinds of social-economic evaluations next to the technical

evaluations of the project. Chakana had already explicit and tacit knowledge of evaluating and therefore they could easily recognize this explicit knowledge and accumulate it for their own purposes.

Culture has also an influence on the sharing of knowledge in the project-network. Chakana carries out projects for the rural and indigenous Aymara people who have a different cultural background than the people in the city or from other parts of the world. This cultural background is expressed in for example values, beliefs and rituals. By inviting the representatives of Chakana and other organizations in the network to their initiation rituals, the local people transmitted their knowledge and cultural beliefs to the other actors. By participating in these rituals, knowledge about the people and their culture is transmitted as well. The Andean notion of the learning process is that knowledge increases through experiences as part of growing to maturity. Participating actively in a project is a way of learning.

6.2.3 Exchange of Knowledge

The exchange of information, called communication, needs a sender, a message, a common language and a receiver to succeed. When knowledge is exchanged the receiver is able to use the information for his own purpose as well. The exchange of tacit knowledge is hardly possible from a distance because it is 'knowing by doing' and this implies that the actors have to interact physically to exchange knowledge. Within the network this exchange most of the time took place when the local organizations and the supervisors of the projects worked together on the construction of the canals and the centre of Artesania. When Chakana supervised the projects they participated in the exchange of tacit and explicit knowledge but this was a one way direction of exchange of technical knowledge. Chakana supervised the projects and controlled the work of the maestro and the local people. Organizational tacit knowledge was also exchanged between the local organizations and Chakana because they got new insights in dealing with other parties. The exchange of organizational and cooperative knowledge not only happened at the project sites. When the local organizations visited the office of Chakana to talk about the development of the project, knowledge about the organization of the work was exchanged. These representatives of the local organizations who were the spokespersons for Chakana had the responsibility to communicate this knowledge to the rest of the community.

Chakana did not directly exchange knowledge with the municipalities. They have send an mid-term evaluation because in the contract was agreed that this was necessary to get the remaining part of the funding. In Achocalla it was difficult for Chakana to contact the municipality or to arrange things. Chakana organized a meeting with the municipality and the community at the townhouse to exchange knowledge about the development of the project and to sign the contracts for the project. In this formal setting only explicit knowledge about the different aspects of the project could be exchanged. The contact with the municipalities remained formal and therefore only explicit knowledge could be exchanged. Chakana gained more insight in the functioning of the municipality by working on these projects. They increased their tacit knowledge of who to approach and what strategies could be used best in dealing with the municipality. There was no exchange of explicit knowledge between the municipality and the other actors while they do have access to different types of knowledge that could be useful in the network. The municipality did not seem to have the means to use their knowledge in cooperating in a network of development projects. Representatives of the municipality declared that one of the tasks of the municipality is to increase the knowledge of the local people by assisting them in their agricultural activities. During the running time of the

projects the municipality has not carried out such activities in the project-communities in Achocalla.

The local organizations could not be reached easily by phone so exchange of tacit and explicit knowledge took only place in face to face meetings. This was in line with the Aymara notion of knowledge because things could be demonstrated and showed to communicate the knowledge. Language played a role in this exchange of knowledge because the representative of Chakana could speak the Aymara language with the local people. They could more easily express themselves in Aymara than in Spanish so that the knowledge was transferred more efficiently. Especially the elderly and women do not speak Spanish very well and by talking in Aymara they could also understand the message and ask questions. When the local people are approached in Spanish it is more difficult to transfer knowledge and meaning. The local people had little access to and power over knowledge. They only had access to their practical and empirical knowledge gathered by their experience. Knowledge was transparent in the network; no actor withheld other actors from the access to knowledge on purpose. But because it was an unconscious process, all actors played a traditional role and used only the knowledge they had already access to. There was a gap between the explicit knowledge of the organizations who had studied and the explicit knowledge of the local organizations that did not. Knowledge was used as a way to pay respect. People called each other by their titles. The local organizations had a lot of respect for the fact the representative of Chakana was an engineer and thought his knowledge was more valuable than their empirical knowledge. When the women got the opportunity to study again and get more knowledge about running an organization they were enthusiastic at first but none of the actors did much effort of making it really happen that the women gathered new knowledge.

Chakana had access to different types of knowledge which was also a strategy to function as an NGO. Chakana Bolivia and Chakana-the Netherlands exchanged knowledge about the policy and philosophy of the organization mostly per email and phone. Although the Dutch representatives visit Bolivia regularly, only explicit knowledge is easily transferred between them. The tacit knowledge that is growing by experience is not fully known by the Dutch part of the organization and vice versa. Both parts of the organization gather different types of knowledge. In the Netherlands the people are looking for funds and making contacts for a network to guarantee the sustainability of the organization. In Bolivia there is the practical knowledge of the organization. Because functioning as a team is very difficult via email and telephone, the two knowledge streams do not interact.

Chakana did not exchange a lot of tacit and explicit knowledge with the VMF. Both organizations had access to knowledge about the development of the projects and the problems that occurred but did not organize an opportunity to exchange knowledge. When the Dutch representative of the VMF was in Bolivia, explicit knowledge about the development of the project was exchanged. But language and culture were barriers for good communication and understanding. The Bolivian representative of VMF had to translate the knowledge of Chakana into Dutch. A lot of details and nuances were lost in this translation process so the transfer of knowledge could not fully take place. Another problem was the different approach of communicating with each other. The Dutch representative was very direct in her communication and this was not appreciated by the Bolivian people working for Chakana. The Bolivian way of communication among organizations is very formal and polite. Problems are not mentioned directly and immediately but after a while of conversation and without mentioning the real problem or the reasons for the problems if these are other persons.

6.3 Social Learning

In the former paragraph the exchange of knowledge within the network was analyzed. When knowledge is also reconfigured by the actor and this is resulting in a change in behaviour or the capacity to function using this new knowledge or skills, values and attitudes, learning is taking place. In this paragraph I will look at the way learning has occurred while carrying out the projects by answering the following research question:

How does learning occur between the actors in the project-network of NGO Chakana?

First I will look in the next paragraph at the link between understanding and action in the network because learning takes place while engaging in actions. Learning implicates change so I will look at the process the actors went through to discover the change in their behaviour during the running time of the projects. It has to be said that the period of the projects is too short to analyze the effects of learning on the actors. The networks were not sustainable enough to analyze the long-term learning processes of the different actors. These two constraints are responsible for the relatively short analysis of this social learning part. Chakana is again the central actor from who the learning processes will be analyzed while interacting with the different actors.

6.3.1 link between understanding and action

The successful transmission of meaning between actors leads to mutual understanding. Within the network, several actors have actively tried to transfer meaning to generate action as result from understanding. I will look at the different ways the actors have succeeded in transferring knowledge and meaning to action.

At first Chakana has transmitted knowledge to the local organizations in all three projects. Somebody who had experience and knowledge of the work that had to be done was set as an example and teacher for the local people. The maestro's as well as the technicians of Chakana had this function in the projects. They showed the people how to do the work and supervised the work to guarantee the quality. The problems that have occurred while carrying out the projects (see the shock-analysis in chapter five) can be explained by looking at the meaning the local organizations attached to this knowledge Chakana offered. Chakana transmitted practical and technical knowledge to carry out the projects. The local organizations accepted this knowledge but in some situations they did not act based on this knowledge that came from Chakana. Two reasons can be given for the fact the link between understanding and action did not work. At first the local organizations involved with the irrigation projects had access to their own practical and empirical knowledge that they used for carrying out the projects. At second the meaning of Chakana's knowledge was not successfully transmitted. I will now explain these two deficits in the transmission of knowledge. In Monte Rojo the local people who formed the local organization had already experience and knowledge in the construction and maintenance of their irrigation system. Chakana transmitted the knowledge to construct a canal of cement and a water storage tank with certain technical characteristics like size and amount of materials. But the local people attached another meaning to this knowledge. They thought the canals were too big and therefore the work was too hard. Chakana had designed the size of the canals based on scientific measurements of the amount of water that was going to run through the canals and the amount of water that was used by the people. But because the local people already had experience with a smaller canal they decided to change the technical details of the project. Because the understanding of the technical reasons was not successfully transmitted, the action that

followed was from the viewpoint of Chakana, the sender of the message, not desirable. In cooperating with the women's organization meaning was not transmitted successfully either. The women did not seem to know what their responsibilities were in the project. Chakana had told them what they had to do for the project but they had no understanding of what this meant in practice. When the construction had begun, the women had not enough spare time to work on the project. Their action was not sufficient for the project and not based on an understanding of the knowledge provided by Chakana. As said earlier they had no experience with carrying out a project so when Chakana told them what their responsibility would be when the proposal was ready, they could not imagine what this would really mean. Chakana had provided the women with explicit knowledge about the project but the meaning of this knowledge was not transferred. Later they declared that they had not known from the beginning what their participation in the project would mean. The maestro in this project succeeded in transmitting knowledge to the women by working together with them on the construction of the centre. The women learned by doing how to make bricks and what different stages were needed to construct a building.

The second way meaning was transmitted was by referring to earlier experiences of the actors. This happened together with the earlier mentioned way of providing an example. Therefore the transfer of meaning from Chakana to the local organizations was more successful with the irrigation project in Achocalla. The local people understood what it meant to work on the project. Chakana as well as Cepas Caritas had emphasized the importance of local participation during the visits. The people were well organized so meaning could reach every individual of the community. Knowledge and meaning that Chakana exchanged with the maestro's and working committees was shared with the other members of the community. The people had already experience and knowledge of working together and understood what it implied to contribute labour and materials to the project. With one community in Achocalla there have been problems because they wanted to change the technical characteristics and the location of the irrigation canal. Chakana has prevented this change in the project by visiting the community and explaining the reasons behind the technical decisions to build the canal on a certain location and with a certain size. Meaning was successfully transferred because Chakana showed drawings and calculations to support their arguments. In Monte Rojo where this similar problem occurred Chakana could not visit the community during the rainy season to put extra effort in the transfer of meaning.

In cooperating with the municipality of Achocalla meaning was initially not successfully transmitted. The municipality tried to adopt another meaning as a strategy in the network to keep the responsibility over their financial resources. To refuse a transfer of meaning and add another meaning to knowledge can be considered the third way of transferring meaning to action. Cepas Caritas and Chakana signed a contract in which was stated that Chakana was responsible for the financial part of the project. The municipality was not used at transferring money to other organizations to carry out projects for them and refused to give Chakana the money for the project. Chakana reminded the municipality of their obligation to give the money for the project to Chakana by visiting the head of the administration with a lawyer to remind them to the contract and explain the commitment. When this meaning was clear, the action of the municipality followed the meaning they attached to the knowledge. The municipality tried to attach another meaning because for them it was not considered the most optimal situation and they tried to act concerning another meaning.

The knowledge that was transferred between Chakana and the VMF about the roles both organizations would play in the project of the Artisan Centre had a different

meaning for each of them. For the executive director of Chakana Bolivia the fact that VMF contributed with more money to the project did not mean that he had to inform and involve the VMF in another way. The changed role meant for the VMF that they had right to more information and responsibilities in the project. They both acted confirm the meaning they had attached to the knowledge but because this was not mutually agreed upon, a conflict between both organizations arose. For both organizations the link between meaning and action was based upon experience with other projects. VMF was used to have frequent and institutionalized contact with project-partners while Chakana was used to provide the funding organizations with explicit knowledge about the project. With the more remote actors in the network Chakana exchanged little meaning as well. Transfer of meaning implies interaction and with the information Chakana send them about the projects, there was no direct interaction involved. Cepas Caritas transferred meaning that led to action from Chakana. They had a standardized method of being informed. They provided Chakana with an evaluation checklist that was very clear so other meaning could not be attached to this knowledge. CC managed to transfer the meaning of this document as it was intended.

6.3.2 The change of learning: knowledge, skills, values an attitudes

In this final paragraph about learning the change in knowledge, skills, values and attitudes of the actors in the network will be object of analysis. The drawback is that the period of looking at the actors in the network is too short to see sustainable changes and learning. But the actors reacted on each other and changed their values, attitudes, skills and knowledge to cope with the reality of the projects they had to carry out.

Chakana brought in new elements into the network that were mainly adopted by the local organizations and the women's organization. The most important elements are knowledge, skills and attitudes. These local organizations who participated in carrying out the projects worked daily with the knowledge and skills they had learned by doing from Chakana and the maestro's. Next to this their attitudes towards other organizations changed. They had little experience with working together with NGO's or the municipalities but their responsibility and attitude towards their own participation changed. In Achocalla could be seen that the local organizations expected that the NGO and the municipality would give them a new irrigation system or a Artisan Centre. They were not used at actively participating. But after a few weeks their organization improved and the work became more efficient. In the beginning the local actors were not enthusiastic about contributing with labour and materials but when they saw that without their help there would be no project, their attitude changed. They felt more proud about their own role in the project. The attitude of the women changed as well. At first they were very enthusiastic about the project and their participation in constructing the centre. But after a few weeks they lost their motivation because they could not manage their participation and responsibilities. On the one hand the skills of the women increased but on the other hand their attitude towards the project became more negative.

Chakana's attitude towards the local organizations changed as well. The executive director became stricter and showed less patience with unwilling actors. The Bolivian way of interacting is very polite and problems are not easily discussed. But Chakana saw that they had to be more assertive to be able to carry out the project. Especially in cooperation with the local organizations and the municipality Chakana changed their attitude to be able to function as network manager. Chakana also got more knowledge and skills of cooperating with the group of women. Before the Artisan Centre, Chakana had only worked together with local communities. But with this project Chakana had to develop skills to motivate the women who did not form a community of neighbours and

were not enthusiastic in cooperating with this project. Chakana learned by doing that this organization was something different than working with the local communities but was not able to develop new skills fast enough to save the project. The attitude towards the women changed as well. Before the project started, Chakana saw this organization as independent and responsible for their own internal policy. But after a few months of cooperating with the women, Chakana's attitude changed by realizing the women needed more help with their internal affairs to be able to continue with the project.

Values do not change as fast as other elements like knowledge, skills or attitudes. Nevertheless Cepas Caritas brought new values into the network by focussing on the responsibility of the local people and the importance of a social evaluation of the project. Cepas Caritas asked for a social, economic and technical evaluation that was new for Chakana. Chakana adopted the value that the social development of the project is also very important when looking at the success of the project. This value could be adopted more easily because of the social problems that arose in the network.

6.4 Framing

In this paragraph the interpretative processes within the network are the central point of attention. The research questions about framing that were derived from the theory in chapter two (see p. 91) will be answered in this paragraph. Common interests and assumptions form the ground for communication. In the network deficits in communication between the actors could be caused by differing interests and assumptions. Interests and assumptions are linked to culture and historical factors that bind a group of people. In the project-networks the actors have different cultural backgrounds and therefore different perspectives of reality. At first I will have a look at the different cultures in the network. These cultures will lead to the frames and meanings that exist among the actors to construct their ideas of the world. Because the actors are cooperating and learning they are reframing their ideas to come to an understanding of the other actors in the network. Learning and reframing are two communicative processes that lie closely together and need each other to take place. Frames are constantly changing under influence of learning. The change of attitudes for example leads to the adoption of new frames to interpret what is happening. Next to this the actors are developing an overlapping frame and meta-culture that is unique for the project-networks.

6.4.1 Cultures in the networks

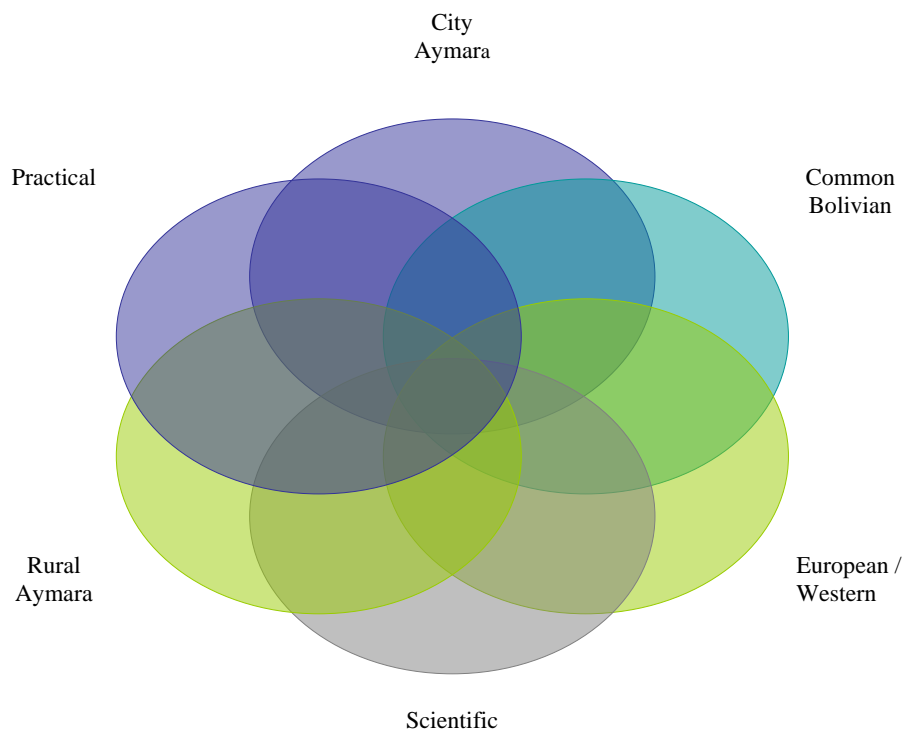


Figure 12: Cultures in the project-networks of NGO Chakana

Six different cultures could be identified in the networks. In figure 6.1 can be seen that these cultures exist next to each other but also overlap. In the middle of the figure where all cultures come together, the meta-culture of the network can be seen that is developed because of the interaction between the actors involved in the network.

The local organizations have an indigenous and Rural Aymara background. They are farmers who live closely in touch with nature. They shared parts of their culture with the other actors in the network by organizing initiation rituals to offer coca-leaves and alcohol to Mother Earth to ask her permission for the project. Another feature of their culture is the Aymara language they speak. Especially women and old people hardly speak Spanish and have little contacts outside their own cultural group. The traditional local organizations like the “Alcalde de Agua” are part of their culture as farmers. These traditional organizations have in most cases no formal status. The more remote the local communities are from the city, the more traditional their culture has stayed. In Achocalla the local organizations have adopted more elements of the city culture. They live an hour travelling from the cities of El Alto and La Paz and this has influenced their culture. They know how to influence politics in the municipality, most of them speak Spanish, people trade their products in the city and have been to school. The local community plays an important role in shaping culture. The people are closely connected to their community and culture is transmitted through contacts within the villages like festivals, weddings, funerals etc. The women’s organization is lacking part of this cultural element. The members of Mujeres de 24 de Octubre also have a rural Aymara background but are as an organization not traditionally or at community level organized. The women’s

organization is built up around different community based groups of women. This element fits within the rural Aymara culture. But the inter-communal cooperation of these groups is something new for the women in Achocalla. To have a board and a formal status as an organization is characteristic for the city-culture in stead of the rural indigenous culture. The culture of the city has more characteristics of the western culture. People are educated, have paid jobs in institutions and have access to modern communication technology like internet and television. Most people who are working for Chakana in Bolivia are city-Aymara's. They still can speak the Aymara language and know the rituals and traditions of the indigenous people. But they also have studied at university, have international friends and contacts outside their own culture. The municipalities of Achocalla and Chuma also have indigenous elements because they are rural municipalities and the Aymara people are represented at the municipality. But most people working for the government are educated in the city and have other ethnical backgrounds and represent the common non-indigenous Bolivian culture. The same can be said about Cepas Caritas. CC is a big organization that is active in all of Bolivia and the people working at the office have different ethnical backgrounds and come from different parts of the country. One featuring cultural element of Cepas Caritas is their Roman Catholic background. Their projects have to be in line with the Catholic doctrine and ethical themes like reducing poverty. Culture influences the way actors are working on the projects and behaving in the network. A respondent from the municipality of Achocalla said that it is typical for the Bolivian way of working to do everything on the latest moment without a strict planning. This feature of the Bolivian way of working is very different from the western culture that is also presented in the network. The Bolivian actors have experienced the European, western culture of Chakana, the Van Malsen Foundation and the German Embassy as direct, controlling, efficient and pragmatic. Another difference between the Bolivian and European actors is that the European actors are able to travel to Bolivia while the Bolivian actors have a lot of difficulty leaving Bolivia to visit other countries. On the one hand it is too expensive while on the other hand it is difficult to get visa Europe. The European actors are internationally oriented and have more experience in adapting to other cultures and dealing with other interests and assumptions. Chakana is also characterized by an university culture. Most volunteers working for Chakana in Bolivia as well as in the Netherlands have a scientific background. People working for the Van Malsen Foundation have a practical background that they experienced as another culture in the network.

The different cultures in the network don't have clear borders and although actors are part of a dominant culture, there are elements of other cultures next to the dominant cultures. By interacting with other cultures the actors are able to adapt elements to add to their dominant culture and frame of looking at the world. The overlap between the different cultures in the network forms the basis for understanding each other.

6.4.1 Framing, meaning and perspectives on reality

The dominant culture of actors influences the frame and meaning actors attach to the project networks. The frames are also related to their objectives to join the network because the way the actors frame the projects is based on the how the project and cooperation in the network will lead to reaching their personal objectives. Actors look at the network in terms of what is in there for them and these interpretations lead to the circle of action and thinking. The frame the actors use to look at the network can be seen as an interpretation of what is going on and how the actors see themselves and others implicated in what is happening. Knowing the different frames of the actors involved and

the overlap between them can be useful in creating a common vision and understanding in the network.

The local organizations frame the development projects as an improvement of their livelihood. The projects are a way to generate money and development for the community. The local organizations think of the cooperation with other organizations as prerequisite for getting resources like money and help. They do not trust the Bolivian government to help them and addressing NGO's is a strategy to improve their way of living. Cooperation in the project-networks is framed as livelihood strategy by the local people. The local organizations framed their own position as dependent and needy. They framed the network as way of providing them with the lacking ingredients to carry out a project. Because of the cultural element of the traditional institutions the projects could be framed as communal work for the common cause of the village. The people were used at working for the community and framed the work on the project in this light. The local organizations that had preserved this element of the Aymara culture were better able to organize the work on the project.

The projects are also for Chakana essential for the existence as NGO. For Chakana the development projects are framed as means to improve the living conditions of the rural Aymara. But the people who work for Chakana Bolivia frame the projects as learning schools to get field experience as engineers and build up a network that can be used for making a living. As an organization the projects are framed in an altruistic way but for each of the people involved with Chakana the projects are framed concerning their personal benefits. The projects are windows of opportunities to make new contacts, to get access to paid jobs and get more experience for personal development. In Bolivia the volunteers hope that when Chakana is growing they will get paid jobs at the organization. Because of this double way of framing Chakana sees herself in what is happening as on the one hand a helper, a contributor to development with idealistic motives but on the other hand as dependent on the contribution of the other actors to be able to grow as an organization. In the actions of Chakana this can be seen because on the one hand Chakana is the manager of the network but on the other hand has continuously make sure that the other organizations contribute to this growing process of the organization by succeeding in the work on the projects and generating new projects.

The municipalities seem to use double frames as well. On the one hand they frame the development projects as a positive way of contributing to the development of their people. The municipality thinks of the cooperation with Chakana as an opportunity of reaching more development with the same amount of resources. But on the other hand the projects are framed as loss of power and control. The municipality is not the manager of the project-networks and therefore plays a more marginal role in development. At the municipality could be seen as well that the organization as a whole framed the projects as positive and a contribution to development. But the individuals working for the municipality did not act corresponding to this frame. Sometimes the cooperation with the other actors was not very smoothly because the individuals tried to adapt another frame that suited their personal benefits better. The VMF also used different frames as a basis for their actions in the network. As a development organization they acted based on framing the projects as a way of helping the people in Achocalla. But in the network they framed the project as a way to settle the name of their organization because they were closely involved with a big project. The VMF framed the development of the project and the cooperation between the actors as problematic and based on this frame they wanted to be more closely involved with the practical work on the project. The VMF framed the work on the project from a Dutch perspective. The practical approach of Chakana was not based on this Dutch way of framing the project which caused a lack of mutual

understanding of each others way of working. The Bolivian reality and experiences of the people working for Chakana had led to another perspective on how to carry out a project.

The remote actors in the network framed the projects as well as a way of contributing to development with resources that are available especially for this purpose. Because this organizations did not cooperate with the other actors in the network, they had no double way of framing the project-networks.

The different organizations framed Shocks and disputes in the network based on their own perspectives of their position and the roles and positions of the other actors. In Monte Rojo for example the local organizations did not frame the same events as problems as Chakana did. For Chakana the technical changes of the project were a problem but the local organizations framed the original project-plan as a problem because the realization was too difficult. Also the problems with the Artisan Centre were framed differently by the actors involved. As said before the VMF framed the project from a practical perspective based on experience in the Netherlands and other projects carried out in Bolivia. Chakana's frame to look at the project was based on the independency and responsibility of the actors involved. They felt the VMF was threatening the independency and agency of Chakana as well as the women's organization. The organization of women looked at the project from a dependency-frame. They felt less capable than the other actors and in need for external help. This did not correspond with the way their role was framed by Chakana.

6.4.2 Reframing

The actors reframed the way they looked at the network and the projects during the running time of the projects. Cultural elements were shared and overlapped each other in the network but the development of an overlapping frame between the actors did not happen. The running time of the projects was too short and sustainability of the relations too little to generate an overlapping frame that was used by all actors to look at the projects. Because there was no overlapping frame, the actors communicated based on their own frames and perspectives of reality during the running time of the projects. I will now explain till what extent the actors reframed the way they perceived the projects because of the cooperation with the other actors in the network.

The actors reframed their own role and position, the roles and positions of the other actors, ideas, the meaning of the projects and their responsibilities while interacting with the other actors. For Chakana the most important change of frames was the way their own role in the network was perceived. After a few months of working on the project Chakana changed the role they played in relation to the other actors that carried out the projects. Chakana thought the problems were caused by a weak position as a network manager. It was needed to be stricter with the other actors and remind them of their responsibilities and tasks within the project. At first the cooperation with the other actors was based on the frame that every actor was independent and responsible for their own part of the project. Chakana had based this frame on the assumption that every actor had their own reasons and benefits to carry out the projects. But when mistakes of actors had consequences on the other actors, this frame was not suitable anymore as a basis for the actions of Chakana. The problems Chakana had to deal with, required innovation of their position in the network. The three project-networks faced the same kind of communicative problems on which Chakana reacted. The action of Chakana followed the problems that occurred. The reframing of their role could make Chakana more active in the network so that communicative problems do not get a chance. Chakana reframed also their ideas about the sustainability of a project. Cepas Caritas had put a lot of emphasis on local participation and organization and with their obligatory evaluation

forms Chakana was confronted with other ideas about the quality of projects. The executive director started to think about the project within these new frames and agreed upon the importance of community participation for the quality of a project.

The local organizations reframed their own dependent role in the network. While the project was carried out they felt more important and autonomous because of the labour they contributed. They framed the project not only as a project that was given to them but started to feel ownership for the project. They were proud of their work and showed more enthusiasm and initiative. In Monte Rojo this changed way of looking at their own role, possibilities and agency has led to changes in the project. Learning was a prerequisite for this reframing. The local organizations got more knowledge of how to construct an irrigation system and got more confident about their own roles in the projects.

Within the network can be seen that reframing does not necessary have to be a positive change. The relation between the VMF and Chakana changed during the running time of the project. When the project was proposed all actors involved had trust in each other's capacities. Because of all the problems that took place, the actors reframed their trust and sympathy for the other organizations. The different cultures that met in this project were an obstacle for cooperation and understanding. The VMF was experienced as too direct in their communication about the project. In stead of cooperation, Chakana enlarged the distance between the organizations in the network because they did not feel comfortable with the cooperation.

7 Conclusion, Discussion and Recommendations

7.1 Introduction

So far the concepts 'network', 'sharing of knowledge', 'social learning' and 'framing' have been discussed in the context of the development projects of NGO Chakana. In this chapter these concepts will be brought together to deal with the central research question that remains to be answered:

How do the project-networks of NGO Chakana and the communicative processes within these networks influence the performance of Chakana in executing their development projects in Bolivia?

In this chapter I will look for an answer on the central question while discussing the theory and analysis on which these answers are based. The insights gathered in this research project will be translated into some practical recommendations for NGO Chakana to improve their performance in carrying out development projects in the highlands of Bolivia. Exchange of knowledge, learning and framing are important for Chakana to grow as an organization. Chakana itself needs to develop and learn from experiences of the cooperation with other actors in a network situation to be more efficient and effective. The social location and environment of the network influences the way Chakana is able to carry out a project. Chakana is continuously interacting with the other actors and therefore influenced by communicative processes.

7.2 Network

One of the network characteristics that I mentioned in the theory was the presence of diverse actors with their own differing goals. In the project networks of Chakana there were different actors, but they were not characterized by differing goals. Every actor had the objective, supported by their own reasons, of carrying out the development project. Because the objectives were more or less similar, coalitions between actors were not formed. Coalitions between like-minded actors to secure their interests were not necessary in these small networks that were formed by actors who were not part of a bigger social movement. Because one of each kind of actor (a NGO, a government organization, a local organization etc.) was active in the network, coalitions were not relevant. In a bigger network NGO's could form a coalition to secure their common interests, or local organizations to stand stronger against plans of a government. The theory about networks has been developed to analyze bigger social movements or relations between organizations. Although it gave a good insight in the way Chakana functioned, not all concepts of this theoretical paradigm were relevant in this research.

Synergy was in the theory presented as a motivation for actors to join the network. Although the sum of all actors' contributions was more than the input of each actor alone, synergy was not consciously experienced by the actors. It was therefore not a motivation to join the network. Synergy could occur because the actors were motivated by each other and lifted on a flow of actions. Without cooperation with the other actors, individual actors would have contributed less or other actions than they did now. They were dependent on each other's contribution, which enabled them to carry out a project.

The sustainability of the networks was not very strong. Chakana cannot rely on a sustainable flow of resources for carrying out their projects after cooperating with the actors in these three project-networks. Only Cepas Caritas is willing to finance another

project of Chakana so that tie will be remained. The search for new funding to develop more projects is the task of the Dutch part of Chakana.

Between the actors existed a strong interdependency to meet their objective of carrying out a development project. In the theory was stated that although the actors are dependent on each other they still have a relative autonomy to act. This was also visible in the project-networks but this autonomy was not positive from the perspective of Chakana as network-manager. Individual actors tried to increase their autonomy which caused problems for Chakana in carrying out the project. The increased autonomy of the local organizations for example has resulted in shocks in the network. Chakana was responsible for carrying out the projects and when the local organizations showed more autonomy by changing the project proposal, Chakana faced technical or financial problems. The less influence Chakana had on the local organization the more the technical quality of the project decreased. Thus although in the theory autonomy of actors is presented as a network characteristic, in the project-networks around Chakana it resulted in shocks. The project-networks were not composed of equal actors in the sense of autonomy because Chakana was the general coordinator and can be seen as the spider in the web of project-networks. A distinction has to be made between the remote and closely involved actors in the network. The closer Chakana was cooperating with the actors, the more their autonomy affected the work of Chakana. The autonomy of the remote actors was not an issue because their action did not influence the work on the projects Chakana had to do. For example the German Embassy and Cepas Caritas only contributed with finance and asked for evaluation. They were not directly involved with the process and therefore their relative autonomy was not an issue. The increasing autonomy of the local organizations meant that Chakana could not influence their participation on the project-work anymore which affected the execution of the projects negatively.

In all three projects can be seen that the resources the actors have access to, differ from the resources that are exchanged between Chakana and the actors; not all available resources are used in the network. Especially 'local knowledge' and the 'networks of actors' are not exchanged. The local organizations play a rather passive role in the network. They are involved in a late stadium when the project-proposal is already presented (like with the Centre Artesanal and Irrigation in Monte Rojo). Only one representative is consulted for developing the project but it was not clear that the rest of the community is involved as well. There has not been much exchange of knowledge from a representative to the rest of the local organization or community. This works both ways; the information of Chakana does not reach the whole of the local organization and the local knowledge does not reach Chakana. The local-local connections between the leader and the base of the community were not used to transfer knowledge about the project. This became clear with the Women's organization. The board could not communicate the details of the projects and responsibilities of the organization to all members. This resulted in shocks like the women who did not came working on the project anymore. Thus the cooperation of Chakana with organizations that had strong local connections between the representative and the base was most efficient. These organizations showed bigger responsibility and were better able to organize the work on the project. The irrigation project in Achocalla was a good example of this. On the other hand strong local connections caused an 'inwards' looking attitude. This means that organizations did not cooperate with Chakana in the first place but tried to look in their own organization for solutions. This could be seen in Monte Rojo in which Chakana was

not approached to solve their problem with the canals but solved it themselves by changing the project. The local connections within Chakana were used differently in the three project-networks. The executive director of Chakana in Bolivia did almost all the work on the projects. Especially concerning the Irrigation projects in Monte Rojo and Achocalla he delegated tasks but there was no full cooperation between the volunteers working for Chakana. The local connections between the volunteers working for Chakana in Bolivia seemed weak; all organizational resources were concentrated at the executive director. There was not much trust between the people working for Chakana and other volunteers could not use these resources like knowledge and network which made their work less relevant and efficient. Strong local connections are a vital aspect of the social capital of an organization. The theoretical framework I used for this research focuses on the relations between Chakana and the other actors and does not cover the importance of the local connections within organizations sufficiently to explain the problems within the organization of Chakana. But my data and field experiences show that trust is an important concept in evaluating the local connections.

In the theoretical framework I approached the network as a soft-system without set boundaries that was open and on the move. The theory also provided the idea of connectedness outside the network and the continuous inclusion and exclusion of actors, Therefore I expected that Chakana would make new contacts by using the networks of the other actors involved with the projects. But Chakana used the networks of other organizations hardly as a resource. The more remote actors Cepas Caritas and the German Embassy have access to a big network of organizations. Chakana could use these networks to make new contacts with NGOs who work in the same field of development. The municipalities also have a lot of contacts that could be useful for providing knowledge, new ideas or finance to the project-network of Chakana. It is difficult for Chakana to gain access to the network-resources of municipalities because they are not reliable partners and people working there change a lot. Therefore it is hard to build up sustainable relations with people on strategic positions within the municipality.

The maintaining of the ties with all actors in the networks was difficult for Chakana. External factors like the rains that destroyed the road, the lack of communication technology and the big distances made it difficult to communicate with especially the local organizations. In the theory (chapter 2) can be seen that networks require a communication infrastructure to support the exchange of for example information, knowledge and materials within the network. In this Bolivian context this communication infrastructure was too weak to have this supporting task of the network. Also social factors posed a threat on maintaining the ties between Chakana and the other actors in the network. The internal problems at the municipality made it difficult to approach and rely on the different employees of the municipality. The different expectations and cultural background of VMF and Chakana worsened the relation between both organizations. VMF expected more information about the development of the project. The executive director of Chakana Bolivia had not much time to provide these evaluations and was not used to making standard information forms. Not only the communication with VMF was difficult for that reason, also the internal communication between Chakana the Netherlands and Chakana Bolivia proceeded with difficulty.

Chakana has developed a pattern in the roles they play with the different actors. All organizations in the network played different roles at the same time. The local

organizations played a cooperative role that was at the same time dependent and patron-client. Chakana played a cooperative and coordinative role with at the same time a dominant, controlling and observing role. The roles Chakana and the other actors played, influenced the performance of NGO Chakana directly. It became clear that when roles of actors are not clear for other actors in the network, problems and constraints arise. To perform best and carry out a development project without too much shocks and problems, roles the different actors play should be clear for every actor. This means that the responsibilities, tasks and corresponding activities have clear boundaries for every actor. The relation with the local organizations for example is on the one hand patron-client and on the other professional. This has led to confusion because the local organizations did at some points not understand what was expected from them. The women's organization referred to the help of Chakana in evaluating the relation while Chakana referred to the lack of professional cooperation of the women. The VMF wanted to play a more professional role in the project-network while Chakana saw the role of VMF as financial; they had to pay the money for the project and would get a final evaluation at the end. This discrepancy in experiencing the roles of the organizations led to a lack of mutual understanding between the actors in the network. With the municipalities the roles and responsibilities were more ambiguous. The municipalities contributed to the projects with finance but also with professional cooperation. Chakana had professional as well as financial relations with these governments. Chakana invested also time in developing friendship relations. Knowing people is in Bolivia very important. Friends, study-colleagues and family for example help each other. Chakana got access to other networks and contacts because of these personal relations. The development of sustainable connections like friendship requires time and that can be a reason for the earlier mentioned lack of external connections of Chakana during the running time of the projects.

7.3 Communicative Processes

The communicative processes between Chakana and the other actors in the network did not occur independently from each other but overlapped and interacted.

Knowledge played several roles in the project-networks. The first role of knowledge is as strategy to exert agency and power. Chakana has a monopoly position in the network concerning the use and distribution of knowledge. The remote actors in the network are dependent on the knowledge supply of Chakana. Because controlling is very difficult in the Bolivian context, Chakana has the ability to distribute the knowledge and information they think is important, useful and desirable. What knowledge is considered important is related to the frame with which the actors look at the network. Knowledge about the development of the projects that was considered important by the different actors did not always correspond. For example actors who contributed funding to the development projects needed knowledge about the expenses and economic development to be sure their money was spend in a desirable way. The local organizations were mainly interested in knowledge that was useful for carrying out the project. For an actor the importance of knowledge depends on what knowledge the other actors have access to. Therefore the access and use of knowledge can be seen as a strategy to exert agency. Because the municipality has access to juridical knowledge it becomes for Chakana important to have access to this kind of knowledge as well. Access to knowledge determined the power-balance between the actors in the network. The second role knowledge played in the network was as a resource that determined the importance of an actor. Awareness and appreciation of the use of knowledge determined how valuable knowledge was as a resource. Actors appreciated the use of explicit knowledge better

than tacit knowledge. Actors derive respect and status from explicit knowledge. Chakana was appreciated by the other actors for bringing in explicit technical knowledge into the network. The local actors for example valued this explicit and scientific knowledge as more important and valuable than the local knowledge they had gathered by experience. For Chakana the practical local knowledge was very valuable and useful in designing projects. Knowledge is therefore framed differently by the actors in the network. In carrying out the project tacit knowledge played a more important role than explicit knowledge. This leads to the role knowledge played as basis for learning. Actors who already had a base of tacit knowledge were better able to generate new knowledge because they could recognize the knowledge and link understanding to what they already knew. Knowledge was used more efficient when actors already had a knowledge and experience base. The transmission of explicit knowledge was in some cases in the network a strategy to increase the adoption of the tacit and practical knowledge to carry out the project. The women's organization first had to learn how to organize and coordinate an organization before they were able to function as, and act as, a fully fledged actor in the network. Although knowledge as a resource was exchanged intentionally in a one way direction, tacit knowledge was exchanged unconsciously at the same time.

Learning had the role of being the link between understanding and action in the network. Because of participation and interaction the attitudes, skills and knowledge of the actors changed. Explicit as well as tacit knowledge was transferred by interaction between the actors in the network. Learning by doing fitted within the cultural frame of the Indigenous actors. By doing the actors developed their own understanding based on the knowledge and experience they gathered. The development of meaning can be seen as learning because actors draw their own conclusions based on interaction and participation. Their attitudes and values changed. Transfer of knowledge did not always lead to action. Although learning could have taken place within the actor, it was not brought into practice so that it became social learning that was shared with the other actors. When the transferred knowledge was not accumulated and brought into action, learning had not taken place. In the network there were two reasons for the failing of learning. The first was that the actors based their action on other knowledge than the transmitted knowledge they got from another actor in the network. Especially the local organizations based their action on their own knowledge in stead of on the knowledge Chakana had transmitted to them. Another reason was that action was based on another meaning than the transferred knowledge and attached meaning. The action did therefore not correspond with the meaning that was transferred. Too much independency in the process of learning had led to a drifting apart of meaning and understanding. In some cases knowledge was transferred but not used by the receiver of knowledge.

The culture and language of people living in remote communities were very different from the city. Because of the distance and differences, these local communities have little experience in working together with outsiders. For the efficient exchange of knowledge, language played an important role. The meaning of the project and the knowledge about carrying out the project could be communicated more efficiently to the local organizations by speaking in the traditional Aymara language. Next to a better understanding, the local organizations had the feeling they were addressed by people with the same cultural frame. Intersubjectivity between Chakana and the local organizations increased feelings of responsibility and involvement. Language was also a barrier within the network. The Dutch VMF was dependent on

translations of Spanish to Dutch to generate knowledge about the project. Because direct communication was not possible, understanding and meaning were more difficult to transfer. Problems also arose because of ambiguity of expectations and agreements. The roles the different actors played in the network were not always clear for the other actors. Meaning and framing of the roles and tasks were differing among the actors. A meta-culture with shared understanding of the development project was not developed among the actors in the network. The running time of the projects, all less than six months, was not sufficient to develop such a meta-culture by just interacting, sharing knowledge and learning.

Framing can be seen as the link between the processing of knowledge into understanding. Learning therefore depends on the way knowledge is framed before it is transferred into action. Culture is a determinant of the frame actors use to look at the development project. Actors do not belong to one culture but continually switch between different cultures in different situations. The frames they develop are based on all interactions with these cultures. The more different cultural interactions an actor has in the network, the more easy frames of other actors are understood. A broad interpretation of what is happening is useful in understanding the way other actors interpret the situation. When reality is interpreted differently by actors who cooperate in the network, communication and transfer of meaning has been more difficult. Frames determine what knowledge is getting through to the core of an actor where it can be processed into meaning and action. A frame can be seen as a kind of filter that actors use to choose what knowledge they want to let in. In the network framing was a vague concept that was subject to change, reframing, but without being able to measure the strength or sustainability of the frames that were adopted by the actors. The lack of an overlapping frame was an obstacle for social learning between the different organizations. There has not been developed a meta-culture in which all actors recognized themselves. Although social learning took place in groups of individuals, it did not occur on organizational level throughout the whole network. Probably the short period of time was not sufficient to see these kinds of structural patterns occur.

7.4 Answering of the central research question

This research has focused on the communicative processes within the network of one NGO to explore the influences of these processes on the execution of the projects. To develop the theory of the importance of social learning, framing and sharing of knowledge for organizations it is necessary to carry out more research. It is necessary to compare organizations and look at the influence culture plays in these processes. This research has been conducted in the highlands of Bolivia but when an NGO is carrying out projects in for example an African country, the influences of communicative processes and a network environment would probably be very different.

This research has been carried out not in the last place to explore the possibilities of NGO Chakana to improve the performance of their project-work. The fact that Chakana is carrying out development projects in a network environment implies the existence of communicative processes between the interacting actors. The communicative processes and the network itself influenced the performance of Chakana in a positive as well as negative way. The insights in the network that were provided by have shed light on the weak and strong points of the position of Chakana in the networks. This research can make Chakana therefore more conscious of the influence certain behavior has on the other actors to make the positive points stronger while working on improvement of the

negative points. The strong points of the network are the increased possibilities Chakana has with functioning in a network-environment. Chakana has access to resources like labor, money and knowledge and is able to exist as a development NGO because of the other actors they are working with. Because of the synergy that occurs when actors are working together, Chakana can accumulate their own resources by effectively and strategically using the resources of other actors. The weak point in the network is that Chakana is dependent on the other actors in the network to successfully carry out a development project. Chakana can use the communicative processes strategically and positively to exert more influence on the other actors to carry out the projects more effective and efficient. But before this is possible there has to be the acknowledgement that communicative processes matter for the quality and efficiency with which problems are carried out.

The project-networks and the communicative processes within the networks influence the performance of Chakana in the following ways:

- The network dynamics make the process unpredictable so that the performance can never be planned beforehand to prevent shocks and problems totally.
- Local-local connections within Chakana influence the performance of Chakana as coordinator of the network.
- Local-local connections within the other actors are less visible for Chakana but determine the way cooperation in the network takes place.
- Knowledge of the characteristics of the actors in the network helps to support communicative processes because for example the reasons to participate, the dominant culture of actors and their resources are known to the network manager who can anticipate on such knowledge.
- Maintaining of ties is important for the sustainability of the network and influences the performance of Chakana. Strong connections lead to more trust among actors. The more the network is characterized by sustainability and trust, the more successful projects can be carried out by Chakana
- Roles and strategies the different actors play in the network influence the performance of Chakana as well. Chakana can not influence the roles the other actors play because they are derived from their objectives with the project and preferences of the actor. Transparency of the role Chakana wants to play has a positive effect on the network because actors know what to expect and how they can rely on Chakana.
- When the network manager knows what knowledge is considered important and expected by the different actors, shocks, problems and disappointments can be prevented.
- Lack of or little social learning is influencing the performance negatively because the transfer of meaning into action is not taking place.
- Participation and interaction stimulate learning between actors. On the one hand learning has to take place in practical situations and on the other hand learning moments have to be created by the network-manager.
- Intersubjectivity and the sharing of a culture of knowledge of other cultures influence the performance in a network positively.
- Framing and interpretation of a situation influence the way actors in the network of Chakana are acting and reacting on the work on the development projects. Objectives and expectations actors have can also be derived from the frames with which they deal with the situation in the network. The more transparency there is about the expectations of actors, the more the frames are subject to change and reframing can occur. Reframing has a positive influence on the performance of Chakana because

actors are better able understand each other and agree on the things that have to be done for the project.

7.5 Recommendations for Chakana:

- **Strengthen local-local connections within the organization**

To be able to use the full potential of knowledge, experience and learning within the organization it is necessary to share knowledge between all people who carry out the projects. When the local-local connections are strengthened, trust between the volunteers can increase. When all volunteers can carry out the projects on a transparent and similar way, the organization can become more efficient and continue with the growing process. Also the connections between the Netherlands and Bolivia need to be more structured. It is necessary to do more research or for example a brain-storm session to find out what both parts of the organization need in terms of information and transparency. The communication between both parts of the organization need to be structured so that people working for Chakana can rely on this flow of knowledge.

- **Use the local-connections present in other organizations**

Especially the local connections within the community are a social resource that can be relied upon in carrying out the projects. It is necessary to find the key-persons within the community to communicate with and make them aware of this social potential within their own local community.

- **Actively generate social learning in the networks**

By organizing meetings to discuss the development of the project, the organizations involved can learn from the viewpoints of others. It is for example useful to arrange these meetings in the project-proposal so that every actor is aware of the need of these moments of coming together to learn and reframe to develop a meta-culture and common frame of looking at the projects. Because learning takes place in interactions. The parties who are working on the projects need organized learning moments to discuss what new knowledge and skills were generated while working together. This way the engineers and the local people are better able to share their tacit and explicit knowledge.

- **be clear about the roles every actor should play to carry out the project**

There has been too much ambiguity while carrying out the projects. The role and responsibilities should be clear for every actor. Especially their meaning and interpretation. More time needs to be spend on transfer of meaning of the different roles and evaluation during the running time of the project. Shifting roles and responsibilities should be clear to everybody involved so that the efficiency with which the work is done, can increase. Roles can be defined in the contracts Chakana signs with the actors involved so that expectations can be based on these transparent roles.

- **Communicate expectations**

Before the project is started and during the running time it is necessary to communicate the expectations every actor involved has for the project. By discussing expectations it becomes clear for every actor what is possible and under what conditions. The different expectations need to be discussed and shared so that a workable and doable expectation

of the project is created that is shared by all actors. This will prevent disappointment during the process or at the end.

- **Improve the communication infrastructure of the projects**

Some of the deficits in the communication structure can not be solved by Chakana, like the improvement of the road to the project-areas. But communication and contact should take place more structured. This is difficult to implement because Bolivian culture is not that structured as for example the Dutch culture. Actors in the network should find a way of communicating they think is pleasant to work with but also guarantees an efficient way of working. Again I think it is important to explicitly mention communication moments in the contracts that are signed by all actors involved.

- **Pay attention to the cultural differences of the different actors by talking about the meanings every actors attaches to the concepts in the projects**

It is important that every actor involved with the projects understands the objectives and motives of other actors. This can only be reached by contact-moments. Chakana needs to pay attention to the cultural differences by making expectations and underlying motives discussable. This can be done by putting them on the agenda of a meeting or holding a workshop in which all actors can ventilate their meaning about project-issues.

- **Include actors in earlier stages of the projects**

It is necessary for a successful fulfillment of the projects that all actors involved are aware of what is going to happen, what everybody's role in the project is and what is expected from them. This needs to be stated very explicit and more attention needs to be paid to the communication of these project-plans. This can prevent a lot of disappointment in a later stage of the project.

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Annex

Annex 1: Actors and their relations with Chakana

A: Centro Artesanal

B: Irrigation in Achocalla

C: Irrigation in Monte Rojo

Annex 2: Photo-impression of the fieldwork in Bolivia

PROJECT CENTRE OF ARTESANIA ACHOCALLA

ORGANISATION

INPUT

	FLOW	TIE	FROM	FLOW	TIE
Chakana Bolivia (CB)	1. Ideas for the Centre of Artesania	1. Professional	1. VMF Bolivia, Mujeres de 24 de Octubre	1. Ideas for the Centre of Artesania	1. Professional
	2. Money for executing the project.	2. financial	2. Chakana the Netherlands	2. Project Proposal	2. Professional network
	3. Instructions and culture Chakana.	3. personal	3. Chakana the Netherlands	3. Contract	3. Juridical
	4. Coordination development project.	4. professional	4. VMFB, M24/11, Municipality Achocalla	4. Report project development	4. Professional
	5. Promise to contribute to funding.	5. partner	5. Municipality of Achocalla	5. Assistance	5. Professional
	6. Labour and local materials to execute the project	6. professional	6. Mujeres de 24 de Octubre		
Chakana The Netherlands (CN)	1. Ideas for the Centre of Artesania	1. Personal	1. Chakana Bolivia	1. Project Proposal	1. Personal, professional
	2. Money to fund the project.	2. Financial	2. VMF the Netherlands	2. Money for executing the project	2. Financial
	3. Request for clarification	3. Professional	3. VMF the Netherlands	3. Explanation for problems and setbacks	3. Professional dependency
	4. Request for money	4. Financial	4. CB, M24/11		
VMF Bolivia (VMFB)	1. Instructions policy and culture VMF	1. personal	1. VMF the Netherlands	1. Ideas project proposal	1. Professional personal, netw
	2. Request for assistance	2. Professional, dependency	2. Chakana Bolivia, Mujeres de 24 de Octubre	2. Assistance	2. Professional
VMF The Netherlands (VMFN)	1. Information project development	1. Professional	1. Chakana Bolivia, Chakana the Netherlands	1. Money to fund the project	1. Financial
	2. Request for funding	2. dependency, financial	2. Chakana, Mujeres de 24 de Octubre	2. Land for the Centre	2. cooperative
				3. Request for information	3. professional financial
Mujeres de 24 de Octubre (M24/11)	1. New contacts	1. Network	1. Municipality of Achocalla	1. Idea for the Centre of Artesania 2. Labour 3. Local Materials	1. Network
	2. Land for the Centre	2. Patron-client	2. VMF the Netherlands		2. Professional
	3. Assistance	3. professional	3. Chakana Bolivia, VMF Bolivia, Municipality of Achocalla		3. Professional
	4. Money	4. Financial	4. Chakana Bolivia		

A: actors and their relations with Chakana: Centre of Artesania

PROJECT IRRIGATION IN ACHOCALLA

	3. Problem solving	3.professional, dependency	3. Chakana			
	4. Contract		4.Cepas Caritas, Chakana	4. Hosting visitors	4. Appreciation	4. CC
	1.Project proposals annual plan Municipality	1.Friendship, experience, network	1.Municipality Achocalla	1. Project Proposal	1. Experience, network, financial, professional	1. German Embassy, M Achocalla, Local Chakana Netherlands
	2. Assistance (knowledge and experience) project proposal	2. Professional	2.Municipality of Achocalla	2.Technical assistance	2. Professional	2. Local organizations
				3. Materials	3. Professional	3. Local organizations
	3. Money for carrying out the project.	3. Financial	3. Cepas Caritas, Municipality	4. Midterm-evaluation	4. Dependency, professional	4.Cepas Caritas, C Netherlands, Munic Achocalla
	4. Labour and local materials	4. Professional	4. Local organizations	5. Final evaluation	5. Dependency, professional	5. Cepas Caritas, C Netherlands
	5. Contract 2	5.dependency, professional	5. Cepas Caritas	6. Contract 1	6. Professional	6. Local organizations, m
	6. Invitation for Lunch	6. Friendship, appreciation	6. Local organization	7. Problem solving	7.professional	7.Local people
	7. Control	7. Power, dependency	7. Cepas Caritas	8. Model-project	8.network	8.Cepas Caritas
				9.Control	9. Power, professional	9. Local organization
				10. Effort to get the money from the municipality	10. Dependency	10. Municipality of Acho
				11. Contacts with the mayor	11. Strategic	11. Municipality of Acho
ands	1.Project proposal	1. Professional, colleagues	1. Chakana Bolivia	1. Background questions, clarification	1. Professional	1. Chakana Bolivia
	2.midterm and final evaluation	2.professional, colleagues	2.Chakana Bolivia			
s	1. Midterm and final evaluation	1.Professional, dependency.	1.Chakana Bolivia	1. Assistance with applying for funding	1.friendship, network	1. Chakana Bolivia
	2. Model project to show to external donors	2. Network, friendship	2.Chakana Bolivia,	2. Money	2. Financial	2. Chakana Bolivia
				3. Control	3. Power, dependency	3. Chakana Boli organization, Munic Achocalla
of	1. Mid-term and final evaluation	1.Professional, dependent	1. Chakana Bolivia	1. Money	1. Financial	1. Chakana
	2.request communities to pay for the project expenses	2. Representation	2, Local organization	2. Technical assistance	2. Professional	2.Local organization
				3. Assistance project-proposal	3. Network, professional	3. Chakana
izations Bojsana	1. Materials	1.dependency, professional	1. Chakana	1. Labour	1. Professional	1. Chakana
	2.technical assistance	2.dependency	2.Chakana, Municipality	2.Invitation	2. Appreciation	2. Chakana, CC
				3.initiation of the	3. Appreciation,	3. Chakana, municipality

B: actors and their relations with Chakana: Irrigation in Achocalla

PROJECT IRRIGATION IN MONTE ROJO

ORGANISATION	INPUT			OUTPUT	
	FLOW	TIE	FROM	FLOW	TIE
<i>Chakana Bolivia</i>	1. Request for a project	1. network, professional	1. Local organization, municipality	1. Project-proposal	1. Friendship network
	2. Invitation to present a project proposal	2. Friendship, network	2. German Embassy	2. Midterm and final evaluation	2. Professional dependency
	3. Money	3. Financial	3. German Embassy	3. Technical research: knowledge and experience	3. Professional
	4. Control	4. Professional	4. German Embassy		
	5. Invitation initiation project	5. Appreciation	5. Local organization	4. Technical assistance	4. professional
	6. Local knowledge	6. Professional	6. Local organization	5. Materials	5. Professional
	7. Changes in the project	7. Professional	7. Local Organization		
	8. Labour and local materials	8. Professional	8. Local organization		
<i>Chakana The Netherlands</i>	1. Project Proposal	1. Professional, colleagues	1. Chakana Bolivia		
	2. Midterm and final evaluation	2. Professional, colleagues	2. Chakana Bolivia		
<i>German Embassy</i>	1. Project proposal	1. Professional, network, friendship	1. Chakana Bolivia	1. Money	1. Financial
	2. Midterm and final evaluation	2. professional	2. Chakana Bolivia	2. Control	2. Power, dependency
<i>Municipality of Chuma</i>	1. Project Proposal	1. Professional	1. Chakana Bolivia	1. Money	1. Financial
	2. Midterm and final evaluation	2. Professional	2. Chakana Bolivia	2. Technical supervisor	2. Professional
	3. Invitation initiation project	3. appreciation	3. Local Organization	3. Visits to Monte Rojo	3. Professional control
<i>Local organization Monte Rojo</i>	1. Money	1. Financial, dependency	1. Chakana	1. Labour and local materials	1. Professional
	2. Materials	2. Professional, dependency	2. Chakana		
	3. technical research	3.	3. Chakana	2. Local knowledge	2. professional neighbours

	4. Maestro-technical supervisor	Professional, dependency 4. Professional	4. Municipality Chuma	3. Changes in the project	3. Professional power
				4. Invitation initiation project	4. Appreciat

C: actors and their relations with Chakana: Irrigation in Monte Rojo

**Annex 2:
Fieldwork
Photos**



LISTA DE SERENAJE	
Lunes	{ Angel Mameni, Casimero Calle
Martes	{ Teodocio Condori, Alejandro Calderon
Miércoles	{ Mario Mendaya, Claudia Escobar
Jueves	{ Rene Alba, Max Calle
Viernes	{ Mario Choque, Alejandro Calle
Sabado	{ Santos Nina, Basilio Hinojosa
Domingo	{ Carmelo Poma

