

Community Management of Wild Vicuña

Field work report

Nadine Renaudeau d'Arc¹

¹ PhD student at School of Development Studies, University of East Anglia (UEA, Norwich)

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ACRONYMS

Codes	Description
AECI	Asociación Española de Cooperación Internacional.
AMC	Area de Manejo Comunal
ANMINA	Area Natural de Manejo Integrado Nacional Apolobamba
Appendix I	
Appendix II	
ARMV	Asociacion Regional de Manejadores de vicuña
ARMVA	Asociacion Regional de Manejadores de vicuña de Apolobamba.
CICMV	Convenio internacional para la conservación y manejo de la vicuña
CITES	Convenio Internacional de Trafico de Especies de Fauna y Flora Silvestres
CMV	Comunidad Manejadora de vicuña
CV	Convenio Internacional de la vicuña
DGB	Dirección General de Biodiversidad.
DS	Decreto Supremo
ICIB	Instituto para la conservación y la investigación de la biodiversidad dependiente de la Academia Nacional de Ciencias de Bolivia.
LMA	Ley del Medio Ambiente
MDSyMA	Ministerio de Desarrollo Sostenible y Medio Ambiente
PMV	Plan de Manejo de la vicuña
PN	Parque Nacional
PP	Ley de Participacion Popular
RA	Resolución Administrativa
RAP	Reglamento Areas Protegidas
RB	Reserva de la Biosfera
RCMV	Reglamento Nacional para la Conservación y el Manejo de la vicuña
RN	Reserva Nacional
RVS	Refugio de Vida Silvestre
SERNAP	Sistema Nacional de Areas Protegidas de Bolivia.
SNMV	Sociedad Nacional de Manejadores de Vicuña
SNRNMA	Secretaria Nacional de Recursos Naturales y Medio Ambiente
SNV-FAP Holanda	Fondo de Alivio a la Pobreza
UCMV	Unidad Comunal Manejadora de vicuña
UEA	University of East Anglia

I. Introduction

The research for this thesis is directed by the University of East Anglia (UK) and forms part of a wider EU-funded project MACS “Sustainable economic utilisation of wild South American camelids: Strategies for improving rural productivity in pastoral communities in Latin America”. It is expected to contribute to the socio-economic analysis of MACS project by identifying those socio-cultural elements of the community management of wild vicuña in Bolivia. The aim of MACS project is to evaluate the sustainability of ongoing vicuña management projects that are taking place in the Puna and Altiplano region of Peru, Bolivia, Chile and Argentina, identifying economic, legal, socio-cultural, biological, ecological factors that can contribute to the success or failure of different management initiatives. The objective is to facilitate such information to interested social actors, community members and relevant institutions to influence social development and vicuña conservation and management policies.

This research is based on a comparative analysis to understand the individual incentives to collaborate (or not) within institutions for natural resource management using as special case study the vicuña management by andean communities. The focus of the analysis is from a social actor perspective, its interests, actions and interactions through semi-structured interviews, in-depth interviews and participative observation before and during the vicuña capture and shearing event. This analysis will provide the opportunity to identify those social elements, under different contextual factors, that may contribute to the viability of community management of wild vicuña.

The research started in October 2001 (Table 1). The first nine months have been spent at the University of East Anglia (UEA) in the UK, assisting to courses, reviewing literature on community wildlife management experiences in Africa and vicuña management in Peru, Chile, Bolivia and Argentina. This reading permitted to identify community management of wild vicuña in Bolivia as an interesting case study from a socio-cultural point of view because a) the national law states the community wild management as the only legal management scenario available, b) the social and territorial organisation of the land, c) there is no economic benefits of the fibre yet. During this period (from October 2001 till June 2002) a theoretical framework was elaborated at UEA with a one-month visit (November 2001) to Lipez-Chichas management unit to participate during the vicuña capture and shearing event. This visit was combined with the first MACS coordination meeting in Putre (Chile). By end of May 2002 a Procedural Paper was presented and corrections and amendments were made in June 2002.

Field work started in July (Table 2). The first month was spent at Buenos Aires to meet up with Gabriela Lichtenstein (partner of MACS project) to: 1) revise tasks and activities from WP2 (section VI) and 2) design a common set of questions to be asked in two different scenarios: captive management in Argentina by Gaby and wild management in Bolivia by Nadine. From August till December 2002 nine weeks have been spent in Mauri Desaguadero area, seven weeks in La Paz, and twenty days in Peru.

Table 1. Description of activities in UEA

Date	Location	Activities
Oct 2001	UEA	Courses: Epistemology of the sciences and research skills workshop
Nov 2001	Chile Bolivia	First MACS coordination meeting in Putre (Chile)* Field work in Lipez Chichas unit of management*
Dec 2001	UEA	Course: Research Skills for Social Analysis (attendance: one month) Essay on the epistemology of the sciences*
Jan-Feb 2002	UEA	Literature review and development of research questions*
Mar 2002	SUM (Norway) UEA	Course on Globalisation and Transnationalisation: Lessons from Latin America* Conference on Latin American studies*
Apr-May 2002	UEA	Procedural Paper* writing up and presentation
Jun 2002	UEA	Procedural Paper ammendments and preparation for field work

* Documents available

Table 2. Description of activities during field work

Month	Duration	Location	Activities
Jul 2002	1 month	Buenos Aires	Revision of MACS Work package 2 with Gabriela Lichtenstein (Gaby)
Aug/Sep	3 weeks	La Paz	Time spent to present my research and MACS project with many difficulties.
Sep	2 weeks	MD	Time spent to try to understand how people are organised as individuals, communities and institutions. Most of the time spent within the Marka San Andres de Machaca, Ingavi province in Mauri Desaguadero area.
Sep	1 week	La Paz	Interviews with director of Apolobamba (see Appendix II).
Sep	2 days	Apolobamba protected area	Assisted to Management Plan presentation, interviewed key government official in the vicuña management programme.
Oct	1 week	La Paz	Contacted researchers and NGOs directly or indirectly involved with vicuña management.
Oct	4 weeks	MD	Visited communities in Ingavi and Pacajes provinces. Then, joined the DGB team for capture and shearing in Ingavi province (Ayllu Choque).
Nov	1 week	Peru	Visited the Reserve Aymara Lupaca in the Peruvian border to Mauri Desaguadero.
Nov	2 weeks	MD	Joined the DGB team for capture and shearing of vicuña in Ingavi province.
Nov	1 week	Peru	MACS meeting in Arequipa. Assisted to community chaccu. Contacted NGO and officials from CONACS.
Dec	1 week	La Paz	Difficulties to work in Apolobamba area (see Appendix II)..
Dec	3 days	MD	Visit to Pacajes area.
Dec	3 days	Peru	Vicuña stakeholders meeting in Arequipa.
Dec	1 week	La Paz	Writing up field work report. Plan for future work.
Next: see Discussion			

MD: Area Mauri Desaguadero

II. Research questions

The research questions first developed in the Procedural Paper have been readjusted to field work experiences.

The main research question “Is it viable to conserve vicuña through sustainable use by communities?” was slightly modified to “Does social elements contribute to the viability of community management of the wild vicuña?” which resulted in “Is community management of wild vicuña viable?”

The institutional structure for managing vicuña in Bolivia and Peru have different levels of governance affecting a number of different stakeholders at local, regional, national and international levels. Secondary data permitted to produce a general stakeholder mapping presented in MACS meeting (see section IV). This table was not used as a preliminary basis for interviews design. The different social actors involved (individuals and institutions) presented in this table have not all been contacted. Most information has been generated from primary stakeholders (important in terms of likely impacts of vicuña management on livelihoods, relatively little influence over decisions). At local level, the identification of

individual primary stakeholders changes across study areas, closely linked to livelihoods activities. These are not considered in the institution structure for managing vicuña set up by government. Every person encountered was interviewed and information was triangulated with other primary and secondary data.

The first research question (RQ1) will then identify the stakeholders in the vicuña management structure. These are key actors a) important in terms of likely impacts of vicuña management on livelihoods, relatively little influence over decisions (primary stakeholders); b) influential in decisions and responsible for resource management, but not directly affected (secondary stakeholders) and c) influential but external of the process or site (external stakeholders). Community surveys will include mainly primary stakeholders, and semi-structured interviews will be undertaken with secondary and external stakeholders to find out the relative role of vicuña within their interests and agendas. A cross scale analysis will permit the tracing of linkages of their actions and interactions in finding out the power relationships, conflicts of interest and trade-offs.

The intended approach in the research question 2 (RQ2) was to focus on camelids management an institution for local resource management. This research idea was based on field observations from Lipez where livelihoods are mainly based on production of mixed flocks of sheep and llama with non-agriculture components. The way rural people compose livelihoods in the Mauri Desaguadero area differs significantly from Lipez. The region is not for alpacas and there are very few llamas. They are multiple with agrarian (agriculture and livestock) and increasingly non-agrarian components (market trade with La Paz). Pastoralism is based on mixed flocks of sheep and cows with or without llamas. Agriculture is based on different kinds of potatoes, quinoa and cebada. Some of the production is for subsistence and some other for commercialisation in regional markets and in La Paz (example: they kill sheep to sell in La Paz). There is a high percentage of young migration to La Paz that makes an old composition of households.

What motivates individuals to collaborate in vicuña management?. Why some communities collaborate together to capture and shear vicuña while others not? How does communities respond to the mechanism of “ayni” (“I help you if you help me”) to manage vicuña? The questions here are around when, who and why people collaborate or not. Where does the motivation or push is coming from? (the nature of communities or the nature of resource and landscape). The institutional analysis can take different dimensions depending on the types of boundaries considered (political, cultural, ecological, economic) and if expected (legal boundaries) and real (locally perceived boundaries) overlap or not.

Associations and cooperatives that exist can also be considered institutions with valuable secondary data to be cross checked with field observations. Some examples are the Norwegian Alliance and the Christian organisation. The initiative of these institutions was to make communities get together with a common goal. This same approach is also motivated by the popular participation and the basis of the institutional arrangement government design for vicuña management.

To investigate institutional issues (RQ2), the research will focus not only on the newly created agencies and structures around vicuña management, but will also conduct a parallel

investigation of the social and territorial organisation that already exist within the study area. It will then move to identify how stakeholders interests are likely to be mediated through new and existing institutions by analysing incentives to collaborate or not in collective action.

The aim is to explore the different dimensions in which people are organised as individuals, communities and institutions in different geographical and historical settings for vicuña management and other resources that can be used as case studies. Analysis of other local organisations or institutions for management of other natural resources (water, livestock, crops) can provide relevant information to cross check individual incentives to collaborate (or not) in the management of natural resources. This analysis will highlight the systems boundaries of decision-making and perception. These boundaries can take different dimensions depending on the scale of analysis.

Research question 3 were formulated on a too abstract way. I didn't know how to approach this research question. In the field I do ask sometimes what is the ideal for you in the capture and shearing? And outside this event what would be the ideal for you on how to deal with vicuña? It seems that because they do not see any economic benefits yet the ideal would be to domesticate vicuña and minimise the damage it makes to productive activities. For the DGB and wildlife wardens the ideal would be to have interested communities participating to be able to capture many animals and so increase the amount of fibre at national level that would permit to sell the product.

The aim is to really point out if primary stakeholders objectives are aligned with the vicuña management system . The new formulated research question (RQ3) will look at the objectives of the different stakeholders within the analysed vicuña management system. It will first assess if expected costs and benefits are both aligned with the real costs and benefits from the analysed vicuña management system. It will secondary identify what contextual factors are perceived to be lying within and outside control of the system boundary and decision-making frame.

In the real world, where individuals in a community have divergent interests, it is often said that community institutions work when they are able to minimise conflicts and maintain effective compromises between different individual interests. One aspect of viability or success of such institutions is in how effectively they include a broad range of interests. One measure of their failure might be a high rate of defaulting (e.g. poaching of vicuña by community members). It is therefore important to ascertain whether poaching is done by community members or outsiders. The issue of poaching might be one of the key tests of institutional viability and in the future it will be addressed with much detail. A visit to black markets in La Paz and interviews with frontier police.

Figure 1. Research Questions

RQ1: WHO ARE THE STAKEHOLDERS IN THE VICUNA MANAGEMENT STRUCTURE?	RQ2: WHAT INSTITUTIONS EXIST AND HOW DO THEY WORK?	RQ3: ARE PRIMARY STAKEHOLDERS OBJECTIVES ALIGNED WITH THE VICUNA MANAGEMENT INSTITUTION?
<ul style="list-style-type: none"> a) Identify a number of stakeholders (primary, secondary and external) b) Assess the relative role of vicuña for them within their interests and agendas. c) Assess power relationships, conflicts of interest and trade-offs 	<ul style="list-style-type: none"> a) Identify a number of local institutions (vicuña management structure and social and territorial organisation) b) Analyse incentives to collaborate in collective action or not (social and ecological features) c) Identify the system boundary and decision-making frame. 	<ul style="list-style-type: none"> a) Identify the social and economic costs and benefits (real and expected) a) Assess the system boundary and decision-making frame: what factors are perceived to be lying within and outside control? b) Investigate poaching activities and illegal trade

**IS COMMUNITY MANAGEMENT OF
WILD VICUNA VIABLE?**

It is hoped that cross checking this information will permit to answer the main research question of this thesis: Is community management of wild vicuña socially viable? Where viability in this context refers to the alignment between conservation and development objectives in this management shift towards an integrated programme. The research will focus on the socio-cultural aspects, secondary data and feed back from MACS research team will provide a basis of information on the other aspects such as ecological, biological and economic.

III. Study area

Vicuña in Bolivia is found between 14°40'' and 22° 50'' South Latitude, covering an altitude range that varies between 3,600 and 5,300 m a.s.l approximately. It extends over the Puna and Altoandina regions covering an extension of 170.000 Km². International legislation (see Legal Mapping in Appendix II) permitted life shearing of vicuñas on an experimental basis (without commercialisation of fibre) in three pilot areas where the species was classified under 'Appendix II' of CITES because of the high number of animals: Area de Manejo Integrado Apolobamba (ex-Ulla Ulla), Mauri-Desaguadero and Lipez-Chichas (Table 3). Since last CITES meeting (November 2002) in Chile, all vicuña population have been reclassified under 'Appendix II' permitting life shearing and commercialisation of its fibre in all its distribution within Bolivia. This means that vicuñas in Bolivia stands now in the same CITES category as vicuñas in Peru with a number of differences: 1) communities in Peru can shear vicuñas and trade its fibre since 1986 with economic benefits; 2) Since 1996 vicuña management is also taking place in semi-captivity.

Table 3. The characteristics of the three pilot areas in Bolivia

Management unit	Ha.	N°of Vicuñas (density)	N° of wildlife wardens	N°CMV& UMV	N° of vicuñas captured/ sheared	Gr. of fibre produced
Protected area Apolobabmba	100,000	8,299 (0.08)	25	10	1009/770	126,400
Mauri-Desaguadero	388,400	14,117 (0.03)	16	10	489/360	51,455
Lipez-Chichas	1,282,445	17,907 (0.01)	8	5	75/68	17,618
Total	1,770,845	40,323	115 + CW	25	1573/1198	195,47

						(x/animal 163gr)
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Source: DGB, SERNAP (2001); Acronyms : CW: community wardens; Vicus: vicuñas; CMV: Comunidad Manejadora de Vicuña; UMV: Unidad Manejadora de Vicuña. NB: This table does not show data on vicuña conservation in the rest of its distribution.

The study area has been built up as an ongoing process conditioned by field work logistics. The initial approach was to be able to compare people's interest and attitudes towards management of vicuña within a protected area such as Apolobamba and outside protected areas such as Mauri-Desaguadero and Lipez-Chichas.

The Lipez-Chichas Unit was visited between 17-28 November 2001 to assist the two-days process of capture and shearing of vicuña in three communities: San Antonio de Lipez, Relave and Guadalupe. Two communities on the Argentine border were also visited (Cusi Cusi and Rinconada). Observations of peoples' attitudes, collated through participant observation and informal interviews, were recorded before, during and after the two-days event. Informal discussion with members from other communities managing vicuñas (San Pablo de Lipez and Santa Isabel) and from other vicuña protected areas where vicuña management is not carried out (National Reserve Avaroa) represented yet more interesting sources of information.

Field observations in Lipez-Chichas unit reveal that there are conflicts of interest between the government agency and community expectations regarding the management of vicuña. Members from the DGB agency highlighted this experience as a characteristic of this management unit because of the far distance from La Paz and recommended to visit the two other units of management closer to La Paz to observe differences in human behaviour.

Visits to Apolobamba and Mauri-Desaguadero units, both located nearer La Paz were planned to provide valuable information to cross-check with preliminary observations in Lipez-Chichas unit. Potential motives and interest to the vicuña shearing programme can be obedience and/or trust of government directive or other institution, enjoyment/social benefits, and expectations of future financial gain. Visit to different areas can provide valuable data to validate and cross-check findings. For example, one can expect a better social organisation and a more interested attitude towards conservation and management of vicuña in an area that is more logistically and financially supported such as the protected area Apolobamba that depends on the Protected Area Administration Government Agency and where the Spanish International Cooperation is technically and logistically supporting the programme. Human behaviour may change not only amongst units of management but also across the year calendar with different objectives and agendas before, during and after the capture and shearing event. It will also be important to spend some time in La Paz and local authority department to collect information about key stakeholders and secondary data.

Unfortunately, the above work plan was not possible to achieve, problems with the Director of the reserve Apolobamba made access to the reserve almost difficult.

In spite of difficulties, opportunities arised and I was lucky to be invited by Dra Maria Ripa de Marconi (Director of the DGB, Wildlife Agency) to the presentation of the Management Plan draft document to the communities for revision in the protected area Apolobamba. I was

then able, against the Apolobamba director wishes, to meet key authorities and get a better understanding of the institutional arrangement set up for managing vicuña in Bolivia.

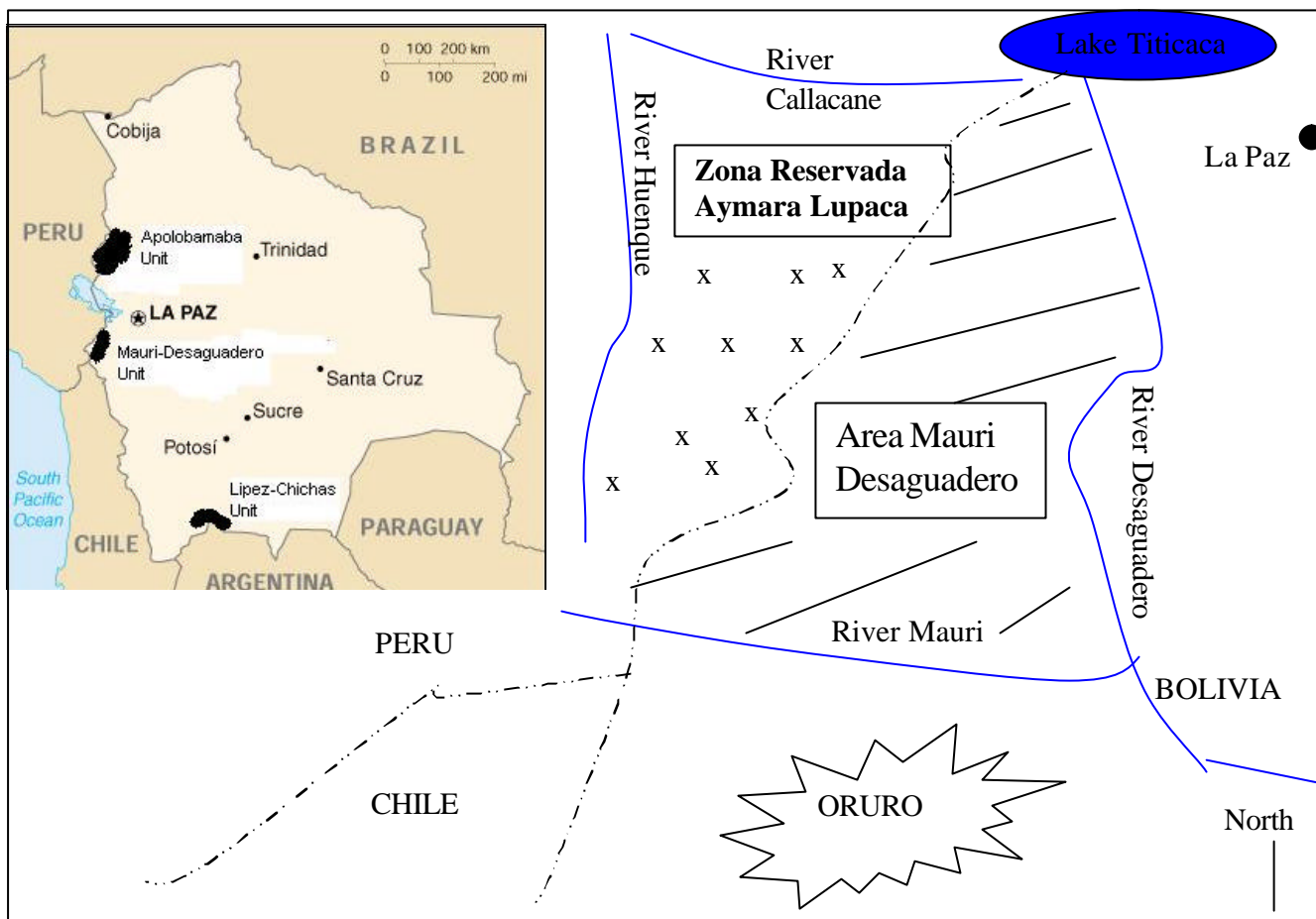
Because of logistics purposes most of the time has been spent in the Mauri Desaguadero area. An area located between the rivers Desaguadero and Mauri, south of Lake Titicaca where capture and shearing is happening in those communities that are interested since year 2000. A breath through data gathered, resulted in more field work to cross check the general assumption that “communities are more interested if they currently get some economic benefits”. Then, crossing the border to the Peruvian territory (Zona Reservada Aymara Lupaca) where commercialisation of fibre takes place and communities share many similarities with Mauri Desaguadero area could provide an interesting scenario to cross check the general assumption that people and communities in Bolivia will get interested in the vicuña shearing programme once they start perceiving economic benefits (Figure 2).

The idea of crossing over to Peru to find out what is happening with vicuña there was very much supported by community members in Mauri Desaguadero area giving a significance to my research. They visualised and understood better my research when I explained to them about making a comparative analysis with what is happening in Mauri Desaguadero area with the Peruvian side, a boundary area that they share vicuñas and where people are related by kinships.

A first visit showed that people’s attitudes and perceptions towards vicuña shearing programme is changing in the Peruvian area since a new management programme has been introduced by CONACS, semi-captive management by fencing vicuñas. The semi-captive management system ongoing in Peru is affecting economic benefits from vicuña fibre because communities have to return the costs of infrastructure for enclosure loaned from CONACS. Experience and research up to now has shown that this semi-captive management system is not sustainable in the long term from the biology of the species and from people’s economies (see Procedural Paper).

The MACS meeting in Arequipa (Peru) provided the opportunity of finding out a bit more about the bio-ecological and socio-economic impacts of the CONACS semi-captive management programme. A second visit to Arequipa (Peru) provided the opportunity of meeting key stakeholders from the vicuña management institutional arrangement in Peru and understand more the commercialisation and economic benefits perceived together with different perceptions and attitudes towards vicuña management scenarios (wild management and semi-captive) in Peru.

Figure 2. Study area



New opportunities for comparative analysis arised from last meeting with Dra Maria Ripa de Marconi. For more field work on a comparative focus she recommended to either return to Lipez-Chichas for more field work, an area with different geographical (mountaineous) and cultural (quechua communities) characteristics or visit Andamarca in Oruro department with similar geographical (along river Desaguadero, in a plain) and cultural (Aymara communities) where the local government has got resources to support vicuña programme and there is pressure from communities in using vicuñas. This issue has become important for them (DGB) since all vicuña has passed into 'Appendix II' of CITES with all vicuña population in a legal position to be sheared by local communities. She also added that because of this they were planning to make a capture and shearing demonstration in this area next year.

IV. Methodology

The Procedural Paper describes the conceptual framework of the methodology used with no preliminary work plan. Different methods and tools were used, in relation to the logistics and opportunities arising. This approach was not accepted by the director of Apolobamba as

'methodology' what made my access to the area difficult in spite of producing a second document with a description of methods to be used as requested (see document Work Plan). Field work was divided in stages between each of which it was possible to think through data collected and improve future work (Table 2).

The first phase was two weeks spent in Mauri-Desaguadero area. Most of the time was spent in Ayllu Choque within the Ingavi province. The first contact was the wildlife warden Mateo Hinojosa who first introduced me to community authorities. I had an introductory letter that was stamped and by them. In this letter it is stated that my contribution to communities will be a report. Mateo took me in his motobike for household interviews. Because I was suspicious about the bias of my information, I borrowed his bike and started going on my own. A couple of times, Marcelino, a young boy of 11 years old accompanied me who helped translate into aymara languages (mostly spoken by old people and women). Because of logistics, my first sleeping basis was Nazacara, a small town at the edge of river Desaguadero, where Mateo permanently lives. The first set of questions asked were open-ended questions on what do people think of vicuña? I interviewed pastoralists living along the river Desaguadero and other scattered houses around the area as well as members from Nazacara town. After a week, I got to know the place and people and they got to know me better what made communication more fluent and easy. This also permitted to understand better how people in the area are social and territorially organised. This information was then cross-checked during capture and shearing event because I had got to the position of recognising individual people and names.

The two days visit to Apolobamba area permitted to understand better how the institutional arrangement set up to manage vicuña is organised because the members from the organisation are more active and stimulated probably because 1) the area is a protected area institutionally supported SERNAP and 2) the vicuña programme is technically and financially supported by the Spanish Cooperation. I could meet and talk to the president (member from the community) of the vicuña regional association and other community wildlife wardens. I could then realise which are the stakeholders that I needed to contact in Mauri-Desaguadero.

The second field visit to Mauri-Desaguadero area lasted four weeks. The first two weeks were spent trying to understand the social and territorial organisation and finding out NGOs and other organisations working in the area by assisting to community meetings, talking to wildlife wardens, community authorities and key informants within Ingavi, J.M. Pando and Pacajes provinces. The same set of questions were asked. Some questions were also asked on the other side of river Desaguadero where, at the time of the survey, vicuña was strictly protected (under Appendix I) with no access to communities to the shearing programme. Because of logistics, the first contacts made were the wildlife wardens in each site where I could spend the night. During the day I was on my own and talked to any person that crossed on my way and got also information about vicuña. The objective of this second visit was to find out how the vicuña management structure works out in the field, if representatives still exist and how well known they are by other community members. By chance (without preliminary knowledge about their existence), I came across wildlife wardens and other people involved in some way or other with vicuña.

The two other weeks, I joined the DGB team (two technicians that came from the offices in La Paz and the 16 wildlife wardens from the whole area) for capture and shearing in those communities that are interested. The event started with communities within Ayllu Choque. Because the DGB was delayed two weeks because of no budget from the Ministry for fuel (bureaucracy) some communities got disinterested with failure at last moment. The DGB truck transports the fish nets to all communities, they have to find the way to transport posts that are shared between them. The capture and shearing event lasts two days in each community, the first day is to construct the capture enclosure, the second day to capture and shear vicuñas. I try to make the same set of questions both days. The 16 wildlife wardens and 2 technicians from DGB are always present. I count the people present by gender and age. To guide and support my field work I designed the following sequence of questionnaire (Table 4).

Table 4. Guiding questionnaire during capture and shearing event

Entering questions	In depth questions
1. How did you know that this event was happening? Which was your initiative to come? Is it the first time? (if the case, why didn't you come last time?)	What would you be doing now instead? Which is your role within your household and community? (record gender and age)
2. Are you interested in vicuña? What are you interested about it?	Who talked for the first time about vicuña? When? Where would you put vicuña in a ranking of importance in relation to other resources/activities? (draw a line on the floor to visualise better the question)
3. What do you think about the capture? How would you do to improve it?	Why some communities make 'ayni' (help each other) and other not?
4. What do you think about the shearing? How would you do to improve it?	How do you think benefits from the fibre are going to be divided?
Why vicuña can't be killed? Why can't you breed it in captivity? Why does the fibre is not sold yet?	

One of the apparent disincentives about participating in this event was the lack of understanding that the programme is built on 'trust on expected economic benefits'. The idea of crossing over to the Peruvian border to see people's attitudes towards vicuña in an area where there is economic benefits started to arise. I then decided to visit the Reserve Aymara-Lupaca in Peru where communities perceive real economic benefits from the programme. Unfortunately, I couldn't spend as much time as I wanted and I was surprised to find out that people are getting disinterested in the programme (see preliminary results).

The two following weeks I joined the DGB team with capture and shearing in other communities within the Marka San Andrés de Machaca. Because of my frequency in the area, I got people to know me and it made me also easier to recognise people. I could then start, visualising their individual spatial and temporal pattern of activities. This means that I started to understand that people have many households, many activities, many members amongst which they share these tasks.

The week spent in Arequipa for MACS meeting permitted to share some first results and discuss more about this issue of getting a representative sample of peoples' livelihoods (Appendix II). It also provided the opportunity of making contact with NGO CONATURA supporting the vicuña management programme in the wild and government officials in

CONACS to cross check some preliminary information. I was then invited to a regional meeting of vicuña fibre committee in December. This meeting coincided with capture and shearing event in Pacajes province but I decided to take the opportunity of getting information from Peru.

During my field work I found myself in many situations in which I had to choose between two equally interesting choices that were in some way or other conditioned by different factors but still make you think and rethink “if I would of gone to”

V. Preliminary results

The three research questions are interrelated and results are still mixed up. MACS meeting permitted to produce a stakeholder mapping for Bolivia (Table 5). The roles and agendas of the different stakeholders (social actors and institutions) identified in previous table area described in Table 6. Information for Peru can also be available.

Table 5. Stakeholder mapping in Bolivia

Scale	Technical assistance	Financing	Production	Auctions/Selling/Buying/Processing	Patrolling	Protection/Control/Monitoring

Local	AMINA	AECI (1 technician)- SERNAP (director of reserve) ICIB	1998: University of Oxford & National Museum for Natural History Since 2000: AECI (Programa Araucaria) 2002: ICIB (SNV-FAP Holanda)	Local communities through ARMVA	Expected for the year 2003	Park wardens (SERNAP employees) Local communities (indirectly involved) Community wardens CMV UMV	
	Mauri-Desaguadero	DGB (2 technicians)	DGB (2 technicians) Local communities (through popular participation)	Local communities	No plans yet	Community wardens CMV UMV wildlife wardens (DGB employees) Local communities (indirectly involved)	
	Lipez Chichas	DGB (2 technicians)	1998: GTZ (Programa Proquipo) Local communities (through popular participation)	Local communities	No plans yet	wildlife wardens (DGB employees) Local communities (indirectly involved)	Prefectura
National	DGB SNMV Prefectura International agencies	1999 & 2000: UNEPCA	SNMV	SNMV DGB		DGB Municipio Prefectura	SNMV DGB MDSMA/SN RNMA MUNICIPALITY Prefectura DGB
International					USA market		CITES-Traffic

NB: Does not include illegal trade. Bolivia hasn't commercialised fibre yet.

Table 6. Roles and agendas of different stakeholders

Stakeholders	Agendas
Park wardens	Employees of SERNAP. Responsible for control and monitoring of vicuña populations within protected areas.
DGB technicians	Logistics and technical support during capture and shearing event in Mauri Desaguadero and Lipez Chichas areas.
Technician (AECI)	Logistics and technical support during capture and shearing event in Apolobamba area.
CMV or UMV	Responsible of the vicuña custodianship. Informs periodically on vicuña. Organises the community warden system and propose community wardens within the management area. Reports frauds. Presents and executes the Management plan. Supports the Vicuña National Programme
Community wardens	Elected by the CMV and UCMV and approved by the department authority. Ad-honorem service also responsible for control and monitoring of vicuña populations within protected areas.
Wildlife wardens	Employees of DGB. Responsible of control and monitoring of vicuña populations within each non-protected unit of vicuña conservation.
DGB	Approves the vicuña Management plans with previous revision from Prefectura Records the unique registry of vicuña and emit the respective certification Controls national census of vicuña, in coordination with the department authorities and provides official results Promotes the community capacity building for the management and conservation of vicuña and exploitation of its fibre Coordinates and executes the PNCV with relevant institutions Facilitates the interchange of experiences at national and international level with institutions related with South American Camelids Motivates the basic scientific research applied to vicuña management and sustainable use Responsible of stocking the fibre Executes the public auction for the transformation of vicuña fibre in cloth Authority responsible of vicuña Legalises activities related to vicuña Approves and executes the Vicuña National Programme Promotes Andean communities capacity building for management and conservation of vicuña Makes the public auction for the fibre transformation in cloth Controls that benefits of fibres goes to Andean communities Administrative authority of CITES in Bolivia
International agency (UNEP/CA)	Between 1999 and 2001 it financed the capacity building for control and warden activities, capture and shearing, dissemination of the RCMV and the organisation of ARMV in Apolobamba, Norte Pacajes, Paka Jaquis, Machaqa and Sud Lipez
PREFECTURA	Controls the cumplimiento of terms and conditions established in the contracts for vicuña use Authorises and supervises its utilisation (capture and shearing) Evaluates the Management plans and its monitoring until execution Coordinates with the municipios its participation and support to the Nacional Programme Approves the solicitudes and subscribes contracts for exploitation of fibre with the communities managing vicuña with the previous approval from the national authority
MUNICIPALITY	Periodic census of vicuña Authorises the killing of old or sick animals and provides a certificate Monitors and controls the execution of the Reglamento 24.529 with other norms Supports the Nacional Programme for vicuña conservation
ARMV	Guarantee the equitative distribution of the benefits in the communities managing

Stakeholders	Agendas
	vicuña -Coordinates capacity activities, management and exploitation amongst communities managing vicuña
SNMV	Unique responsible to subscribe the contract with textile enterprises Represents the communities managing vicuña

The social and territorial organisation of people in Mauri-Desaguadero area can be easily visualised with a political boundary that overlaps the traditional organisation of aymaras that has been reinvigorated by a law. For example, Nazacara small town is located within Nazacara community, one of the six communities within the Ayllu Choque. The Ayllu Choque forms part of the six ayllu within the Marka San Andrés de Machac. Each community, ayllu and groups of three ayllus have got an authority called mallcu originario, mallcu subcentral and jacha' mallcu respectively. It is one of the many services to the community renewed at the end of each year. Community members will all at some point in their lives provide this service. They name 'community' the territorial boundaries under responsibility so with their definition communities can have different dimensions. Little towns within the Marka are small clusters of houses with no territory. These houses belong to people from communities around that use this space temporarily or permanently mainly for commercial purposes and markets. For example, many women in Nazacara cook food for the buses that come from La Paz.

When I asked about vicuña people immediately list all the damage it represents to them: 1) it eat crops (potatoes and cebada), 2) it transmits scab to livestock, 3) bathes itself in livestock baths. They do not know how to control it and thought I was coming to give them advice on how to deal with vicuña. When I went to interview alone, the second complain was around the unfairness of having wildlife wardens. Wildlife wardens are community members that have been elected by community members at the beginning of the vicuña management programme.

Wildlife wardens are community members that have been elected by communities themselves at the beginning of the vicuña management programme (in the 80'). Mateo, for example, has been the first wildlife warden in the area. They perceive a monthly salary (600 Bolivianos) and their responsibilities are to control and monitor vicuña population with a census of animals on a monthly basis. There are 37 employees of the DGB within the vicuña distribution area outside protected areas of which 16 are responsible of the Mauri-Desaguadero area. The problem was expressed around the question "what do they do to perceive a salary that others in the community can't do?"

The different members within the institution for managing vicuna are not active. In the field it was very difficult to contact these stakeholders because nobody knew about their existence and wildlife wardens do not have any relationship with them. I realised, a bit late, that I should of got a list of names from the DGB agency to facilitate my work in the field. One of the reasons why I didn't get this information is because relationships with DGB technicians at the beginning of my research were not good and had to start fieldwork without any logistic or technical support from any institution.

Most of the people say that the main reason why these representatives are not active is because there is no commercialisation yet. Some communities have been participating for three years without receiving any economic benefits yet. This generates a suspicion amongst the different local stakeholders. All vicuna population in Bolivia has recently passed into Appendix II of Cites (November 2002) and all communities within the vicuna wild population distribution are potentially available to make a sustainable use of the species. This creates a lot of expectations and pressure from the communities themselves.

Along the wildlife wardens, community wardens have also been elected on ad-honorem basis but do not cooperate in the wildlife wardens' duties such as vicuña monthly census because there is no economic incentive they say. In Mauri Desaguadero wildlife wardens are called "vicuña pastoralists" and people are very suspicious about their activities. Especially during capture and shearing event when the two technicians from the DGB come from La Paz and form a closed team with the 16 wildlife wardens that come from all communities within the area to participate and work in all captures. Another issue raised was "why does DGB take away from communities the fibre shorn to La Paz?" They are very suspicious about the government programme. People do not understand either why it is forbidden to kill vicuña.

In general, two types of answers were given around two issues 1) the disagreement with the existence of wildlife wardens and the 2) lack of information about the capture and shearing programme, viewing vicuña as a damage for their livelihoods and wanting to control and manage vicuña in the same way as livestock.

During capture and shearing event different answers were given. Regarding the question of motivation to come to the event some said because of personal interest, curiosity to see, touch vicuna or experience the shearing. Others just said they were told by the community authority that they had to come.

Regarding the question of expected benefits, many insisted that the damage vicuna does on agriculture and livestock ranching will continue if vicuña is left free. They would like to manage vicuña by growing special spots with grass to keep them in one place as they do with domestic livestock. Unfortunately, this management is not compatible with vicuña's behavioural ecology that have patterns of activities covering an area of at least 10km.

In relation to the plans for distribution of benefits, people from communities organised as individual communities for the capture and shearing event said that distribution should be per individual that participated. People belonging to those communities within an ayllu that get together to collaborate in the capture and shearing think that the initial benefits should be reinvested into infrastructure for the capture and shearing equipment.

Regarding legislation, they have heard about vicuna that is protected and killing prohibited. Some are scared because it is said you go to jail while others laugh at the word 'jail'. No one could tell me why vicuna has been protected and why killing is not permitted.

Poaching activities is a well known fact in Bolivia and Peru. Most of the time it is done by people from outside the region. The black market in the Alto of La Paz (16 de Julio) sells vicuña fibre that comes from Peru. The prices are 1000 Bolivianos/Kg. They buy it to make

blankets sold for 3500 Bolivianos weighing 2 kilos and a half approximately and sold to some other people that export it. This is a theme that I would like to investigate a bit more.

In Aymara Lupaca reserve on the Peruvian side, in spite of perceiving economic benefits from the programme people seemed to be disinterested. The money is used to pay back to CONACS the high costs (23,000 dollars) of the infrastructure from the vicuña corrals. This result could represent an interesting finding to start finding out where are those social elements within communities that would support the viability of the wild management system. Most people answered “corrals are not convincing”.

VI. MACS meeting

The meeting was held between 24-28th of November 2002 in Arequipa, Peru. The work achieved during year 1 within each of the five work packages were presented on Monday 25th. The financial reporting, discussion on Bolivian situation and strategic planning of each work package for year 2 were reported on Tuesday 26th. Ing. Domingo Hoces (CONACS member) presented the vicuña situation in Peru and Dr Ian Gordon outlined future MACS planning. In the afternoon, a visit to Inca Tops (Fibre processing enterprise) provided the opportunity to understand how a fibre mill producer works. On Thursday 28th, the group was divided: some went for a trip to Aguada Blanca; others (that included me, Javier and Bibiana) went to a vicuña chaccu with the NGO CONATURA to Tambo Cañahuas community. Friday 29th some people returned back home, some others continued the trip up to Machu Pichu and I started going back to La Paz with a stop in Puno to interview members of CONACS and NGO EDAS. Some parts of the MACS meeting were tape recorded.

1. Livelihood analysis

I was responsible but thought I was not going to be able to provide much information on this because it is not included into my research questions. Whatever, from a long discussion with Kristi Anne the idea of providing in depth information from three households arised. It was agreed that the desired output for next MACS meeting in 2003 is producing a livelihood mapping showing the outcome of different combination of variables. This information could be based on a in-depth analysis of two to three rural households representatives of the study area.

The set of common questions produced in coordination with Gaby were included into the semi-structured interviews. A preliminary analysis can be made from Mauri Desaguadero area only. The aim is to provide qualitative information and a basis to compare captive management in Argentina and wild management of vicuña in Bolivia (Table 7).

Table 7. Set of comparative questions

Vicuañas under Appendix II of CITES			
Country scenario: Management of vicuña in the wild Case study: Bolivia (Nadine)		Country scenario: Management of vicuña in captivity Case study: Argentina (Gaby)	
Individuals located			
within WM activities	outside WM activities	within CM activities	outside CM activities
Question 1: Who is interested and not interested in vicuña? Why?			
Question 2: Which is the value/importance of vicuña in relation to other needs, priorities and or opportunities? Why?			
Question 3: Which is the attitude towards its conservation? Why and how to conserve vicuña? (look at policy implications)			
Question 4: Which is the attitude towards its management? Why and how to manage vicuña? (look at poaching activities)			

Acronyms: WM: Wild management; CM: Captive management

2. Stakeholder analysis

Desmond presented the stakeholder mapping with preliminary data from four countries (example: Table 5). He explained how a horizontal analysis can provide information on who (either a social actor or institution) is more involved; a vertical analysis can provide information on whether the management of vicuña is a top-down approach and between countries.

He also described Gaby's results and analysis of vicuña breeder ranchers in Argentina. Some of the issues raised during the discussion was "If economically it is not worth doing it, why people continue?".

The set of common questions prepared together with Gaby has not been presented. My results on who is and not interested in vicuña and why has not been analysed yet. I have a problem on how to present this data. The information on the role and agendas (Table 6) of the different stakeholders involved was taken from secondary sources.

3. Alternative scenarios

Desmond presented the approach used and results for the four countries. The mapping for Bolivia is presented in Table 8.

Table 8. Mapping of alternative scenarios in Bolivia

How?	Where/Who?								
	Puna/Altiplano			Outside Puna			Other country		
	LP	PC	Gov.	LP	PC	Gov.	LP	PC	Gov.
Captive management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wild management	v	N/A	v	N/F	N/F	N/F	N/F	N/F	N/F
Ecotourism	N/A	N/A	N/A	N/F	N/F	N/F	N/F	N/F	N/F
Hunting	N/A	N/A	N/A	N/F	N/F	N/F	N/F	N/F	N/F
Nil	v	v	v	v	v	v	v	v	v

Notes: LP: Local native people; PC: Private company; Gov: Government; v: existing scenario; N/A: Not available. Potentially feasible scenario that is not taking place because of present laws or political impediments; N/F: Not feasible. Unrealistic scenario.

The category of “hunting” was discussed and agreed that it should be reclassified under two categories: “culling” and “trophy hunting”. Jane Wheeler referred to her paper on “Diversidad Genética y Manejo de Poblaciones de Vicuñas en el Perú” to support the idea that “trophy hunting” can be considered as a possible management scenario of vicuñas in Perú.

A description of the management scenario in Bolivia was illustrated with slides (Figure 3).

Andean communities that are responsible of the vicuña population custodianship have to ask for the creation a basic community management area (AMC) by presenting the following documents:

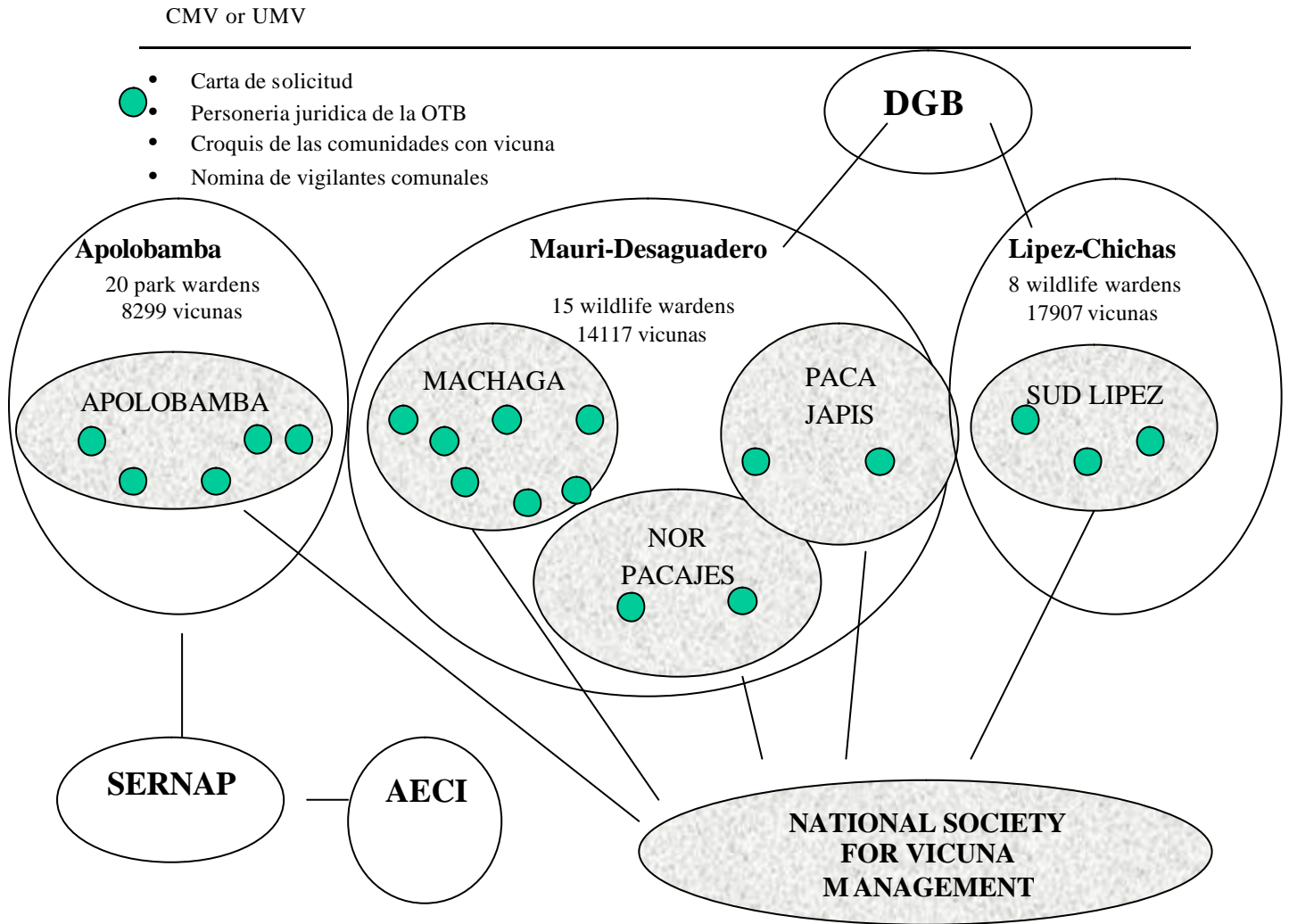
- Carta de solicitud
- Personeria juridica de la OTB
- Croquis de las comunidades con vicuña
- Nomina de vigilantes comunales

Following the presentation of these documents, the National authority declares Community Management Area (AMC) to the territory with vicuña natural population under custodianship of one (CMV) or the association of two or more communities (UMV). These Community Management Areas with the assignment of representatives will conform the Regional Association of Vicuña Managers (ARMV).

Monitoring of wild vicuña populations area carried out by wildlife wardens in Mauri Desaguadero and Lipez Chichas pilot areas and park wardens in Apolobamba pilot areas. They provide a monthly census report. An annual national census is carried out between June and August. They have to also report on poaching activities. If community wardens are interested and active they also participate in some of these activities.

The analysis of this data provides valuable information on the daily patterns of activities of local vicuña populations (sites for eating, drinking and paths where they escape) at the same time than information about distribution and density of animals. This allows to determine which is the best site for vicuña capture and orientation of the capture enclosure. This site has to also be topographical accessible for logistics and labour management.

Figure 3. Institutional structure for vicuña management in Bolivia



Capture enclosure (manga de captura) are structures for enclosure and capture of animals. It is formed by Eucaliptus sp posts of 3mts and 2.5 mts length and 10cm width that are unified by a fish net (type Raschell) of 200mts length and 2mts width. This material is installed in form of “embudo” which permits the “arreo” of animals to a central corral. The construction of the enclosure requires digging of holes of 40cm approximately for 170 to 200 posts and then knitting up the fish net. In Mauri Desaguadero most of this task is carried out by wildlife wardens and done on one day.

The following day is the capture of vicuña. The two technicians from DGB organise participants (wildlife wardens and community members) in a strategic way to make a human chain or movable barrier (“cercos móviles”). The type of “arreo” is by foot and with the help of coloured flags tied to a string “banderols” that help to fill up spaces between two people and act as another “cerco móvil”. Animals are slowly chased towards the corral. Some can escape during this procedure.

Once animals and humans arrive to the corral, capture consists of catching the animals, one by one, generally between two people, and the legs are tied up following the same traditional method as domestic animals. Animals are sexed, offsprings younger than two years old are kept together, females are first sheared.

The animal to be sheared is put lying on its side on top of a mattress with at least two people handling each. The shearing is partial (costillar y lomo), because la braga of the extremities and neck are fibre with medula that area not interesting to the textil industrial. Scissors are provided by the DGB technicians (a set of 15). An animal to be sheared takes between 15 to 30 minutes. Any injury is cured with “Iodo”. If the animal has got “sara” it is injected with Ivomex. Those animals ear-tagged from last year are recorded. The fibre is put into a plastic bag. Once sheared, females are first released with offsprings. Males are released at last.

During the shearing activity, some participants undo the capture enclosure. A break for a community lunch is made. The community provides food and drinks to all participants. The fibre is weighed, one plastic bag corresponds to one animal, on an electronic balance brought by DGB technicians. The weight is recorded by all wildlife wardens and interested community members. Then everybody does the counting and the final result is recorded in two official papers: the Community Acta and an official paper for the DGB with stamps from community authorities. The fibre is kept in big blue bags where the name of the correspondent community is recorded and taken to DGB offices in La Paz where it is officially stored.

4. Economic aspects

Economic aspects include a market analysis (refers to estimating realistic prices for fibre), predict expected earnings (refers to earnings in economic terms), assess alternatives for collection and selling the fibre (refers to earnings in technical terms), potential for adding value at different levels (refers to viable alternatives).

Desmond presented these tasks as a focus for discussion and suggestions were made that a reliable source of information could be information provided from auctions. It was said that next Peruvian auction should be held in March 2003.

In Bolivia, they are especially interested in the market analysis because the plans are to sell the fibre next year but they still do not know which are going to be the buyers. The Academy of Sciences in La Paz has contracted a consultancy service to study the commercialisation of vicuña fibre for next year. The consultant was called Guillermo Pumont and he gave the following explanation: “The vicuña is gold but much more than gold because it is a renewal natural resource that will remain from one generation to the next. I arrived to the following recommendations:

- 1) The Regional Association for vicuña management has to be reinforced

- 2) Maintain conservation policies to allow vicuña population to increase even more
- 3) To sell the fibre, I recommend that the regional association should associate itself with textile enterprises. I only recommend selling fibre as crafts and finished goods that will permit an added value to it. I see this, as the exploitation of a product with an increase in benefits (added value) and beneficiaries (more people involved in the productive chain)”

Dr Armando Cardoso (Academic director of ICIB) confidentially said to me “I think it is a ridiculous proposal the one made by that economist, I would like to ask him how can you be reassured that fibre will be legal? I can see that by making crafts to the difference of making cloths with Vicuña Bolivia printed in a little label you can easily take it off and put it in another material. Another issue is that the legislation states that fibre can only be sold as cloth but there is not enough fibre to sell to process in a mill (200kg).

5. Identify and assess existing policies

A mapping of policies for four countries was presented (Table 9).

Table 9. Legal mapping in Bolivia

Scale	Local	National	International	Foreign
Land tenure	Law 1.715/1996 (INRA)	Law 1.715/1996 (INRA)		
Indigenous rights	Law 1551/1994 (PP)	Law 1551/1994 (PP)		
Wildlife resources (vicuña) ownership	DS 24.529 (RMCV/1997, artículo 1).			
User group/s	DS 24.529 (RMCV/1997, artículo 3)	DS 24.529 (RMCV/1997, artículo 13)		
Vicuña management (conditions)	DS 24.529 (RCMV/1997, artículo 14; artículo 16, artículo 23) RA 027/2001	DS 24.529 (RCMV/1997, artículo 24)		
Poaching		DS 22.461/1990		
Movement live animals/products		DS 22.461/1990 DS 25.468/1999		
Commercialisation	DS 24.529 (RCMV/1997, artículo 34-38)	DS 24.529 (RCMV/1997, artículo 15)	CITES, 1997, 2000 CV 2002	
Exports				
Benefits of use	DS 24.529 (RCMV/1997,			

Scale	Local	National	International	Foreign
	artículo 3)			
Reserve creation	1939 (PN Sajama, Oruro) 1972 (RN Ulla Ulla, La Paz) 1973 (RN Eduardo Avaroa, Potosí) 1974 (RN Yura, Potosí) 1975 (RVS Huancaroma, Oruro) 1977 (RB Ulla Ulla, La Paz)	1980 (Areas de Proteccion de Vicuna, La Paz, Oruro, Potosi, Cochabamba) Law 24.781/1997 (RAP)		
Conservation		Law 1255/1991 Law 1333/1992 (LMA)	DS 16.464 (CV/1979) DS 17625 (CV/1980)	

The Supreme Decree (DS 24.529, May 1997) authorises and makes the RCMV viable with the objective to conserve the species, within the national policies framework and authorise the utilisation of fibre under a number of conditions:

- The utilisation must be from **shearing of life vicuñas** to obtain fibre which commercialisation will be oriented to the issue of **benefits for the Andean communities** that live with the species, respecting the biodiversity conservation. Vicuñas populations must remain in good conditions to be used in the future.
- **Shearing of life vicuñas can only be practised in** wild populations found in the selected pilot areas: **Ulla Ulla, Mauri-Desaguadero and Lipez-Chichas.**
- The utilisation of the species will strictly follow the conditions established under the RCMV/1997.

The Reglamento para la conservación y el manejo de la vicuña (RCMV/1997) establishes that:

- **Vicuña (*Vicugna vicugna*) is a wild species**, and a natural patrimoine, **State-owned**, following the established in the Political State Constitution and country laws.
- The state gives **vicuñas custodianship to Andean communities**, to protect and allow recuperation of vicuñas populations living within their territories.
- Custodianship doesn't mean the cessation of the state property rights on the vicuñas populations.

Dr. Maria Ripa de Marconi (Director of DGB) said that RCMV/1997 should have the following modifications:

- Modify article that mentions national auctions as the only way of trading fibre. The modification of this article is to allow the Vicuña Regional Associations (ARMV) to associate and negotiate directly with private enterprises for fibre trade.
- Modify article that mentions that fibre should be sold as finished cloth. This modification is to also include the sell of finished goods as crafts.
- Focus on commercialisation taking into account the origin of the product and not necessarily the quality (for example: how many families are going to be beneficiaries?)

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- Custodianship doesn't mean the cessation of the state property rights on the vicuñas populations.

Desmond explained that the column "foreign" refers to any law outside the region that could affect vicuña (example: US Law). The dynamics of this table was highlighted:

1) Recent change of international law from CITES (example: all Bolivian population has passed now to Appendix II); 2) Bolivia is planning to modify some articles from Reglamento de la vicuña 1997 (for example, article 15 only permits selling of fibre as cloth but the modification should also allow selling of rough fibre and crafts); 3) Domingo Hoces highlighted the contradiction between laws within Peru that makes possible two contradictory options

VII. Future work

Field work up to now has been dynamic in space (study sites) and time (change in policies). At this stage, there is a need to decide which issues should research focus on?

1. Study area

Field work up to now have shown that the limits of the study area are still in a dynamic and ongoing process conditioned by the detective nature of data been gathered (see section II). There is a special interest in comparing different sites within a country located in international boundary areas. Boundary areas are areas of conflict with a common resource such as vicuña where policies play an essential role. Argentinians say that “Bolivian park rangers get into the Argentinian Puna to take vicuñas to their side” and Bolivian say that “Peruvian people shear Bolivian vicuñas when they cross to their side”. The interesting issue about this is that the conflict is also perceived across communities and territorial boundaries within the same country (observations from Peru and Bolivia). Other variables can be:

- 1) Political and community boundaries overlap
- 2) The viability of the vicuña management programme depends on a) the financing sources and access to institutions and b) social and territorial organisation (social features are independent to the potentiality of the area)
- 3) The role of vicuña to livelihoods also differs between sites
- 4) A measure of degree of interest is through the degree of cohesion and support between communities to manage vicuña
- 5) The participation is also conditioned by their livelihood activities

The study areas covered up to now have been:

- Two weeks during capture and shearing in Lipez-Chichas area.
- Nine weeks before and during capture and shearing in Mauri-Desaguadero area.
- Two days for Management Plan presentation in Apolobamba area.
- One week in Aymara Lupaca reserve in Peru.
- One week in MACS meeting in Arequipa.
- Three days in Vicuña stakeholders meeting in Arequipa.
- Seven weeks in La Paz: 1) breath of data gathered; 2) secondary data; 3) permissions for field work; 3) writing report.

Agenda of activities available for future field work can be as follows:

- January/February: 1) meeting of vicuña stakeholders in La Paz; 2) writing up reports for communities.
- February/March: 1) visit black market; 2) discuss report with communities in Mauri-Desaguadero area; 3) visit Aymara-Lupaca.
- March/April: 1) visit Oruro; 2) visit Lipez-Chichas; 3) Meeting in Arica with vicuña convention.
- May: 1) invitation to capture and shearing event in Aymara Lupaca area and Picotani community; 2) meeting of vicuña stakeholders in Lima; 3) meeting of regional vicuña stakeholders in Peru
- September/December: season of capture and shearing in Bolivia and Peru
- October/November: 3rd MACS meeting in Argentina.

There is an urgent need to define next steps for field work. The possibilities I can see are two: 1) go back in March to UEA and make a second field visit combined with 3rd MACS meeting during capture and shearing event or 2) prolong my field work until end of May (call it end

of field work) and then, go back to UEA to start writing, return here only for 3rd MACS meeting. I can find time to sit, think with the possibility at hand to cross-check or readjust that finding. From my point of view, I will feel much more confident with my data if I assist to those stakeholders meetings, cross check finding with Lipez and/or Oruro and find out more about illegal trade. It is easier from logistics, contacts and networking purposes because all these have been initiated and my ongoing presence makes me obtain more reliable information.

2. Change in policies

A number of real changes in policies have happened since field work started:

- 1) Since November 2002, international legislation (CITES) have permitted the reclassification of all vicuñas in Bolivia under Appendix II permitting capture and life shearing of animals by local communities.
- 2) In September 2002 a first draft of the first Vicuña Management Plan was officially presented during a ceremony with communities of the protected area Apolobamba. The document contains: a) recommendations to reinforce vicuña control; b) zonification; c) vicuña monitoring; d) commercialisation for vicuña monitoring

A recent resolution from the government is to make a big meeting with key community members (community authorities, wildlife wardens and responsible from the vicuña management organisation) from the three pilot areas that have been shearing vicuña since 1998 by the end of 2002 to decide whether the fibre should be sold as rough product with an expected value of 200 US\$/Kg or as a finished good (cloth) with an estimated value of 500US\$/Meter of cloth. If there is a strong pressure from communities for receiving the economic benefits the fibre is going to be quicker sold as rough product.

To make the commercialisation an actual fact the following articles from the National legislation should be modified (interview with Maria Ripa de Marconi):

- 1) Article that specifies about auctions should allow associations/committees managing vicuña to directly associate with a private enterprise without government intervention.
- 2) Article that specifies that fibre should be sold as final cloth should allow selling of finished goods (crafts).
- 3) Bolivia has never been recognised because of quality so it is suggested to focus on new markets such as based on origin of fibre (for example: how many families are going to be beneficiaries)

3. Poaching and illegal trade of fibre

Poaching activities is an ongoing and real fact and Bolivia stands as the principal illegal market to trade illegal fibre from other countries such as Peru or Argentina. Detective work on this issue started when Gabriela Lichtenstein (MACS member working with vicuña breeding ranches in Argentina) got the following information: “Members of the border police in Argentina believe that vicuña fibre is smuggled into Bolivia and exchanged by coca leaves and rifles”.

I could find out and cross check the following information: people living along the river Desaguadero train their dogs to chase vicuñas towards the edge of the river where they start

biting their back until they die. The leather and fibre is peeled and the farmer goes and reports the wildlife warden about the dead vicuña by the river. Wildlife wardens write up in their reports that vicuñas have died because devorated by foxes.

Community members do not possess guns or rifles but police does. A wildlife warden in Peru told me that some chilean people working in a mine came together with the police to kill vicuña. He couldn't do anything about it.

It is also well reported and investigated without beeing capable yet to make a legal process that from Juliaca (Peru) a team is organised to kill vicuñas. This fibre is stored in Moho (frontier with Bolivia) and then taken to the 16 de Julio market in The Alto of La Paz where it is sold as row fibre.

I was travelling with a woman from Santiago de Machaca (within Mauri-Desaguadero area) in the bus on my return to La Paz and she unfolded from her blanket vicuña wool. She was threading and told me that bought the row fibre for 1000 Bolivianos/Kg in the 16 de Julio Market. That fibre, she said is dirty and sometimes humid so it weighs more. They say, that it is brought from Ulla Ulla (Ulla Ulla is located close to Moho). She needs 2 kilos and a half for making a vicuña chalina (sort of chall) because a woman from Calacoto (a rich neighbourhood in La Paz) asked her to make 20. She then added it is probably to export, don't you think? She also told me that many years ago she went to Argentina and sold already made chalinās to the Bolivians living in Buenos Aires for 4000 Bolivianos. They need this garment for the annual feast. She said that argentine fibre is also sold in La Paz but it costs less because it is whiter. This is due to the fact that the other vicuña subspecies (Vicugna vicugna vicugna) is whiter than the andean northern subspecies (Vicugna vicugna mensalis).

I also had the opportunity of participating in the annual feast in Santiago de Machaca and saw that every single dancer had a vicuña chalina on their sholders.

Lots of other data has been gathered but not yet analysed but also would need to get more information. Recently, 90 vicuñas have been poached near Andamarca (Oruro department). A short visit to the site could gather more data.