

# ***The future of the High Plateau and Andean Central Valleys products/Textils- Camelids***

## **Final Report**



ORGANIZACIÓN DE LAS NACIONES  
UNIDAS  
PARA EL DESARROLLO INDUSTRIAL  
Subdivisión de Promoción de  
Inversión y Tecnología



Fundación OPTI

## **A FUTURE VISION: CAMELIDS FIBRE IN 2030**

When the prospective study about camelids' fibre in the Andean region in 2010 ended, the situation of both fibre and producers was critical. The camelids fibre was little known in the big world markets and its quality, which has been decreasing over the years, was not in a competitive situation with other high quality fibres.

The deterioration of the quality had to do with various factors but was mainly because of high hybridization and lack of genetic control, the absence of quality rules, fibres were bought by its weight, the rough life in the plateau, the absence of infrastructures, low productivity and much more.

If the countries of the region had failed to react in time, in a few years the production of fibre in Andes would have been reduced to a mere testimony. In those years, Australia and Canada were important future producers of camelids' fibre.

Fortunately, the institutional agreement held by Argentina, Bolivia and Peru to improve camelids fibre quality and its international recognition, made it possible to create the Andean Camelids Regional Observatory based on a Regional Secretary office for Andean Camelids, which started working in 2011. That allowed starting actions at a regional and national level, and fibre was sold by its quality, establishing quality control and standardization mechanisms, to create a value chain according to the social responsibility and sustainability and to offer to the market high quality and design artisan products.

These actions, taken in time, created the present reality in which camelids fibre have a great advantage towards the ones from goat and sheep. In the Andean region, the camelid breeders have enough communication, health and educational infrastructures, they have stockpile centers with laboratories where they can measure the quality of the fibre and they sell it according to its quality. The migration to the city has diminished and the per capita income has leveled in relation to the ones obtained in other activities.

Nowadays, the Andean countries are also known in the international markets for being the producers of a renowned fibre and it is considered by the most prestigious brands as an essential raw material for their products.

The craftsmanship of the region has made significant achievements and it is now a prosper industry with a very important added value.

In any country of the world, wearing a piece of camelid fibre is a distinguishing factor.

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# 1. Introduction

ONUDI started in 1999 a programme for the development and application of the prospective in South America and other regions of the world.

As a consequence of that programme, between 2004 and 2005 a first regional exercise of prospective was done over the production line of the fishing industry in the Pacific Ocean coast in South America, in which Colombia, Ecuador and Peru were involved.

In 2006 a second regional study of prospective was started over the High Plateau products and the central Andean valleys, which considered the prospective of the medicinal plants in that area with Bolivia, Ecuador and Peru's participation.

The success of those exercises encouraged them to make a new prospective exercise in the same area over the future of the camelids-based fibre from the Andean region with Argentina, Bolivia and Peru's participation whose general objectives were:

- Upgrade and improve the native Andean economy
- Identify the risks and opportunities that arises in the improvement of the competitiveness
- To establish a knowledge network
- To reinforce the interaction, communication and cooperation between the stakeholders of the innovation systems at a regional level.
- To promote the Sustained Development and the Green Industry

During the exercise, experts meetings were held in Arequipa (Peru) on the 12<sup>nd</sup> and 13<sup>rd</sup> of May 2010, in La Paz (Bolivia) from the 26<sup>th</sup> to 28<sup>th</sup> July 2010 and Buenos Aires (Argentina) on the 10<sup>th</sup> and 11<sup>st</sup> November 2010.

## 1.2 Study objectives and axes

The main objective of this study is to establish a roadmap with actions for an improved production and marketing of the camelids-based textile and to contribute with that to an economical and social development of Andes.

The specific objectives of the prospective study are:

- To help the development of Andes and to improve the living conditions of High Plateau camelid breeders
- To reinforce the cooperation and communication between fibre producers, industrialists and artisans.

Following these objectives the study is based on the following axes:

- ***Improvement of the living and production conditions of High Andean camelid breeders, development of ties between the farmers and a product with greater added value.***
- ***Coordination between the large textile companies and camelid livestock production.***
- ***Improvement and strengthening of the artisan's value chain***

The aim of the first theme is to emphasise the primary problem that was detected: the poverty suffered by over 80% of the camelid breeding population. Making improvements in production and thus bettering the living conditions of breeders is therefore a priority.

Given the current detachment between the two worlds, the aim of the second theme is to establish new links between the producer of the fibre and the large textile industries.

The third theme seeks to develop an artisan's value chain parallel to the current value chain ending in large companies that is faithful to both Andean tradition and the modern principles of quality, fashion and design.

### **1.3. Methodology**

The methodology used in the project is based on the following elements:

- The Web platform
- The roadmaps

#### **1.3.1 The Web platform**

The Project has its own Website: [www.prospectivacamelidos.org](http://www.prospectivacamelidos.org) which contains information and the main documentation of the project and where a virtual forum has been opened [www.foropti.org](http://www.foropti.org). There is another space for surveys [www.opti.org/encuestas](http://www.opti.org/encuestas). That has allowed developing a broader relationship with the experts and has provided easier assistance from them.

The success of a prospective exercise is based in the choosing of the experts and that is because the prospective is a participatory, reflective and integrator process in which the experts' opinion is needed to achieve a consensus of opinion.

Because of that the prospective is a dynamic process of collective reflection, not only a group of techniques. This process, which is done with experts, may be as important as the product.

Thanks to the Web platform the Project has two levels of experts:

- ✓ Online Experts: Web platform
- ✓ On-site experts: Experts panels

The online experts have developed a broad collective of specialists on South American camelids from Argentina, Bolivia and Peru, interested on solving the problems of the High Andean camelids. This project has aroused interest in the three countries and because of that the group of experts is very large with more than 130 experts registered.

The on-site experts have been selected by the coordination organs of the three countries because they had the best conditions to physically attend to the expert panels. The roadmap has been built with them.

### 1.3.2. Regional roadmap

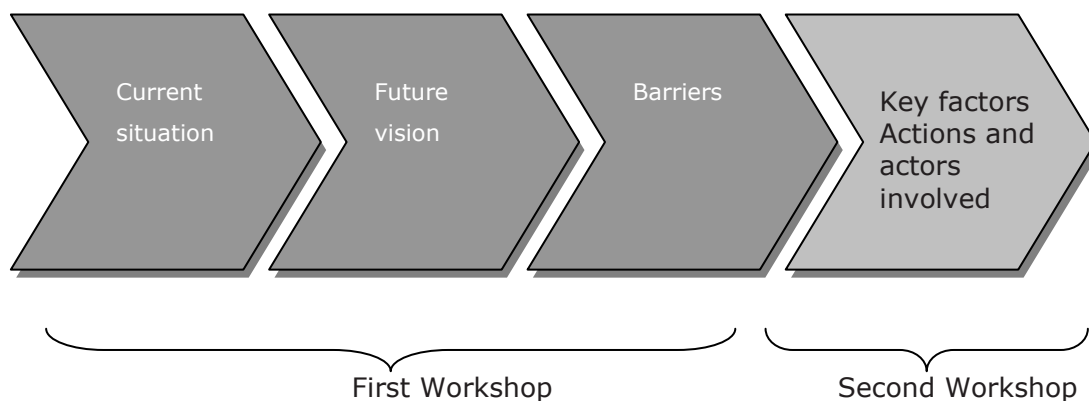
A **roadmap** is a prospective tool that allows the elaboration of an action plan to achieve the final goal in a specific future. It is the result of an analysis between the present situation, the barriers that hinder the desired future and the actions needed to achieve it.

A **Regional roadmap** is the result of applying the roadmap concept to a region, in this case the Andean area belonging to Argentina, Bolivia and Peru.

Roadmapping is one of the methods widely used at company, sector and national levels to align technology investments and other actions with goals and strategy.

This method originally came from the industrial sector and was later incorporated into foresight methodology. The most common types of roadmaps are technology and product roadmaps. Technology roadmaps support technology strategy and planning. The content of the roadmaps linked technologies and other resources to future products, as well as to business objectives and milestones.

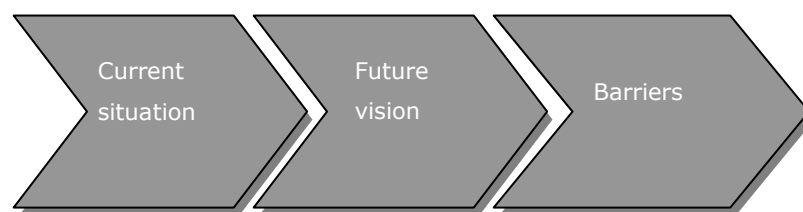
Roadmapping presents a structured way of achieving a vision by proposing measures and actions in relevant sectors and fields; these actions shape development leading to the desired future.



The workshop will be composed of experts from Argentina, Bolivia and Peru, seven from each country, and at least three will be from a business background.

In this first workshop, estimated to last two working days, the following initial stages of the roadmap will be dealt with:

- **Analysis of the present situation**
- **Future visions**
- **Identification of barriers**



### **Analysis of the present situation**

The aim is to achieve consensus among the members of the expert panel on the current situation of the sector at a national level, based on the documentation produced by OPTI on future trends in camelid textile fibres, the information provided by the “key technologies”, and the national reports.

Based on knowledge regarding the present situation in relation to international trends, the experts can define future visions.

### **Future visions**

In general terms, a future vision is the description of a desirable future prospect with regards to a given context. It must therefore outline the main attributes of the future and be specific regarding the objectives to be achieved.

When the future identity is being built properly, a future vision will act as a source of inspiration and will provide clear decision-making criteria. If this is the case, the vision statement can galvanize stakeholders to achieve the defined objectives.

To become really effective, a vision statement must be assimilated by all the agents involved in the process. For this reason, an effective vision statement must be:

-**Clear**, as it should help in the visualization of the objectives to be achieved.

-**Easy to understand**, as the statement should be a memorable and engaging expression, painting a vivid picture of what the future may look like.

-**Realistic**, as it must set achievable aspirations.

-**Reliable**, as it should be able to perform and maintain its functions under any circumstance.

-**Time-bound**, as it is expected to set the time frame in which to achieve the desired goals or objectives.

The future visions will help to establish a commitment between the interested parties involved in the process. A shared vision can break linear trends in the development of a sector and lead to innovative solutions and technological breakthroughs. By connecting the present and the future, visions can help focus resources and efforts on how to achieve the desired objectives from the present.

### **Identification of barriers**

The experts should identify the barriers that may hinder the desired development of the established vision.

These barriers should always be identified taking into account the following key aspects: products, processes, technologies and markets.

### **The workshop's modus operandi can be described as follows:**

- Experts will be introduced to the workshop's methodology
- Presentation of the key technologies
- Presentation of international trends
- The expert panel will be then split up into 3 groups, which will work in parallel and will reflect on the same issues at the same time.
- Experts will be asked to work on the following tasks:
  - Identification of the needs and challenges facing the future of the regional camelid fibre textile industry. From this information a list of implications that the future should bring to the region will also be presented to the participants.
  - The development of one **future vision** relating to products, processes and markets in the camelid fibre-based textile industry.
  - The identification of a number of **objectives** linked to the agreed vision.
  - The identification of the main **barriers** hindering progress towards the vision.

After each task, a spokesperson from each group will present the results obtained from within their group, so that the results can be pooled together and discussed amongst all participants.



All experts involved in the workshop will be asked to reach a consensus on the matters under study.

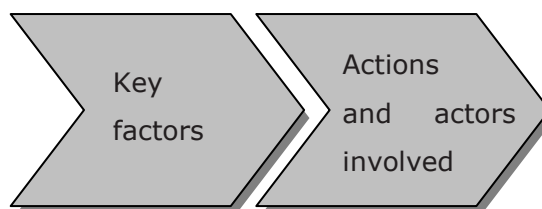
The establishment of future visions together with their **strategic objectives** is an aspect of vital importance when it comes to the development of a *roadmapping* process. It is from the future visions that the aims are defined, as well as the timescale in which the visions and objectives are to be achieved.

The workshop will be chaired by OPTI Foundation experts.

#### *I. Second Workshop: Regional Roadmap*

In the second part of the regional **roadmap**, the first step dealt with is the definition of a series of **key factors** relating to the vision and its objectives. The key factors are determining facts or circumstances affecting the achievement of the future vision.

The **roadmap** is constructed by defining actions in view of a series of key factors relating to a given vision. These actions are prioritised by dividing them into short term (less than 5 years), medium term (between 5 and 10 years), and long term actions (more than 10 years).



#### **The workshop's modus operandi**

Three **roadmaps** will be developed for each visions respectively, each one of which will be developed by a specific expert panel .

Each of the three **roadmaps** will carry out the following activities.

- **Presentation of the analysis** carried out on the material generated in the Future Vision Workshop
- **Identification by experts of the determining key factors** in order to achieve the set objectives, taking into account the following key aspects: products, manufacturing processes, technologies and markets.
- **Identification of the actions** that need to be carried out in order to achieve the vision in view of the key factors, and their prioritisation in time: short, medium and long term.

- **Defining the roles of the different agents involved in executing the actions:** industry, administration, researchers, universities, and other agents concerned with carrying out the defined actions. This will include the identification of specific actors from each country for the development of each of the actions.

The roadmap is then represented in graphic form. The actions are prioritised in time, represented in the horizontal lines, while in the vertical axis; the key factors that affect them are listed.

## 2. DAFO of the Andes (\*)

### I – STRENGTHS

1. Argentina, Bolivia and Peru hold 90% of the world population of camelids such as alpaca, llama, vicuña and guanaco.
2. The camelids breeders of the High Andean area of the three countries have developed thousand-year-old aptitudes for the usage of the herd of domestic camelids like alpaca, llama, Silvestre and specially vicuña.
3. In the three countries there have been an important institutionalism, specially private, around the Andean camelids in various areas: academic, productive, social, professional, cooperational and of technical assistance that can be used regionally based on a reciprocal exchange
4. In Peru and in a smaller scale in Bolivia, a highly specialized textile industry has emerge and develop around the fine hair camelids-base fibre with highly experienced industrialized companies and a high technological level in the processing and manufacturing of high quality products for the demanding world of the international fashion.
5. The existence of a thousand-year-old textile tradition in the three countries in the High Andean zone with manual and manufactured dexterity in quality products
6. The existence of a basic infrastructure of craft and semi-industrial workshops in case of a increased demand
7. Different products for their unique quality fibres as well as their natural colors, texture, endurance, brightness, tec.

**(\*) Done by Mr. Eliseo de los Ríos, UNIDO consultan.**

8. Approval and validity of the technical standards of the Alpaca fibre through quality and colors than have been successfully applied in the fleece fibre commercialization and classification.
9. Presence of industrial companies in Peru and Bolivia in international fairs with designs and competitive fashion.
10. The alpaca and the llama have up to 12 defined natural color fibre that have to be used in the growing market of organic products of excellent quality.

## II – OPORTUNITIES

1. In the three countries the tourism is growing and it demands typical products with good quality and designs according to the fashion demands
2. The geographical location of the camelids breeding area (High Andean zone) generates in the outside the idea of ecological countries (less industrialized countries) bond to nature.
3. Successful experiences in Argentina, Bolivia and Peru in the fields of: animal production, competitively textile specialized industrialization, development of high fashion collections, studies, applied researches and contributions to the academic fields that must be properly valued and through regional cooperation agreements they could achieve wider achievements using rational resources
4. The access to American and European markets as well as other countries with tax and free trade agreements allows the development of exports from camelids-based fibre products.
5. Consensus in the public and private sectors involved in the accomplishment of high range regional programmes that allows the comprehensive development of the Andean camelids sector, especially in the High Andean areas.
6. Identification of the Alpaca and Vicuña in the high and medium sectors of the market as excellent quality textile products.

## III – WEAKNESSES

1. In the High Andean region, among the three countries, 80% to 90% of the domestic camelids breeders are smallholders with subsistence economy whose annual incomes are between 400 and 900 dollars as a result of the commercialization of their animals' fibre.

2. As a consequence of that there have been a sharp genetical deterioration in the herd of alpacas and llamas, creating high consanguinity animals with thicken fibres and a high percentage of inferior qualities of around 28 microns and with non-defined colors.
3. Poor cattle management and bad praxis in the labors of harvest and processing of the fibre from the Alpaca and the Llama (clipping, fleecing, categorizing, etc.)
4. Lack of a quality culture in the fibre offer as a raw material
5. Presence of the camelids-based fibre in the market without its "own" history or any message that links it to the great thousand-year-old Andean culture
6. The pasturelands in the High Andean area are very poor for the development of the camelids population that generally lack adequate and appropriate actions for a rational management of the prairie.
7. Presence of the ovine stockbreeding that contributes to the desertification of the prairie because of their destructive eating habits.
8. Lack of a State agency in the three countries, with qualified and specialized non-bureaucratized staff that guides and coordinates rationally the development of the sector, generating and designing coherent strategies allowing the economical agents to have a bigger competitiveness in the demanding textile market of fine hair.
9. The lack of a State agency determines that the activities related to the sectorial development are controlled by different public organizations with uncoordinated actions and repetitive burocratic proposals and usually assistance-type orientation.
10. The lack of sectorial coordination and positioning of the camelid-base fibre in the market with the insufficient development of the commercial intelligence, limits the possibility of controlling the success of the product, so the region depends passively on the foreign prices.
11. The technological development in the breeding does not move as fast as the fine fibre demand in the market.

#### IV - THREATS

1. The sustained advance with high technological level in developed countries that devote a big amount of resources to the camelids sector and can be relied upon them in the future
2. The lack of highly specialized national institutions with economical resources from the states can make the production and business activities critical a chaotic making their competitiveness even lower.
3. The effects of the global warming can bring serious consequences in the breeding zones because they are fragile climatic zones with low water resources
4. The lack of an adequate position in the fine hair global market of the Andean camelids and in high fashion collections bring as a consequence shortness in the demand and the prices of these fibres tend to go below its value.
5. Market tendency to use light products, inconsistent with the present situation, in terms of finesse of the domestic camelid-base fibre (Alpaca and Llama)
6. The Andean camelid-base is dispensable for its deficient level in the market positioning
7. The technological level of the confection segment of the chain, especially in small and micro companies is not adequate to the competitive market demands: quality, opportunity, fashion/designs and prices.
8. Depreciated ethnical image of the typical Andean area that can affect the message of a rich Andean culture and the quality of the camelid products.
9. The animal smuggling with high genetic value can destabilize the herd of alpacas and llamas of the area.

### 3. Roadmaps

The roadmaps were done by the experts panels held in Arequipa (Peru) on the 12<sup>nd</sup> and 13<sup>rd</sup> of May 2010 and in La Paz (Bolivia) from the 26<sup>th</sup> to 28<sup>th</sup> July 2010.

### 3.1. Current situation

In the experts panel celebrated in Arequipa the present situation of the region was defined, (the country is identified when the situation is specific only to itself) with regards to the ***Living conditions of the breeders***

- Extreme poverty, over 50% illiteracy
- Highly deficient basic services
- Very limited and dispersed technical assistance
- Genetic erosion due to an inadequate commercialisation system
- Need to establish qualities and payment according to quality
- Animal health: prevalence of endemic diseases
- Excess animals in relation to the available pastures, impoverishment of feeding habits
- Bad practices in sheering as well as a lack of regularity
- High levels of migration among the livestock farmers, only the oldest remain
- Contamination of water and soil due to mining
- Lack of contingency plans for climatic conditions
- Lack of investment for water resource management
- Lack of technological development for the management of natural resources
- Marginalised production, land ownership; smallholds and extremely small plots
- Lack of coherent and sustainable policies

With regards to ***coordination between the large textile companies and camelid livestock production***

- Peru: sale to intermediaries, growing collection centres, fragmentation among intermediaries
- Bolivia: Peruvian intermediaries. Lack of knowledge regarding the market and logistics
- Southern Bolivia: no buyers, low prices
- Northern Bolivia: COPROCA (1600 members), finance problems
- Argentina: Llamas as with Bolivia. The guanaco economically is a different state of affairs
- Imperfect markets, oligopolies, producers undervalued in relation to the raw materials
- Lack of business and investment commitment in primary production
- Businesses should prioritise the purchase of fibre through organisations of producers at differentiated prices
- Low level of added value generated
- International prices vs. little presence of fibre at a global level

With regards to ***the improvement and strengthening of the artisan value chain***

- Lack of specialised human resources
- Limited financial services

- No transparent information available regarding costs, prices and markets
- Low and unstable production volumes
- Inadequate designs with regards to market requirements
- Absence of designers who are knowledgeable with regards to our culture
- Poor quality raw materials in the artisan market
- Little profitability in artisan industry
- In Peru artisan industry is linked to companies
- In Bolivia the artisan workshops are urban micro-enterprises
- Existence of clusters in Peru: Puno, Juliaca (they are not producers)
- Bolivia: Lack of yarn for artisan use
- Argentina: There are no textile companies that process camelid fibre
- There is no equality between the various links in the chain
- There is a need to place the alpaca brand
- Undervalued and fragmented artisan production
- There is no standardisation of artisan tailoring production

### 3.2. Visions

The expert panels established a general vision and three specific visions, one for each axe.

#### General vision for the three themes:

***The South American camelids sector is innovative, with a fair, coordinated and technologically advanced value chain, that processes fibre renowned worldwide for its quality and contribution to culture and sustainability.***

#### General and transversal objectives

- **To establish a special group within UNASUR to:**
  - Develop joint projects (OAS, FFPE, CYTED, FOAR)
  - Control contraband
  - Develop a legal framework
  - Develop funds open to bidding
  - Promote the incorporation of technology
- **Support from the State in order to access markets and training**
- **Encourage and increase camelid fibre products in state run companies (public purchasing programmes)**
- **Continuity in public strategies and policies; instruments:**
  - Census
  - Genealogical trees
  - New technologies
  - Inter-laboratory

Then, the expert panel established a vision of future for each of the three axes as well as objectives for each vision and the barriers that stops the achievement of them:

### **Vision 1**

***Communities of breeders and artisan workers from the Andean countries with fair earnings, basic services and with the capacity to develop a competitive sector within a framework of sustainability and regional development***

### **Vision 2**

***The producers and the companies coordinate commercially in a transparent manner, based on principles of quality and corporate social responsibility (social, cultural and environmental values)***

### **Vision 3**

***Artisan companies correctly placed in the market, with sufficient support and technology, quality designs and products that give renewed value to traditional know-how***

## **3.3. Development of the Roadmap**

As a result of the workshops a roadmap was developed for each of the three visions established.

### **3.3.1. Roadmap for vision 1**

#### **Vision 1**

***Communities of breeders and artisan workers from the Andean countries with fair earnings, basic services and with the capacity***



***to develop a competitive sector within a framework of sustainability and regional development***

This vision is an answer to the axis study: It improves the conditions of the breeders' life and it is based in the need to adopt measures that allow an improvement of breeders and artisans' life through better infrastructures, health and education and the development of means to make their abilities and competences better. Having a better life quality and productive capacity will allow also a development in the territory according to the principles of environmental, economical and social sustainability.

***Vision 1 Objectives***

To achieve this vision, 5 objectives have been established:

- Promote alliances / associations (industrial and livestock farming cooperatives) and organisational processes among producers, with a focus on business and overall development, coordination in the region.
- Generate and disseminate (through a rural advisory system, CEPROS or specialised institutions), new breeding practices for improving fibre and other products with greater added value (sheering, categorisation, classification, washing, carding, combing), spinning, artisanal weaving, improvement of natural pastures and production gene pool.
- Promote education that increases the value of the artisan alpaca activities with a business and intercultural approach that strengthens self-esteem, cultural identity and iconography as an economic value.
- Develop improved basic services through policies and action on behalf of the state.
- Increase by 5 points the superior fibre qualities

***Vision 1 Barriers***

To achieve the objectives exposed before it is important to overcome some barriers mainly related with producers' life conditions such as lack of infrastructures and lack of organization which strengthen the need of intermediaries and the lack of clear and effective public policies.

### ***Barriers related to Infrastructures:***

- Deficiencies in infrastructures; power, water, drainage, roads, communications
- Low level of education among breeders
- Geographical dispersion of breeders, illiteracy, language barriers, lack of Breeders have difficulty getting access to technology
- specialisation
- Desertification caused by climate change and heavy overburdening of pastures of little value for fodder. Scarce fodder for the animals

### ***Barriers related to producers organization:***

- Weak and fragmented organisations for producers
- Distrust among the various actors of the value chain
- Deficiencies in coordination and information in the value chain
- Resistance to technological change from breeders
- Direct intervention of intermediaries with a high share of earnings
- Lack of a culture for quality

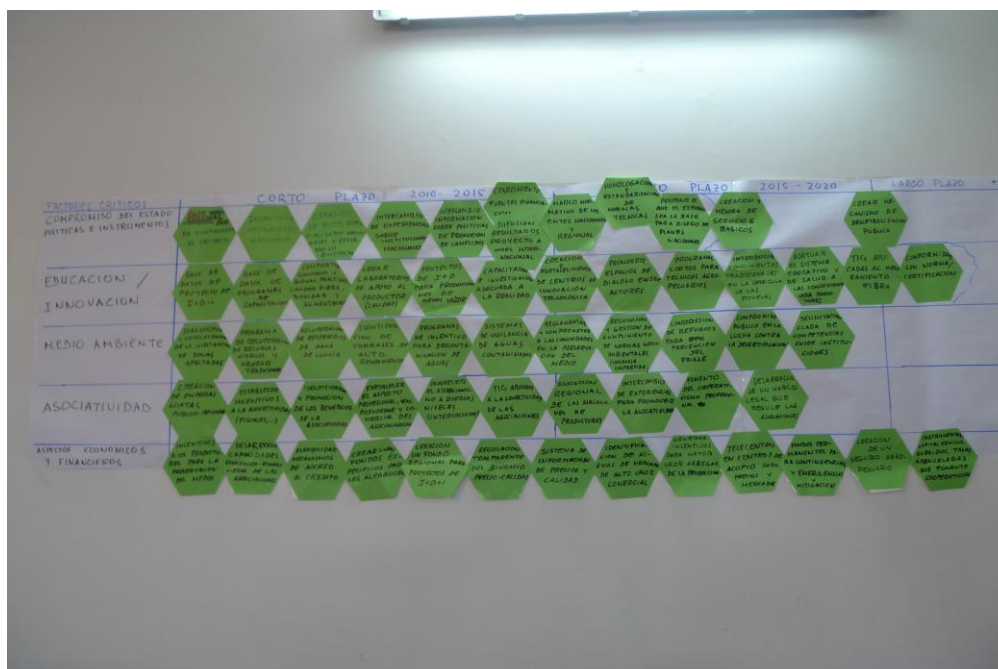
### ***Barriers related to public policies:***

- Insufficient state support in infrastructures, regulations, technologies and financing
- Fear of debt on behalf of breeders
- Inadequate financial products
- Lack of anticipation policies
- Inexistence of a specialised organisation for the sector (previously CONAC in Peru)
- Limited understanding of the worldview

To create the VISION 1 **Roadmap** some **Critical Factors** have been identified which determine the possibility to reach the identified objectives taking into account that there are barriers that need to be overcome. The Critical Factors are:

- a. State's commitment, policies and instruments
- b. Education and innovation
- c. Environment
- d. Association
- e. Economical and financial aspects

Associated to these Critical Factors the Actions to undertake were identified to achieve the marked Vision of the Future.



*Vision 1 Roadmap, obtained by the workshop.*

## A. Actions related with a State compromise expressed in politics and instruments:

### A.1 Creation of a Regional Body which gives the project continuity.

The creation of a Regional Body is considered a key action and without it, it would be difficult to start much of the identified actions. Due to this “macro-action” have to be started short-term with the compromise from all the agents in the value chain of the three countries: Official institutions, Pos, private and mixed companies, NGOs and institutions related with R+D+i.

The goal to achieve by creating the Regional Body is to generate a dialogue between the actors using a regional policy instrument responsible of the design and implementation of policies and regional actions and at the same time, generation support strategies in the camelids sector.

The public sector representatives involved in this project, as well as the political ones of the highest level have to identify the political space and the economical resources (CAF, OEA, IICA) to allow the creation of the Regional Body. It will be necessary to create a Commission among the three countries, in charge of the necessary steps to create this Body establishing the bases, role models and development of their statutes.

The next following actions, expressed in the Roadmap in relation with the Critical Factor, must be understood as complimentary actions from which the Regional Body is responsible.

*A.1.1 Inventory of National Institutions CP.* This inventory will allow the identification of those institutions which need to be worked with to implement the different actions, both nationally and regionally. Also, it will allow detecting possible function duplicities and inefficiencies in the value chain.

*A.1.2 Creation of a National Body specialized in each of the three countries or reformation of the existing ones CP.* The implementation of politics and camelid' sector drive strategies need a national institution that coordinates the actions to perform and that could be the meeting point within the actors of the value chain.

*A.1.3 Exchange of experiences within the national institutions CP.* One of the objectives of this project is to set the mechanisms to establish synergies among the three countries allowing a maximum optimization of the existing resources. It is important to create the mechanisms to allow a systematic exchange of relevant sector initiatives from each country as well as all the information about politics and camelids promotion.

*A.1.4 Knowledge of funding sources CP.* The National Body should know all the possible funding sources existing in the framework of the international multilateral organisms and inside the countries to support the actions identified in this project.

*A.1.5 National and international dissemination of the project CP.* The results of this project must be widely spread both in the national area, so they can be the base for the promotion politics and the development of the camelids sector in each of the three countries, and in the international area, to show its importance.

*A.1.6 Certification and standardization of technical rules MP.* One of the responsibilities of the Regional Body is the certification and standardization of technical rules applicable to the sector, so that the three countries apply the same rule being a certified one and being applied by international standardization organizations.

## **A.2. Creation and improvement of basic services**

Besides the creation of a Regional Body, it is essential to improve producers quality of life through basic infrastructures because if not, the breeding activity will be gradually abandoned and breeders will emigrate to the cities which will imply a medium-term disappearance of the producing activity. This has already happened in countries such as Chile, in which new economical activities have lead to the abandon of the pasture and the disappearance of the camelids

breeding. To avoid this phenomenon as far as possible, it is necessary to provide infrastructure related to:

*A.2.1 Electrification of rural areas using distributed generation sources*

*A.2.2 Water supplies and sanitation networks*

*A.2.3 Construction and improvement of vials*

*A.2.4 Access to information technologies and communications*

*A.2.5 Education access for children and teenagers*

*A.2.6 Sanitary services of primary attention*

*A.2.7 Development of an infrastructure that stops the desertification produced for the climate change and which allows the creation of pasturelands for the proper feeding of animals.*

In the long term and with the sectorial development instruments and regional coordination working, it is convenient to establish a mechanism that allows a slow public decentralization.

## **B – Actions related to the improving of education and innovation**

The improving of the sector depends widely on the existence of formation plans that facilitates the extension of good manners in the breeding and production of camelids to obtain a good quality fibre. The recovery of the traditional knowledge along with new technologies should be the base for the HR training plans. It is also necessary that innovation and technological development reach the producers through Technological Innovation Centers in the strategic productive areas considered of interest.

The actions to implement refer to:

### ***B.1 Education and training***

*B.1.1 Creation of projects databases of R+D+I and existing training programmes.* This information will allow having an inventory and knowledge of all that is done in the three countries in this area and will bring it closer to the field, promoting a proper training and investigation of the reality. It is also proposed to encourage R+D projects to *low level productions* as a way to get the research closer to the field.

*B.1.2 Sharing solutions of good practices for the fibre quality, health and feeding of the camelids* which is another aspect that should be considered regionally to identify the best practices and to elaborate a manual addressed to producers.

*B.1.3 An improvement in education and training is one of the key actions to achieve the Vision and it is essential to create Short training programmes for agricultural technicians* that support and train producers in their daily tasks. It is important to *Introduce traditional knowledge in the school curriculum* so that the interest in the camelids breeding will not be lost and could join with an advanced formation adapted to the technological development.

## **B.2 Technological innovation**

*B.2.1 Creation or strengthen of technological innovation centers.* These centers would be in charge of leading the technological development of the sector, identifying the best options in each case, such as *creating quality fibre laboratories* that help the producer to know his in situ production. In the same way the Technological Centers would be in charge of developing *TIC applications for improve fibre* and doing tests and analysis to *certify the conformity with the fibre quality established rules*.

*B.2.2* To carry out these actions it is fundamental to *promote appropriate spaces for dialogue among all the actors in the value chain*, so that the actions undertaken would be adjusted to reality and to the needs of the whole sector.

## **C – Actions related to environmental preservation**

Environmental preservation needs to establish committed policies and strategies, viable and long lasting. The climate change, the mining industries, the lack of forage and the livestock overpopulation attempt the sustainability of the world and the proper camelids development. It is necessary to start actions that allow the recovery of water supplies and implement supply systems with decontamination technologies and spread the good practices.

### **C.1 Water Supply Recovery Programme**

*C.1.1* First, it is necessary to make a *diagnosis of affected areas* and implant a systematic monitoring and investigation programme. With the information a *Wasted water recovery and traditional management, rainwater recovery programme* must be started

C.1.2 At the same time, it is recommended to apply a *Contaminated water surveillance system* and a *Incentives programme for decontaminating water*.

C.1.3 From a regulatory standpoint, it is necessary to establish a *Regulation and management of environmental rules fulfillment* as well as *Regulate and commit the communities to preserve the environment* through a shared surveillance system and a *clear delimitation of competences among institutions*.

C.1.4 It is also necessary to establish a *Public commitment in the fight against desertification*.

C.1.5 There is a proposal to create a programme of *incentivizing the producers in preserving the environment*.

## **C.2 Feeding and animal care**

C.2.1 Creation of an *Identification of high-performance fodder* to improve the quality of the animal feeding and the construction of a shelter for cold prevention.

## **D – Actions related to association promotion**

A very important pillar to achieve the vision is to promote the association in which the most important value should not be the sales but trying to develop all the commercial and business aspects. From the starting point of the producers union, it is easier to dialogue with State authorities and large companies. The first step to show the advantages of association is to establish stock-pile centers.

### **D.1 Promotion of Association**

Some key actions are proposed:

D.1.1 Identify and promote the benefits of association

D.1.2 Establish tax incentives and others to the association

D.1.3 Encourage the professional, entrepreneurial and commercial aspects of association

D.1.4 Promote professional cooperation

### **D.2 Creation of instruments**

To make the collaboration a reality among producers, some instruments have been proposed:

D.2.1 Create a regional association that joins together the producers association from the three countries.

D.2.2 Apply Information and Communication technologies to ease the communications among different producers associations.

D.2.3 Develop a legal framework to regulate the associations.

D.2.4 Creation of public/private joint-ventures

## **E – Actions related to economy and finances**

The opening of specific credit lines for a sector is a key aspect for its recovery, even though the guaranty is linked to the association factor through incentives. Among the proposed actions there are two different blocks:

### ***E.1 Development of economical and financial capacities both for associations and producers, through***

*E.1.1* Measures to adjust mechanisms of credit access.

*E.1.2* Crear líneas de fondos específicos para los productores

*E.1.3* Creation of a regional fund for R+D+i

*E.1.4* Establishment of a permanent fund for emergencies and relief

*E.1.5* Creation of an agricultural insurance

*E.1.6* Instruments based on capital-seed, subsidies and duty taxes to promote the cooperation

### ***E.2 Creation of a system of price and quality information***

This system must ensure *transparency both of price and quality* and will allow the *identification of market holes with high commercial value*. To obtain that they should:

*E.2.1* Generate incentives to add more value to the production

*E.2.2* Create a Tele-center in the stockpile centers as an information system of prices and market.



## ROADMAP

**VISION 1:** Communities of breeders and artisan workers from the Andean countries with fair earnings, basic services and with the capacity to develop a competitive sector within a framework of sustainability and regional development

Critical Factors	2011-2012	2013-2016	2017-2020
a. Actions related with a State compromise expressed in politics and instruments	a.1. Creation of a Regional Body which gives the project continuity		
	→ a.1.1. Inventory of a National Institutions		
	→ a.1.2. Creation of a National Body		
	→ a.1.3. Exchange of experiences		→
	→ a.1.4. Knowledge of funding sources		→
	→ a.1.5. Project dissemination		
	→ a.1.6. Certification and standardization		
	a.2. Creation and improvement of basic services		→
	→ a.2.1. Electrification of rural areas		
	→ a.2.2. Water supplies and sanitation network		
	→ a.2.3. Construction and improvement of vials		
	→ a.2.4. Access to ITCs		
	→ a.2.5. Education access for children		
	→ a.2.6. Sanitary services of primary attention		
	→ a.2.7. Infrastructure development		

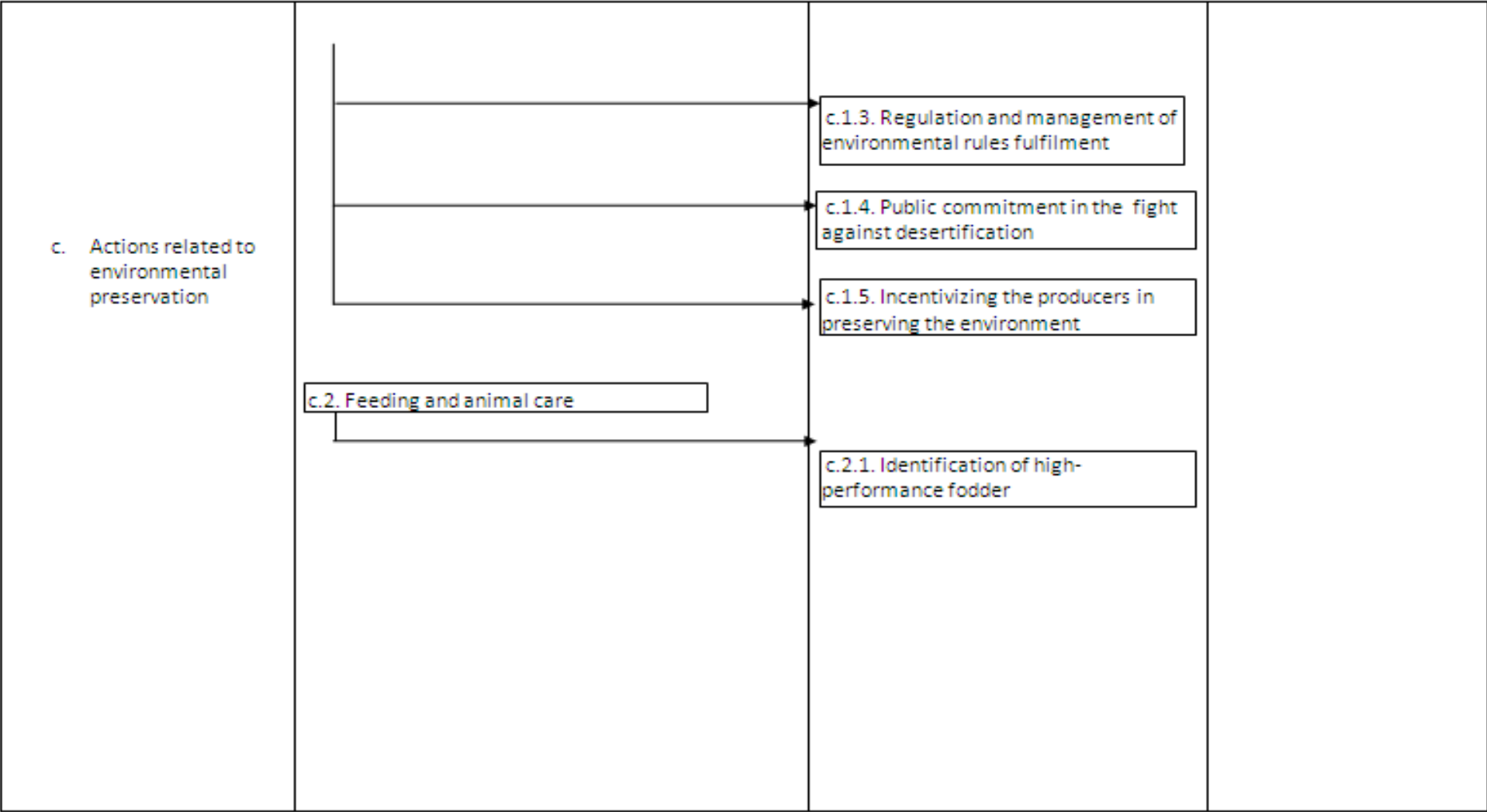
## ROADMAP

**VISION 1:** Communities of breeders and artisan workers from the Andean countries with fair earnings, basic services and with the capacity to develop a competitive sector within a framework of sustainability and regional development

Critical Factors	2011-2012	2013-2016	2017-2020
b. Actions related to the improving of education and innovation	<div>b.1. Education and training</div> <div> <div>b.1.2. Sharing solutions of good practices for the fibre quality, health and feeding of the camelids.</div> </div>	<div>b.1.1. Creation of projects databases of R+D+I</div> <div>b.1.3 Education and training improvement</div>	<div>→</div> <div>→</div>
	<div>b.2. Technological innovation</div> <div> <div>b.2.1. Creation or strengthen of technological innovation centres</div> <div>b.2.2. Promote appropriate spaces for dialogue among actors in the value chain</div> </div>		<div>→</div>
c. Actions related to environmental preservation	<div>c.1. Water Supply Recovery Programme</div> <div> <div>c.1.1. Diagnosis of affected areas</div> <div>c.1.2. Contaminated water surveillance system and Incentives programme for decontaminating water</div> </div>		<div>→</div> <div>→</div>

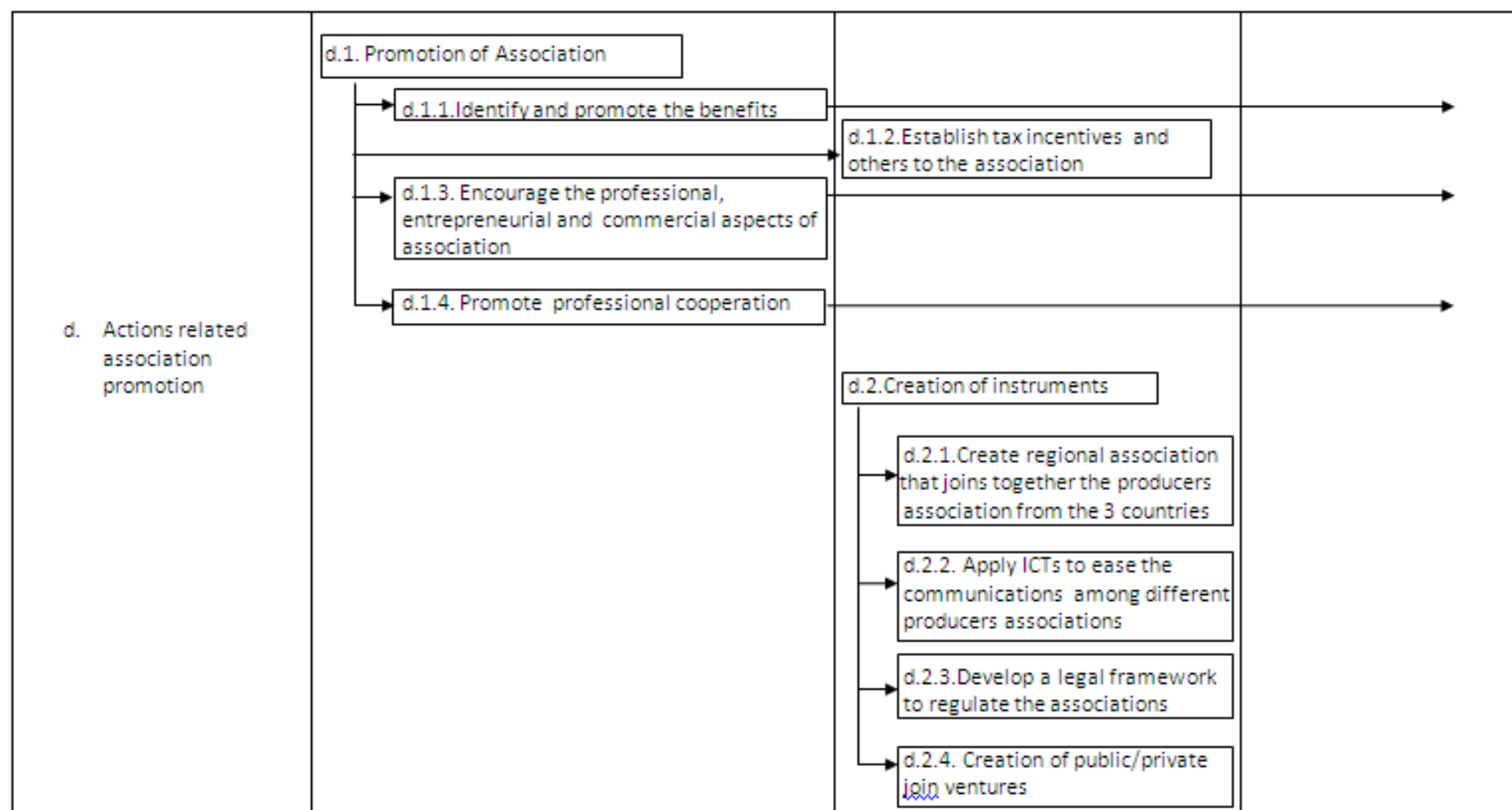
ROADMAP

*VISION 1: Communities of breeders and artisan workers from the Andean countries with fair earnings, basic services and with the capacity to develop a competitive sector within a framework of sustainability and regional development*



## ROADMAP

**VISION 1:** Communities of breeders and artisan workers from the Andean countries with fair earnings, basic services and with the capacity to develop a competitive sector within a framework of sustainability and regional development



# ROADMAP

**VISION 1:** Communities of breeders and artisan workers from the Andean countries with fair earnings, basic services and with the capacity to develop a competitive sector within a framework of sustainability and regional development

Critical Factors	2011-2012	2013-2016	2017-2020
e. Actions related to economy and finances	e.1. Development of economical and financial capacities both for the associations and producers		
	→ e.1.1. Measures to adjust mechanisms of credit access		
		e.1.2. Create specific funding lines for producers	
		e.1.3. Creation of a regional fund for R+D+I	
			e.1.4. Permanent fund for emergencies and relief
			e.1.5. Creation of an agricultural insurance
			e.1.6. Instruments based on capital-seed, subsidies and duty taxes to promote the cooperation
	e.2. Creation of a system of price and quality information		
		e.2.1. Generate incentives to add more value to the production	
		e.2.2. Create a Tele-centre in the stockpile centres	

### 3.3.2. Vision 2 Roadmap

#### **VISION 2**

*The producers and the companies coordinate commercially in a transparent manner, based on principles of quality and corporate social responsibility (social, cultural and environmental values)*

This future Vision answers to the second study axe: *Articulation between large textile companies and camelids livestock production* and it is based on the need to create communication and dialogue between producers and textile companies so that they can obtain a development in the sector through all the value chain links and implant clear technical and quality criteria through an improvement of producers' skills and the strengthen of the weakest chain link: the breeding.

#### **Vision 2 objectives**

- Find mechanisms so that companies may develop social responsibility both internally and externally (ISO 14000 & 25000).
- Develop collection centres and improve the producers' negotiation power through the organisation of the supply.
- The application of ICTs in order to evaluate the quality of the product and price it accordingly.
- Development of an information system that facilitates access to markets for livestock farming communities and SMEs
- Encourage training with emphasis placed on business practices and the use of ICTs.

#### **Vision 2 Barriers**

To achieve the previous objectives, the existing barriers related to the lack of trust between value chain actors, the improvement of the fibre quality and the offer organization must be overcome.

**Barriers related to offer organization:**

- Scarce collection centres
- Low negotiating power of breeders due to their low production volumes
- Lack of specialised human resources among breeders
- Minimal access to finance
- Excessive bureaucracy for the creation of new companies

**Barriers related to fibre quality:**

- Insufficient regulations from the state that encourage production and improve quality
- Not enough laboratories to support quality fibre
- Difficulties identifying fibre quality

**Barriers related to institutional relationships:**

- Lack of trust among the value chain's actors
- Unfair competition between the three countries
- Deficiencies in the Argentinean and Peruvian textile industries
- Institutional weakness in public financial organisations
- Deficient public management at national, departmental and local decision-making levels. Institutional zeal

To make the VISION 2 **Roadmap** some Critical Factors were identified and they determine if the identified objectives can be achieved, considering the barriers that need to be overcome. The **Critical Factors are:**

**F. Organization offer****G. Social responsibility of the companies and all the chain actors****- Equipment and Technical Service infrastructure (\*)****H. Value added to the production areas**

*(\*)The actions related to this critical factor have been incorporated together with the actions in 1.1, Creation of stock-pile centers because they were closely related.*

Associated to these four Critical Factors, the Actions to take to achieve the Future Vision were identified.

**F – Actions related to the offer organization****F.1 Creation of district Stockpile centers**

The existence of Stockpile fibre centers properly located is considered one of the necessary elements for producers' offer organization and fibre classification according to different qualities.

The first action to undertake in each of the three countries is to make studies to locate Stockpile Centers according to the localization of farms and the existing communications.

These Centers will have the following:

*F.1.1 Stockpile centers, transformation and shearing equipment.* The Centers should have *shearing beaches*. Making these jobs efficient will carry on actions related to *identification of the best shear practices and establishment of technical rules* related to these labors. In the stockpile centers producers would be trained to use these tools properly.

*F.1.2 Accessible laboratories equipped to measure the quality of the fiber.* That will lead to a proper classification and the producer will receive a price according to the quality of his fiber. This will contribute to the care and genetic improvement of the animals to obtain better quality fibres.

*F.1.3 Information systems of prices and qualities.* The Stockpile Centers will have an information system and Access to ICT's and telecenters which will allow to have price information and to guarantee a fair sale process.

*F.1.4 Development of technologies for low scale camelids dehairing. Precategorization and scouring of the fleece in stockpile centers. Quality and standard colors prequalification*

*F.1.5 Quality labeled.* In the Stockpile, a fibre categorization would be done based on the human resources and with the laboratory support they would classify the fibre according to its quality and color and it would be labeled. This will allow to generate a traceability system of the fiber that is sold.

*F.1.6 Technical body among the producers, long lasting.* While the producers' training in shearing skills and categorization develops, the stockpile centers must have trained personnel to help the producers.



## ***F.2 Existence of a Stockpile Center Coordination Programme***

Once the Stockpile Centers spread in the three countries, a Programme that allows coordination and cooperation and the exchange of experiences among them will be established. Mid-term programmes should be started as well as national programmes to coordinate the Stockpile Centers activities and studies would be made to *create a consortium among Stockpile centers*.

## ***F.3 HR Training***

The need to achieve the most adequate levels of education and training for producers is one of the main factors to improve the quality of camelids-base fibres and the relationships among producers and textile companies. Education and training will bring together those two worlds and will make dialogue possible with a transparency en equity base.

Stockpile centers can also be producers training centers.

The training actions must be developed according to:

*F.3.1 Capabilities in the business, productive and organizational management of the producers.*

*F.3.2 Capability of the shears and fleeces, fibre categorizers and gatherers.*  
This should work along with a homologation and normalization system of training and a recognition of capabilities program granting a certificate.

*F.3.3 Quality and productivity improvement of practices for craft spinning*

*F.3.4 Establish a HR database for all levels.*

## ***F.4 Guarantee of origin and Regulatory Board***

Initial studies have shown that camelid-base fibres are no fairly valued in international markets as a natural fibre with the highest standards of quality and comfort. A creation of an Andean Camelid-base Fibre Guarantee of Origin Brand is needed to credit the fibre quality and serves as an introduction and commercialization tool in international markets. This measure helps the value chain´s actor and creates an articulation instrument among the fibre producers and the textile companies.

This measure could be held individually in each country but it is stronger when done regionally. This requires:

*F.4.1* A regional Control Board to establish the requirements to fulfill to be part of the Guarantee of Origin Brand, stating quality and origin. To do that it is necessary to create:

*F.4.2* A Certification and accreditation system of fine fibres and natural origin fibre.

### ***F.5. Promotion of producers' associations with a business focus***

The offer organization comes through the need to promote producers' associations but knowing that their focus should answer to business criteria and not only mere social claims. These associations should try to have as many people as possible and be the base for a continual product improvement using technology, training, management mechanisms and interlocution with other links in the value chain. These associations could be the base for:

*F.5.1* Generating economical resources through a revolving fund for fibre stockpile.

## **G – Actions to incorporate Social Responsibility in companies and all the actors of the value chain**

The Corporate Social Responsibility (CSR) is a synonym to the contribution that a company makes towards a sustainable development. This contribution implies assuming social and environmental responsibility in their main business activities beyond legal dispositions, and they are voluntary.

In the camelids breed sector, the CSR have a wide application in the living conditions of the producers, because of the infrastructure development that they have, the genetic improvement, health and feeding of species and most of all for their contribution to the improvement of the fibre quality and fair price that the producer will receive.

To distribute and implant the CSR, some actions have to be started:

### ***G.1 Diffusion and sector adaptation to the CSR concept***

*G.1.1* Diffusion of the social responsibility concept in all the links of the value chain. Diffusion programs should be organized with the cooperation of consultants and specialized advisers, so it will be necessary to start a training programme for those advisers and to collect existing experiences

about the application of the CSR, mainly in the textile sector, and the search for international benchmarks in SR adapted to the camelids breeding sector.

G.1.2 Companies can contribute to improve the fibre quality and so to an improvement of producers' life quality by promoting the role of the companies in the camelids genetic improvement, feeding and health.

## **G.2 Fare Trade**

Fare Trade is one of the existing tools to regulate a equitable redistribution of the earning in all the links of the productive chain and to connect producers with fare trade. To do that is necessary:

G.2.1 Connect into an international level to go deep into the Fare Trade concepts, establishing contracts with international entities that promote fare trade.

G.2.2 Adjust the fair trade experiences to the camelids sector specifying which fare trade components are related to camelids.

## **H – Added value in production areas**

The improvement of camelids producers' living standards is linked to obtaining a better fibre quality, associated to new production incentives in producing first quality fibre, which is the opposite of what happens now that fibre is bought for its weight, as well as a genetic, feeding and health improvement among others.

Bur a better living standard goes together with the development of new functions in the value chain. Here is where the stockpile centers would help to raise the producers level, selling to the manufactures a classified, labeled, cleaned and dehaired fibre, according to quality standards. This action is shared by the textile producers following this corporate statement:

*"An important point is knowing how to keep the links of the production chain, that is, to boost producers into acquiring the needed skills to develop techniques and capacities that fulfill the normalization requirements in categorizing, classifying, dehairing, etc but let the industry devote itself to continue with raw material industrialization, producing and dealing in the markets and making the most of it. As the proverb says: "Cobber, stick to thay last". Let's not throw away years of effort and investment to open new markets with highly specialized and competitive products letting that highly specialized process into the producers' hands which are not ready yet to face this challenge. By doing so we would achieve recoil and disappointment. Let's go step by step."*

Some of the referred actions here have been referenced being part of the indicated actions for the stockpile centers, as well as the infrastructures of equipment.

**H.1** Development of market researches to define products of added value

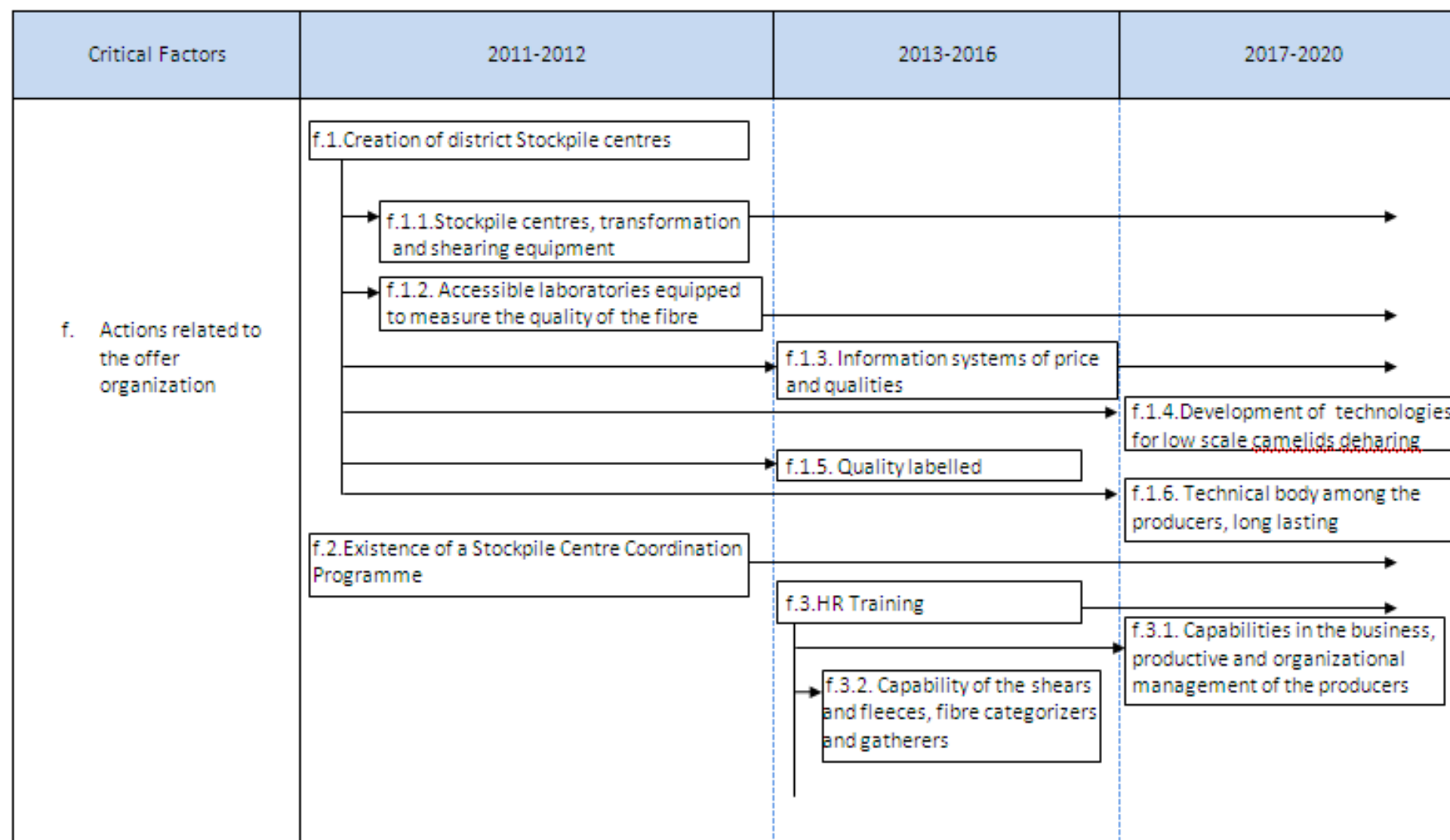
**H.2** Transfer and adaptation of cleaning and dehairing technologies

Image of Vision 2 Roadmap done by the workshop



## ROADMAP

**VISION 2:** The producers and the companies coordinate commercially in a transparent manner, based on principles of quality and corporate social responsibility (social, cultural and environmental values)



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## ROADMAP

**VISION 2:** The producers and the companies coordinate commercially in a transparent manner, based on principles of quality and corporate social responsibility (social, cultural and environmental values)

Critical Factors	2011-2012	2013-2016	2017-2020
g. Actions to incorporate Social Responsibility in companies and all the actors of the value chain		<div>g.1. Diffusion and sector adaptation of the CSR concept</div> <div>g.1.2. Promote the role of the companies in the <u>camelids</u> genetic improvement</div> <div>g.2. Fair trade</div> <div>g.2.1. Connect into a international level</div> <div>g.2.2. Adjust the fair trade experiences to the sector</div>	<div>g.1.1. Diffusion of the CSR concept in the value chain</div> <div></div>
h. Added value in production areas		<div>h.1. Development of market researches to define products of added value</div> <div>h.2. Transfer and adaptation of cleaning and <u>dehairing</u> technology</div>	

### 3.3.3. Visión 3 Roadmap

#### **Vision 3**

*Artisan companies correctly placed in the market, with sufficient support and technology, quality designs and products that give renewed value to traditional know-how*

This Vision answers to the *Improvement and strengthen artisan value chain* axe and it is based on the need to technify and professionalize the artisan companies giving them the tools to improve their production, incorporating adapted production technology to their production levels and improving the product through a design and adaptation to the market demand. That must be done without losing the traditional knowledge and the bond to Andean culture.

Through the Vision 3 development, creative industries may result as new means of management based on networking are introduced as well as intensive use of ICT's, united brand image, guarantee of origin and internationalization.

#### **Vision 3 objectives**

- Strengthen and generate incentives and training programmes in order to improve capacity for the development of processes, products and designs in regional MSEs, traceability and the use of ICTs, regaining self-esteem, iconography and culture, with a focus on quality and on national and international markets.
- Strengthen the role of commercial offices and teamwork between the three countries in order to place camelid fibres and related products in the international market.
- Promote the supply of quality products, with national identity and designs for local and international markets.
- Make progress in the development of technical regulations and promote the development and control of protected designations of origin.
- Promotion of specialised telecentres that enable access to information on markets and fair trade to tailors and home textile producers.



### **Vision 3 Barriers**

To achieve the previous objects it is necessary to overcome some barriers related to artisans' formation, access to technology and suitability of the product to the market demands.

#### ***Barriers related to productivity, H.R. and y public support***

- Highly traditional culture that inhibits the introduction of new know-how
- Very low productivity
- Low levels of association and unspecialised human resources
- Insufficient action for the development of craftwork on behalf of the state
- Institutional divorce between the academic and productive sectors
- Deficient training of artisan workers

#### ***Barriers related to technology and markets***

- Deficient access to new techniques (ICT), new management systems, information on design, materials, prices and markets
- Lack of awareness regarding technical regulations for products and materials
- Deficient levels of technology for the processing of raw materials
- Scarce technical support and services
- Insufficient access to a stock of coloured threads
- Inexistence of a high quality productive base
- Deficient access to information on prices and markets
- Difficulty communicating with English speaking customers due to the language barrier

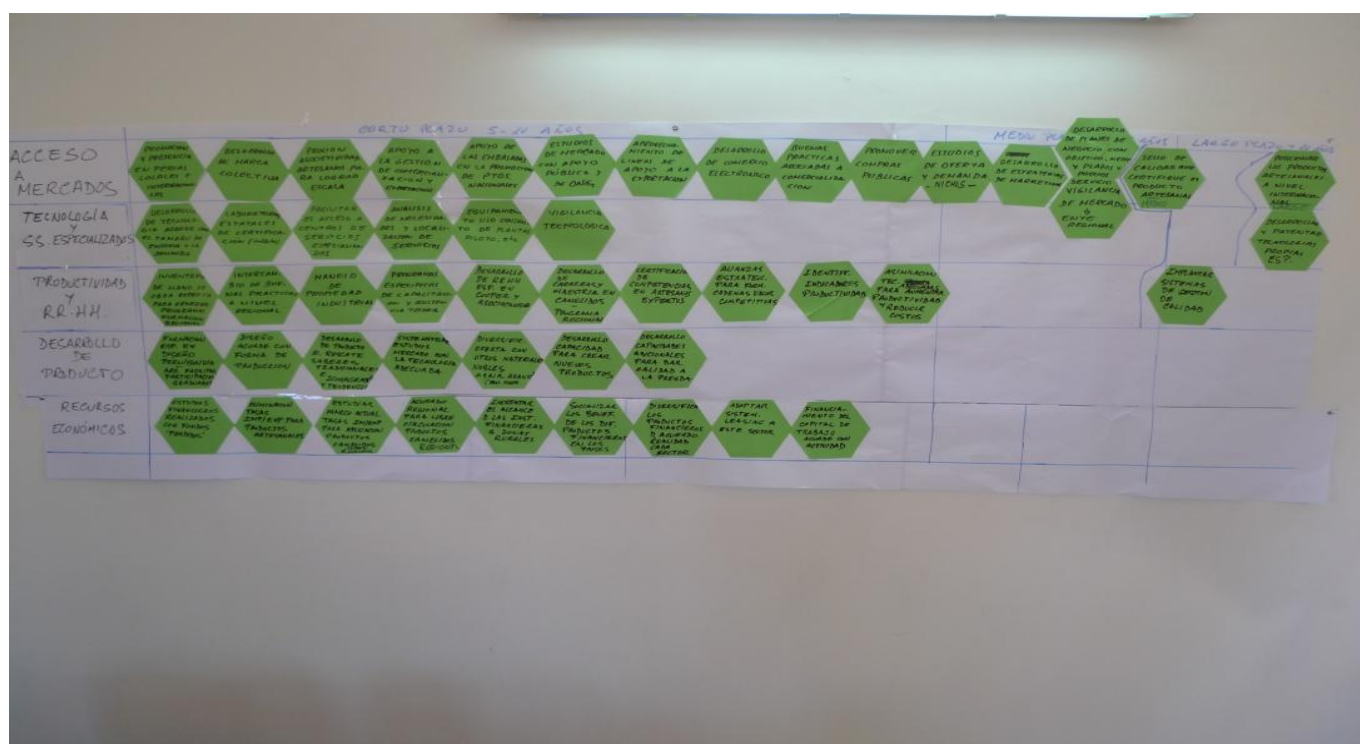
### **VISION 3 Roadmap**

To create the VISION 3 Roadmap some Critical Factors were identified and they determine if the identified objectives can be achieved, considering the barriers that need to be overcome.

Those **Critical Factors** are:

- I – Market access
- J – Specialized technology and services
- K – Productivity and HR
- L – Product development
- M – Economical resources

### Roadmap obtained by the workshop



## I – Actions related to market access

Nowadays and contrary to some companies or artisan entrepreneurs that have made a clear commitment to design and differentiation, artisans have a lack of originality and quality standards. That has led the product to become a street market product without differentiations between cities and countries. We can even talk of an Andean artisan product globalization.

To achieve the Vision is necessary to star some actions in the direction of differentiating the products and access to regional, national and international markets.

**I.1** *Actions related to the development of marketing and promotion strategies and camelids-based fibres and textile diffusion.*

*I.1.1 Promotion and presence in national and international fares.* Active promoting policies have to be start to promote camelids textiles in fashion shows and fairs celebrated in commercial key places. It is necessary to establish help lines to *finance the participation of artisans in this kind of event.*

*I.1.2 Development of a collective brand.* This formula has already been started in other countries and allows to do collective marketing actions associated with a brand that gives identity to the product.

*I.1.3 Support the marketing and export management.* The artisan needs help to fulfill the complex procedures of exportation. Technical assistance services have to be established to locate the products in the new markets creating penetration strategies.

*I.1.4 Support the embassies in the promotion of national products.* The alpaca is considered a “national emblem” in Peru and in Bolivia the same happens with the llama. Governments should develop a policy through their embassies and commercial offices to position camelids’ fibre in international markets through institutional campaigns. *Market studies with public and NGO’s support* need to be done specially in the Tourism field, so that the crafts respond to a growing and more demanding touristic demand. Also *Studies of supply and demand spots* have to be done to identify places in the national and international market for camelids’ fibre products.

*I.1.5 Better use of export support lines.* Nationally and also internationally there are export support lines that are scarcely known by artisans. Information mechanisms with easy access should be implanted for the artisans.

*I.1.6 Promotion of public purchases.* Take advantage of the local market, the purchase power of the State and the corporate purchases to support artisans and spread their products.

## **I.2 Actions related to association**

*I.2.1 Promotion of artisans association.* Artisans have a limited production that cannot supply the market so associations and organizations have to be promoted to guaranty it.

*I.2.2 Development of electronic trade* as a way to have a *low cost commercialization for artisans’ associations that act as a brand* and a shared policy of prices

*I.2.3 Development of business plans with objectives, times and prices.*

*I.2.4 Implementation of a market control system through the Regional Entity*

*I.2.5 Mid-term: Quality seal that certifies the Andean zone artisan product*

*I.2.6 Long-term: Positioning artisan products at an international level*

## **J – Actions related to Technology and specialized services**

*J.1 Analysis of needs and location of services.* First, it is necessary to invent and map technology and equipment installed in Andean countries to process camelid-based fibres and locate those institutions and/or experts who offer specialized services. That will allow to make a benchmarking labor to learn from the best and to have a *body of specialists and centers that offer specialized services* adapted to the artisans needs.

*J.2 Development of technology according to the company size and demand.* It is necessary to develop a specialized technology that allows good levels of industrialization of short series of products so that they are adapted to the artisans need, as well as *specific technologies for dehairing the llama and the guanaco*.

*J.3 Development of equipment and plants for joint use as well as pilot plants.* To make the most of technological investments and teams it is proposed to create plants that could be used together by a group of artisans. That way the artisan could have access to good manufacturing facilities at a lower cost.

*J.4 Implementation of a Technological Surveillance System* that allows knowing the technological advances at an international level. This activity should be carried on by the Regional Entity

## **K – Actions related to productivity and RH training**

*K.1 Actions related to an improvement of productivity*

*K.1.1 Creation of strategic alliances to train competitive value chains.* Once more the association promotion is one of the keys to create critical mass and increase artisans' competitiveness.

*K.1.2 Identification of productiveness indicators.* Those indicators will allow to measure the competitiveness indexes and stimulate an improvement in productivity through different types of incentives (economical, consultancy, training, access to technology, etc.)

*K.1.3* In a mid-term, it is proposed to *implement quality control systems* among artisans companies.

### **K.2 Actions related to HR training**

*K.2.1 Inventory of experts to create regional training programmes.* The cost of training could be reduced if done regionally with syllabus, material and

even teachers shared by the three countries. A *Regional good manners exchange* should be done.

*K.2.2 Specific training and technical assistance programmes which are fundamental to transfer to the artisan the knowledge related to design, pattern making, equipment management, quality control and easy tools for business management.*

*K.2.3. Regional Programme for career development and camelids' mastery.* The objective is to design an ambitious training cycle with different grades related to the whole value chain of camelids-base fibre products. The Regional Entity would be in charge of this Programme design and would take into account the inside and outside regional knowledge.

*K.2.4 Expert artisans skills certification.* A procedure would be created to certificate in a homogeneous way the skills of the artisans as well as the existing training programmes.

## **L – Actions related to the development of the product.**

These actions are focused in improving the product both in its design, so they are adapted to the consumers' demand, and in pattern forms and standardization on sizes and models. These actions refers to:

*L.1 Establishment of an Specific training programme for design in Peru and Bolivia.* Argentina should ease graduates participation.

*L.2 Diversification and innovation in the offer, adding other noble materials to develop new products.* This will allow to offer a bigger range of products and improve the clothes' comfort.

*L.3 Product development rescuing traditional knowledge.* That way the Andean iconography would be revalued, adapting the product to the international market demands.

## **M – Actions related to economical resources**

*M.1* Import and export taxes will be eliminated for artisan products. Creation of a support fund for exportation of camelids' crafts. This is fundamental for a real impulse to export quality craftsmanship.

*M.2* Establishment of a Regional Agreement for free camelids products movement which allows the creation of a Single Market and eases the commercial exchanges among the countries of the region.

*M.3* Increase the scope of the financial institutions in rural areas. The rural areas with a big amount of artisans must contact the financial institutions that offer financial products according to the reality of each sector, adapted leasing systems and working capital financing according to their activity.

## ROADMAP

**VISION 3:** Artisan companies correctly placed market, with sufficient support and technology, quality designs and products that give renewed value to traditional know-how

Critical factors	2011-2012	2013-2016	2017-2020
i. Actions related to market access		<div> <div>i.1. Development of marketing and promotion strategies and camelids-based fibres and textile diffusion</div> <div> <div>i.1.1. Promotion and presence in national and international fairs</div> <div>i.1.2. Development of a collective brand</div> </div> <div>i.1.3. Support the marketing and export management</div> <div>i.1.4. Support the embassies in the promotion of national products</div> <div>i.1.5. Better use of export support lines</div> <div>i.1.6. Promotion of public purchases</div> </div>	

# ROADMAP

**VISION 3:** Artisan companies correctly placed market, with sufficient support and technology, quality designs and products that give renewed value to traditional know-how

Critical Factors	2011-2012	2013-2016	2017-2020
i. Actions related to market access	i.2. Actions related to association		
	i.2.1. Promotion of artisans association		
		i.2.2. Development of electronic trade	
		i.2.3. Development of business plans	
			i.2.4. Implementation of a market control system
		i.2.5. Quality seal that certifies the Andean zone artisan product	i.2.6. Positioning artisan products at an international level
j. Actions related to technology and specialized services		j.1. Analysis of needs and location services	
		j.3. Development of equipment and plants for joint use as well as pilot plants	j.2. Development of technology according to the company size and demand j.4. Implementation of a Technological Surveillance System



## ROADMAP

**VISION 3:** Artisan companies correctly placed market, with sufficient support and technology, quality designs and products that give renewed value to traditional know-how

Critical factors	2011-2012	2013-2016	2017-2020
k. Actions related to productivity and RH training		<div>k.1.Improvement of productivity</div> <div> <div>k.1.1.Creation of strategic alliances to train competitive value chains</div> <div>k.1.2.Identification of productiveness indicators</div> </div> <div>k.1.3.Implement quality control systems</div> <div>k.2.HR Training</div> <div> <div>k.2.1.Inventory of experts to create regional training programmes</div> <div>k.2.2.Specific training and technical assistance programmes</div> <div>k.2.3. Regional Programme for career development and camelids' mastery</div> <div>k.2.4. Expert artisans skills certification</div> </div>	

## ROADMAP

**VISION 3:** Artisan companies correctly placed market, with sufficient support and technology, quality designs and products that give renewed value to traditional know-how

Critical Factors	2011-2012	2013-2016	2017-2020
I. Actions related to development of the product		<div>I.1. Establishment of a specific training programme for design in Peru and Bolivia</div> <div>I.3. Product development rescuing traditional knowledge</div>	<div>I.2. Diversification and innovation in the offer, adding other noble materials to develop new products</div>
m. Actions related to economic resources	<div>m.1. Import and export taxes will be eliminated for artisan products. Creation of a support fund for exportation of <u>camelids'</u> crafts</div> <div>m.2. Establishment of a Regional Agreement for free <u>camelids</u> products movement which allows the creation of a Single Market</div>	<div>m.3. Increase the scope of the financial institutions in rural areas</div>	

## 4. Argentina, Bolivia and Peru Agendas

In the closing session of the project held in Buenos Aires, the three delegations determined the immediate actions for each country to carry out to meet the Regional Roadmap.

### 4.1 National Agenda of Argentina

This agenda has the actions that Argentina must hold to cooperate with the regional Roadmap implementation. All the actions in it are associated to the institutions responsible to fulfill them. The actions have been sequenced according to the schedule in which to carry out.

- **Activities which are being developed**
  - ***Creation of stockpile centers.***  
Developed with MINAGRI's help
  - ***Human Resources training***  
To achieve the best training and education levels for the producers. The training is being done under CONYCET and the INTA's responsibility.
  - ***Artisan spinning***  
To improve the spinning practices in quality and productivity. The INTI is in charge of this activity.
  - ***Fiber's finessed and origin accreditation system***  
Under INTI and INTA's responsibility, a fibers' finesse accreditation system is being developed and will be a guarantee to marketing in new markets where camelids-base fibre is unknown.
- **Activities to develop during 2011 First Semester**
  - ***National and provincial Institutions and producers Inventory***  
This inventory would be developed by the INTA and the Ministry of Industry, Science and Technology
  - ***Creation of an R+D+i projects fund***  
Association and producers capabilities.

- ***Creation of a quality and prices information system***  
The information system must guarantee the transparency in price and quality and identify the spots in the market with a high commercial value.
- **2011 Second semester**
  - **Creation of a Camelids National Entity.**  
This institution is developed to creating camelids policies in Argentina, which will coordinate all the activity related to them and will attend primarily the creation and improvement of basic services and coordination of the regional activities.
  - ***Technological innovation***  
The MINCYT will create or strengthen the technological centers for the development of the sector such as quality fibre laboratories that will help the producer to know the fibre quality in situ.
  - ***Integrated management of flocks and desertification prevention***  
The Camelids National Entity will be in charge of developing this activity.
  - ***Sustainable management of the environment and preservation of biodiversity. Study of the animal charge.***  
MINAGRI and INTA are the institutions responsible of the activity
  - ***Association promotion***  
Producers association is an important base for the improvement of their situation. It is necessary to show the producers the advantages of association. The responsible institution is the MINCYT.
- **Activities to develop on the 2012 Second Semester**
  - ***Quality labels***  
To categorize the fibre in the stockpile centers using specialized personnel and with the help of an analysis laboratory, to classify and label the fibre according to its quality and color, having thus the possibility to have a traceability system. The MINCYT is responsible for this.
  - ***Transfer and technology adequation***  
To improve living standards it is important to achieve the higher aggregated value to the simple production of raw fibre. In the

stockpile centers, apart from classifying and labeling, the fibre can be cleaned and dehaired according to the quality rules, so it is fundamental to have an appropriate technology transfer to this centers. **MINCYT e INTI** are the responsables.

- ***Actions related to association***

Individual artisans have a limited production and are unable to fill a market. It is necessary for them to gather in associations that lead production and manage the marketing. These associations should develop business plans, apply new tools like the eCommerce, and obtain a quality seal of the artisan product. The responsible organization for this is the MINCYT.

- ***Analysis of need and service location***

This is for creating an Inventory of the Andean regional places which have artisan production using fibre processing equipment, as well as locating experts that offer their services.

This labor is underway and will continue until May 2012.

## **4.2 National Agenda of Bolivia**

This agenda has the actions that Bolivia must hold to achieve with the regional Roadmap implementation. All the actions in it are associated to the institutions responsible to fulfill them and the necessary means to do it. The actions have been sequenced according to the schedule in which to carry out.

- **Activities to develop during 2011 First Semester**

- ***Creation of the Camelids Bolivian Committee***

The Ministerios de Desarrollo Rural y Tierra, Educación y Desarrollo Productivo de Economía Plural is responsible for the creation of the Committee structure and regulation. A meeting for all the actors involved must be done.

- ***Inventory creation of the institutions related to the camelids productive complex***

In this inventory the Ministerios de Desarrollo Rural y Tierra y Desarrollo Productivo de Economía Plural and IICA will be involved and will be done through a national survey.

- ***Development of marketing and promotion strategies***

The design and implementation of this strategy will be COTEXBO responsibility and studies will be done to evaluate the local and international markets, supporting the performance of the FITEX Fair and other events for camelids-based product promotion.

- ***Creation and improvement of basic services***  
The Camelids Bolivian Committee will be in charge of the management to the competent institutions, to create a plan to improve the basic services in the producers living areas. They will start by doing a workshop in which the actions to carry on will be presented and prioritized.
  - ***Socialization and validation of productive records***  
The INIAF, PCI and SEDAG are the responsible and would carry on national workshops with the involved actors.
  - ***Project systematization and investigation***  
An Inventory and ongoing research projects systematizations related to production and transformation of camelids fibres will be conducted with the support of the ONUDI Unit in Bolivia, the INIAF and the UMSA-UTO Universities.
- **Activities to develop on the 2012 Second Semester**
    - ***Socialization and approval of an amplifying law for the native prairies***  
The development and approval of this Law is CIPCA, ANAPCA and the Ministerios de Desarrollo Rural y Tierra y de Medio Ambiente y Agua responsibility and will be performed through a Supreme Decree.
    - ***Promote the 6<sup>th</sup> National Camelids Fair***  
Among the marketing and promotion strategies will be promoting the celebration of the 6<sup>th</sup> National Camelids Fair, under the ANAPCA y Chuquisaca Governorship.
    - ***Development of products using traditional knowledge***  
The objective is to recover and systematized the development of works that link crafts and design to traditional Andean knowledge. Universities, designers of this sector and the Science and Technology Vice ministry will participate in this action.
    - ***Creation of Stockpile Centers***  
The objective is to create new stockpile centers and reactivate the existing ones. A sustainability assessing of the centers will be done and the funding will be focused on equipment, training and future purchases. This action is under the responsibility of Producers and spinning companies associations and will look for international support.

- ***Improvement of the Access to Information and Communication technologies***

Grant a better Access to the ICT's in camelids producer zones, experimental centers and productive centers. The Vice ministry of Science and Technology will negotiate with the ICT Directorate the expanding coverage of that zones.

- ***Implementation of an Information Network of South American and Bolivian Camelids***

The Ministerios de Desarrollo Rural y Tierras are the main responsible and should recover and update the existing information from the Universidad Católica de Santa María (Arequipa) and will count on the International Cooperation to create a Technical Office that will administrate the system.

- ***Development of inter-institutional R+D+I projects***

The Science and Technology Vice Ministry will be in charge and the will create a network of Institutes and Research Centers.

- **Activities to develop during 2012**

- ***Awareness and training for producers and transformers***

The need to strengthen the technical abilities of all the actors in the productive camelids chain requires a development of an awareness and training/specialization programme conducted by the Universidad Técnica de Oruro, the Universidad Mayor de San Andrés, the INIAF, the Ministry of Education and PROBOLIVIA. To start this actions it is necessary to have an inventory of qualified working force and to design and start those awareness and training programmes as well as technical assistance services.

- ***Development of fare trade rules for the camelids sector***

This would be an alternative for the development of the productive sector and requires the formulation and implementation of adapted rules. This act will give power to the producers associations, transformers industries and government institutions.

- **Activities to develop during 2013**

- ***Design and implementation of a Technological Centre specialized in the camelids sector***

This Center will have a technological development in cleaning and dehairing, a genetic improvement laboratory and camelid fibres quality certification laboratories among other technological development activities. It is necessary to develop a study in the Center to deal with the sub national Governments and to manage

the financial resources. In the creation of this Center the Science and Technology Vice Ministry, the INIAF, SENASAG, UTO, UMSA, FOTRAMA and COPROCA will be involved.

- **Activities to develop during 2014**

- ***Guarantee of origin of the camelids fibres***

Previous studies have to be done to get the guarantee of origin under the supervision of the Control Board, and the INIAF, Universities and a network of inter labs will be involved.

- **2015**

- ***Objective: to have highly specialized human resources***

To obtain that, it is necessary to have postgraduate training programmes (Master in Animal Science, Degree in textile design and fashion design, Ph.D., and others). The UTO and UMSA are the responsible.

#### **4.3 – National Agenda of Peru**

The actions to perform in Peru and the Region to achieve the Roadmap implementation are minutely detailed for the year 2011. Each action is lined to the regional and national institutions that are responsible of them and to the involved agents that must implement them.

#### **Activities to develop from 2011 to 2013**

- ***Regional Entity***

Following of the LOI, regulation proposal.

Creation of the NET ( legal device) POSSIBLE release in ALTEC OCTUBRE 2011 in Peru .

Agents: Peruvian institutionalism CONALPACA, PRODUCE, MINAG, COPROBA.

- ***Ongoing Project of the 3 nations with ONUDI***

Creation of a Roadmap Monitoring Center (in Peru) for the identification of indicators, with ONUDI's help and with a technical secretary. Development and monitoring of a specific web

Presentation of study findings in each country

Monitoring of indicators and agreed regional actions



Presentation of study findings in Barcelona, Spain, with fibre and finished garments' presentation

Agents: ONUDI, OPTI, OTCIT, PRODUCE, MINCYT

- ***Regional Laboratory Network***

Network establishment. Trials among laboratories. Andean rules

Creation of project a final report FFPG (Peru, Argentina and Bolivia)

Agents: OTCIT-PRODUCE,

- ***Regional Coordination Entity of breeders***

Agreement with Argentina, Bolivia and other countries associations

Regulation. Specific Web

Annual Meeting

Agents: SPAR

- ***Regional programme for the training of Graduates and Specialized Masters***

Proposal Project for training trainers: institutionalism, methodology, educational curricula.

Scholars Financial management in the involved countries.

Professionals' selection

Special programme for designing clothes and textile design

Programme and methodologies to rescue the ancient knowledge.

Exchange programme of professionals among the countries.

Agents: OTCIT-PRODUCE in partnership with Lima Universities and Arequipa and SENATI, MCYT

- ***Strengthening of CONALPACA***

Dissemination of the Regional prospective project in Lima, Arequipa and Puno. Annual Plans and monitoring of goals and indicators.

Inventory of national and provincial institutions and producers.

Inventory of producers to strengthen their role as policy articulator.

Annual Plans and monitoring of goals and indicators

Agents: Vice Ministry of Mype and Industry, MINAG. SPAR, IPAC.

To convene regional governments

- ***Creation of a Specialized Institute of investigation and training ( reengineering of CONACS)***

Creation of the Institute and financial management

Agents: MINAG-PRODUCE

- ***Strengthening and articulation of the CITES supporting the chain***

Meeting of the involved CITES of MINCETUR and PRODUCE, to create shared action plan in the year.

Monitoring of the shared actions plans and create a 2012 proposal.

Agents: OTCIT, PRODUCE, MINCETUR

- ***National CENSUS of camelids productors***

Budget management and census design

Agents: Agricultural Committee of the Congress, MEF-MINAG, INEI

- ***Approval of Technical and standardization rules***

Standardization of the fibre finesse. Creation of the FINCYT Project for Technical Assistance in the laboratory implementation of the reference under ISO 17025. Prototype proposal of an essay laboratory under the rule 17025 Assistance and attention to the final audit of the FFPG project. Creation of documentation for the IWTO.

To publish a design and fashion show catalog among the laboratories.

Resource management for the essay laboratory implementation of the third part of the chain. Training of human resources and management of equipment acquisition.

Agents: PRODUCE, INDECOPI, (CNT) CANALPACA, SENATI

- ***Internet access and use of the ITC's by the producers***

Implementation of the virtual CITE with support for an Employment fund project.

Centralized window of the National Bank in three physical centers (Tele-centers) in Cuzco, Arequipa and Puno.

Implementation of the virtual CITE with the support of an Employment Fund in the CITES of Arequipa and Puno and in alliance with Cuzco (at least 4 physical centers oriented to the second transformation companies)

Installation of the virtual CITE platform in 10 new centers in alpaca zones.

Creation of a Price information system and training to use it.

Traceability training in the primary part of the chain

Training of artisans and Mypes and their associations in the creation of projects and alliances with formulators.

Agents: OTCIT-PRODUCE, CONALPACA, MTC, INICTEL, FTEL, Telefónica, Banco de la Nación.

- ***Electrification of rural areas and construction and improvement of road networks***

Coordination with the High plateau initiatives, MTC. Project of rural roads.

- ***Training and Good Manners.***

Employment fund project post-shear/classification In Cuzco, Arequipa and Puno. Spread the results of the genetic studies and propose "good manners" in the genetic improvement. To involve the IST education and strengthen the good manners of the chain and the identity, from basic education.

To share and train with other countries human resources in Good manners: harvest quality, animal health, water and pasture management according to the field. To apply good techniques in the genetic development.

Complete management of flocks and desertification prevention. Parasites decontamination. Cold mitigation. Development of three training programmes in rural schools CETPROS e IST.

- ***To strengthen the technical support services of the CITES (sustainability).***

Specific projects for bankruptcy funds in the Stockpile Centers Services. To involve the MINAM in the control of mining companies. Diagnosis of affected areas in water resources and desertification. To propose a surveillance system of water. Control of sheep. Fodder identification. Training of breeders in the technological advances of saddles and bales. Dissemination.

- ***Sustainable management of the environment and biodiversity preservation.***

To involve the MINAM in the mining control.

Diagnosis of water resources affected areas and desertification.

To propose a surveillance system of sheep water control.

Regulation and water management standards. Training programmes. Incentives identification for breeders in the water control. Projects for participatory budgeting.

***Feeding and animal care.***

Fodder identification. Training of breeders in the technological advances of saddles and bales and dissemination.

Agents: MINAG and regional governments.

- ***Association***

To establish incentives and share good practices in national cooperatives and from Argentina and Bolivia.

To promote association, consortia and others.

Development of business plans of the consortia or associations.

Employment fund project in Cuzco, Arequipa and Puno.

Breeders cooperatives strengthen as well as other association forms with a business base. Clusters concepts.

Revisit the tax issue of association, that instead of encourage, it discourages.

- ***Actions related to economy and finance***

To make the mechanisms for the credit and guarantee Access more flexible (FOGAPI). To increase the range of the Financial institutions in rural areas. To create special lines in bankruptcy funds of D+I technological transfer in the chain.

Training of breeders and Mypes and their associations in creating projects and alliances with formulators.

Cofide, National Bank, Edpymes, AGROPERU, AGROBANCO, Guarantee funds.

- ***Stockpile centers and actions to organize the offer.***

To install at least 10 stockpile centers that give priority service to ITCs and to promote shearing good manners and classification. To promote municipal building or loaning of infrastructures.

Extension of stockpile centers and of their equipment in ICTs, shearing equipment, washing, classification and quality control (Wayra). Use of renewable energies.

To create specific funds for the rancher' stockpile centers in plateau areas. To add quality labels.

- ***Coordinated programme of interconnected stockpile centers and training programmes***  
 Training of shearers, fleece and fibre classifiers. Auction technology with clear price information (price and quality).  
 Evaluation and adjustment to training programmes with online support.  
 Accreditation system of finesse and origin.
- ***Guarantee of Origin.***  
 Study for the identification of the guarantee of origin of alpaca and vicuña.  
 Obtaining of the GO. To establish requirements. Accreditation system of finesse and origin.
- ***Social Responsibility***  
 To spread and adapt the different agents to the SR concept. The role of the local companies in the genetic improvement of camelids.
- ***Social Responsibility and Fare Trade.***  
 To use the fare trade experiences to the camelids.  
 To identify fare trade opportunities.  
 Agents: IPAD, Chambers of Commerce, Society of Industry and Mining and Petro Industry.
- ***Added value in production areas.***  
 Development of market studies to define products with added value that can be elaborated around the stockpile centers or in the breeders' communities.  
 Identification of technologies to develop those products according to the market studies standards.  
 To expand the market studies and products lines.
- ***Access to markets.***  
 Development of market studies and marketing strategies and to sell products with more added value. Identification of support mechanisms for the management of the inner and outer merchandising. To strengthen the COPROBA alpaca. Promoting public procurement of products made from alpaca fibre.  
 Promotion and presence in national and international fairs in partnership with the tourism sector.  
 Legal framework for the use of cannon resources. Working with embassies and trade representations in promoting the products of the camelids' chain. Design and development of the product.

- ***Technologies and specialized services***

- 

Analysis of the needs and localization of services, specially the CITEs.  
Identification of specialized equipment and pilot plants for joint use.  
Creation of bankruptcy funds projects, canon and others for equipment acquisition and personal training (specific lines in FIDECOM and others)

Agents: CITEs, CONALPACA, Universities, IST, SENATI

- ***Quality and productivity improvement programmes***

Strengthen of the Technical Standards Committee of alpaca and other fibres. Proposal of technical rules for garments, dyes and others.

Coordination with the potential partners about the reference laboratory implementations in Peru with camelids fibres and fibre-based products.

Selection of 10 companies for the pilot implementation of 5 S –Kaizen in Lima and Arequipa (With JICA support).

Implementation of other quality-control systems.

FINCYT II project for the implementation of the laboratory and HR training

Agents: OTCIT-Produce, in partnership with CITEs

- ***Human resources training***

Inventory of skilled manpower and professionals. Proposal of a training programme for professionals, technicians and operators. Design of the textile design and fashion design careers.

Financial Project and international agreements for the implementation of the textile design and fashion design careers in Lima and Arequipa.  
Professional training by the careers.

Methodologies and rescue programmes to rescue the traditional knowledge and imagining products for the products development.

Agents: Ministry of Education, Universities, OTCIT-Produce

## 5. Conclusions and Recommendations

After analyzing the present situation we can say that there is a bleak picture for high plateau camelids breeders, among which the 80% to 90% of them have subsistence economies with annual incomes between 400 and 900 dollars per family.

This poverty situation of the camelid breeders have caused a sharp genetical deterioration in the alpacas and llamas hers which have lead to animals with high consanguinity and high hybridization levels, which means having a high percentage of low quality fibres with indeterminate colors. Also it has led to a lack of quality culture.

This situation is aggravated with the deterioration of rangelands and the draught and contamination effects.

If we add all these to the fact that Andean camelids fibre is dispensable because of its low position in the market and the tendency to use light product instead, the future outlook for camelids fibre and for his producers can be very critical.

This precarious situation contrasts with the existence of a millenarian textile tradition in the High Plateau area, with manufacturing skills of a high artisan quality and the development, mainly in Peru, of a really important and modern textile industry that processes all kinds of fibres.

That lead us to the following **Conclusions:**

- The current herd of Andean camelids divided between Argentina, Bolivia and Peru accounts for 90% of world population, so if the actual deviations are not corrected, it will be threatened by the steady progress in emerging countries with camelids and with a high technology and significant resources.
- If the present problems of the alpaca and llama breeders are not corrected, they will start abandoning the activity while the fibre quality will be getting worse. This phenomenon will happen first in Peru and then in Bolivia

- Camelids have a special meaning in Andean countries which link them to its ancestral culture. Missing them will also be missing an important part of its culture.
- The way out of poverty of more than 200.000 people related to camelid breeding along with the recovery of the fibre quality is a target to achieve.

Because of all these, some **Recommendations** have been established:

### **1. Institutional Agreement among Argentina, Bolivia and Peru**

For the development of joint actions among Argentina, Bolivia and Peru, the measures in relation to improve the camelids fibres and its presence in international markets, have to be strengthen and it is necessary to get to an agreement among the three countries with the highest level of political compromise. Under this agreement, the following actions would be developed to establish synergies, economies of scale and a constant knowledge exchange.

- Creation of an **Andean Camelids' Regional Observatory**. The observatory will be constructed by Argentina, Bolivia and Peru and will be in charge of applying the results of the prospective study *"The future of Andean's products In the High Plateau and the Central Valleys of Andes/Camelids-based textiles"*
- Argentina, Bolivia and Peru must designate an entity responsible for the coordination of the politics related to camelids that will act as an interlocutor for the Regional observatory.
- The first step to start the Observatory would be the creation of a **Regional Secretariat** that in a 12 month period will elaborate a working plan in which the projects to be done and the needed means for its development will be described. To do that, the Secretary's office will keep permanent contact with the designed representatives of each country.
- To start the Secretary's office, Peru offers itself to have the headquarters and will elaborate a proposal that should have Argentina and Bolivia's support and will be used to ask for an expansion of the project allowing to have more financial means during the first 12 months.



- It is recommended to celebrate study presentations in each of the three countries with the presence of the public responsible and the stakeholders.

## ***2. Improve producers' life quality***

Apart from creating an Observatory, it is fundamental improve producers' life quality giving them basic infrastructure. If this is not done it will produce a gradual abandonment of the breeding activity and a migration of the producers to the cities, which will lead in the medium term to the disappearance of the productive activity. This requires providing infrastructure related to health, education, transport, electricity and telecommunications.

## ***3. Human Resources Formation***

The improving of the sector depends widely on the existence of formation plans that facilitates the extension of good manners in the breeding and production of camelids to obtain a good quality fibre. The recovery of the traditional knowledge along with new technologies should be the base for the HR training plans.

## ***4. Commitment to innovation, technology and design***

It is necessary that innovation and technological development reach the producers and artisans through Technological Innovation Centers in the strategic productive areas considered of interest and to develop a technological offer adapted to the needs and capabilities of all the links in the value chain.

## ***5. Environmental preservation***

Environmental preservation needs to establish committed policies and strategies, viable and long lasting. The climate change, the mining industries, the lack of forage and the livestock overpopulation attempt the sustainability of the world and the proper camelids development. It is necessary to start actions that allow the recovery of water supplies and implement supply systems with decontamination technologies and spread the good practices.

## **6. Association promotion**

A very important pillar to achieve the vision is to promote the association between producers and also artisans, in which the most important value should not be the sales but trying to develop all the commercial and business aspects.

## **7. Creation of stockpile centers**

The existence of Stockpile fibre centers properly located is considered one of the necessary elements for producers' offer organization and fibre classification according to different qualities. The centers will have different infrastructure such as laboratories, information systems, training courses, etc.

## **8. Guarantee of origin Regulatory Board**

Initial studies have shown that camelid-base fibres are not fairly valued in international markets as a natural fibre with the highest standards of quality and comfort. A creation of an Andean Camelid-base Fibre Guarantee of Origin Brand is needed to credit the fibre quality and serves as an introduction and commercialization tool in international markets. This measure helps the value chain's actor and creates an articulation instrument among the fibre producers and the textile companies. This measure could be held individually in each country but it is stronger when done regionally, so it should be done by the Regional Entity as a strategic action.

## **9. Actions related to the development of marketing and promotion strategies and camelids-based fibres and textile diffusion**

Camelids' fibre need a strong marketing strategy and to have a place in regional, national and international markets. This action is closely linked to the creation of an Andean Camelid-base Fibre Guarantee of Origin Brand and need collective effort from all the different actors of the value chain and the institutions of the three countries.

## LIST OF ACRONYMS

AIGACAA	Asociación Integral de Ganaderos de Camélidos de los Andes Altos
ANAPCA	Asociación Nacional de Productores de Camélidos
ARCCA	Asociación Regional de Criadores de Camélidos
ATPDEA	Andean Trade Promotion and Drug Eradication Act
CAF	Cooperación Andina de Fomento
CIPCA	Centro de Investigación y Promoción del Campesinado
CIT	Centro de Investigaciones Textiles
CONALPACA	Comisión Nacional de la Alpaca
COPROBA	Comisión Nacional de Productos Bandera
COPROCA	Compañía de Productos de Camélidos
COTEXBO	Conglomerado Textil Boliviano
FAO	Food and Agriculture Organization
FOTRAMA	Fomento del Trabajo Manual
IICA	Instituto Interamericano de Cooperación Agricultura
INIAF	Instituto Nacional de Innovación Agropecuaria y Forestal
INTA	Instituto nacional de Técnicas Agropecuarias
INTI	Instituto Nacional de Técnica Industrial
IPAC	Instituto Peruano de la Alpaca y Camélidos
MINAGRI	Ministerio de Agricultura de Argentina
MINAGRI	Ministerio de Agricultura de Argentina
MINCETUR	Ministerio de Comercio Exterior y Turismo
MINCYT	Ministerio de Ciencia, Tecnología e Innovación Productiva
OEA	Organización de Estados Americanos
PCI	Project Concern International
PRODUCE	Portal del Ministerio de la Producción de Perú
SEDAG	Secretario Departamental de Agricultura y Ganadería
SENASAG	Servicio Nacional de Sanidad Agropecuaria e Inocuidad Alimentaria
UTO	Universidad Técnica de Oruro