

# “Green Gold” Component 4 Facilitate Market Access by Linking Yak Herders to Processing Companies Final Project Report 15.11.2013 – 31.12.2017



**P r e s e n t e d   t o**

SDC

Ulaanbaatar, Mongolia

04/2017

**Your contact person**  
within GFA Consulting Group GmbH is

Anna K. Weber

**“Green Gold” Component 4  
Facilitate Market Access by  
Linking Yak Herders to Processing Companies**

**Mongolia**

**Final Project Report  
15.11.2013 – 31.12.2017**

**Address**

GFA Consulting Group GmbH  
Eulenkrugstraße 82  
22359 Hamburg  
Germany

Phone +49 (40) 6 03 06 – 366  
Fax +49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



## TABLE OF CONTENTS

1	Introductory remarks.....	1
2	Objectives and main achievements of GGC4 activities from 2013 to 2016.....	1
2.1	Objectives and scope of GGC4 activities from 2013 to 2014 .....	1
2.2	Product sheets: achievements, lessons learned and best practices of GGC4 interventions .....	4
3	Monitoring of final progress with regard to project indicators .....	89
4	Feedback of partners regarding GGC4 interventions and collaboration .....	92
4.1	Respondents and methods of the evaluation.....	92
4.2	Needs and benefits of stakeholders.....	93
4.3	Conclusions .....	97

## LIST OF TABLES

Table 1: Overview of Product sheets with GGC4 achievements, lessons learned and best practices .....	5
Table 2: Progress Reporting Against Project Indicators .....	89
Table 3: Activities respondents did not agree with or which provided less benefits.....	95
Table 4: Stakeholders' recommendations for future project activities .....	96

## LIST OF FIGURES

Figure 1: Strategy of GGC4.....	2
Figure 2: Intervention logic of GGC4.....	3
Figure 3: Companies and cooperatives by percentage .....	93
Figure 4: Methods of collecting opinions by percentage.....	93
Figure 5: Job title of respondents by percentage.....	93
Figure 6: Role of respondents' organizations in the value chain .....	93
Figure 7: Main purposes and needs to collaborate with GGC4 (by percentage) .....	94
Figure 8: Advantages and benefits from involvement in the project (in percent) .....	94
Figure 9: Relevance of project activities & efficiency of collaboration with GGC4 team (%) .....	97

## ANNEXES

Annex I	Questionnaire for the final assessment of GGC4 project activities by stakeholders
---------	---

## ABBREVIATIONS

AFPUG	Aimag Federations of Pasture User Groups
FPP	Financial Product Producers
GGC4	Component Four, Green Gold Project SDC
GOTS	Global Organic Textile Standard
MASM	Mongolian Agency for Standardization and Metrology Government Regulatory Agency
MoFALI	Ministry of Food, Agriculture and Light Industry
MWCA	Mongolian Wool and Cashmere Association
PPF	Primary Processing Factories
PUG	Pasture User Groups
SDC	Swiss Development Cooperation
SRM	Cooperatives for raw material collection

## 1 Introductory remarks

This is the final report of the component 4 of the Green Gold project (GGC4) of Swiss Agency for Development and Cooperation (SDC). It covers the entire project period from 15 November 2013 to 31 December 2016 and comprises the following parts.

In part 2, the final report provides first of all a summary of the project objectives, scope of the project activities and the partners for project implementation. This is followed by an overview of the results achieved by implementing the project activities within GGC4. In order to make this as useful as possible this is done by compiling innovations and instruments which were developed by GGC4 in collaboration with the respective stakeholders and which were introduced to upgrade the value chains. They represent the lessons learned and best practices in all relevant interventions of the project. This information is provided in the form of so called “**Product Sheets**”, which follow a uniform structure. They are intended to make future replication and mainstreaming of the results of the work of GGC4 and its partners easier. Additionally, the product sheets can be used for learning from the project and also for Public Relation purposes.

In part 3 the results achieved are put into reference to the project indicators. This follows the documentation in the progress report 2016/2 and is repeated here in order to document the final situation at the end of the project.

In part 4 the report gives room to beneficiaries and stakeholders to provide their opinion on project implementation and communication with the GGC4 project team. The summary of a survey carried out with the main stakeholders of the project provides actors’ feedback and suggestions for a possible continuation of the project.

The externally reviewed financial account, detailing the final status of the funds utilized and any outstanding advances, was provided to SDC as a separate document.

## 2 Objectives and main achievements of GGC4 activities from 2013 to 2016

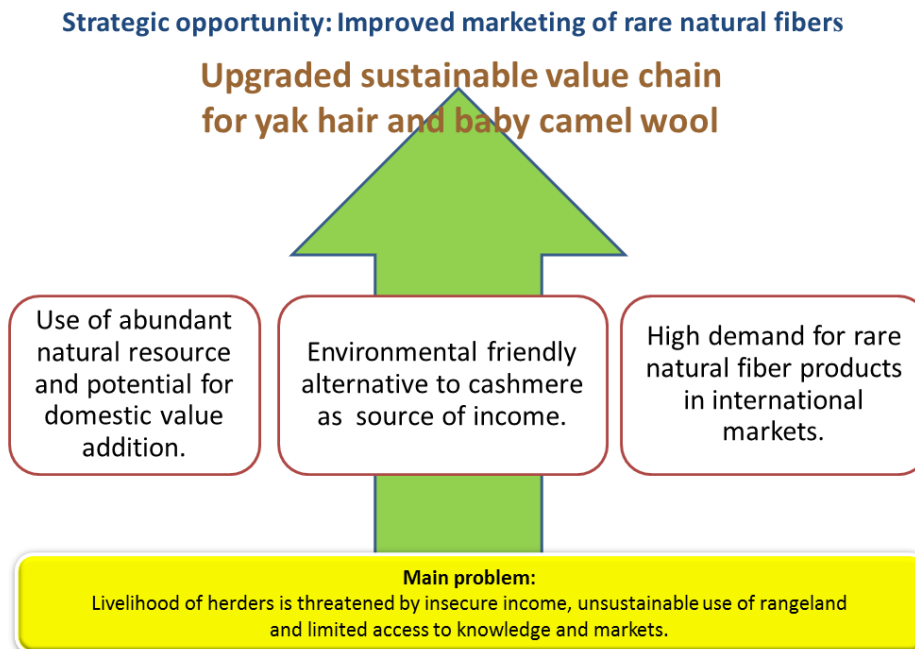
First of all a summary of the project objectives, scope of the project activities and the partners for project implementation is provided in this chapter. This is followed by an overview of the results achieved by implementing project activities within GGC4; this is done in form of product sheets, which are stand-alone products to be used also in future PR or knowledge sharing.

### 2.1 Objectives and scope of GGC4 activities from 2013 to 2014

SDC commissioned the consortium consisting of GFA Consulting Group GmbH and GEFAK mbH from Germany with the task to implement “Component 4 Marketing” of the Green Gold project in the period between November 2013 and December 2016.

The Green Gold project seeks to tackle the main threats for the **livelihood of herders**: insecure income, unsustainable pasture use, and limited access to knowledge and markets. Three great opportunities are available to overcome these problems: huge natural resources for domestic value addition, yak and camel hair as environmental friendly alternatives to cashmere, and high demand for rare fibers in the international markets. As a conclusion, the main strategy was created: to upgrade the value chain for yak hair and baby camel wool and to make it more sustainable (see Figure 1).

Figure 1: Strategy of GGC4



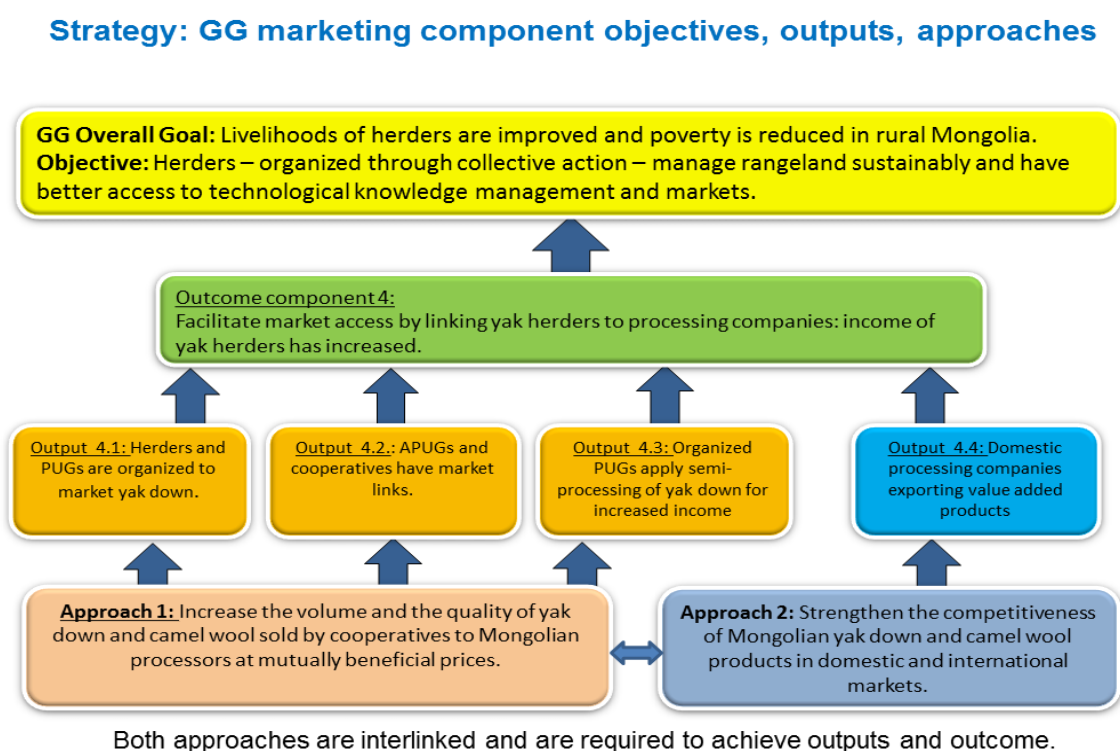
At project start, GGC4 conducted a thorough **analysis of the value chains** for yak hair and camel hair. First, all important actors were identified, from Pasture User Groups (PUG), herders and their cooperatives, to processors and manufacturers as well as buyers in international markets. Then hundreds of herders, most cooperatives and all companies at national level were visited and analyzed. This allowed identifying the real problems and bottlenecks in the value chains, because of which the available opportunities could not be fully used.

On the supply side, challenges included: the still ineffective sharing of tasks between PUGs and cooperatives; the low quality of combing and sorting raw materials; insufficient management, liquidity and infrastructure of cooperatives. As a consequence cooperatives had no direct contact with processors. Therefore, other traders dominated the collection and sales of natural fibers but they did not care about the quality of raw materials and increased the costs of raw material supply.

On the demand side, processors and manufacturers complained about the low quality and insufficient supply of natural fibers, the less competitive designs, and the limited access to international markets.

As a consequence, the **strategy** for GGC4 was developed. It was jointly agreed with all stakeholders in a workshop in March 2014 in which herders, cooperatives, processors, manufacturers as well as associations and the state bodies participated. The objectives of GGC4 were defined as follows: Market access is facilitated by linking herders to processing companies and income of herders is increased. Two main approaches were created to achieve this: 1) Increased volume and quality of fibers sold by cooperatives directly to companies at fair prices; 2) Creating more competitive products and providing access to international markets (see Figure 2.).

Figure 2: Intervention logic of GGC4



The **spatial scope** of the project activities was defined by SDC and covered the seven western Aimags of Mongolia: Arkhangai, Bayankhongor, Bayan-Ulgii, Gobi-Altai, Khovd, Uvs, Zavkhan. In 2016, the Aimags Hovsgul, Overkhantai and Umnogobi were added to the project area.

Based on the good results which were achieved with development of the value chains for natural fibers, SDC commissioned the consortium to implement a pilot project for the upgrading of the **value chains livestock/meat and hides/skins** in the period January 2015 to December 2016. Here, the project area was restricted to the Arkhangai Aimag and Zavkhan Aimag.

Active partners of GGC4 in implementing the project activities comprised of all relevant stakeholders actors in the respective value chains and wider market system: herders, PUGs, Aimag Federations of PUGs, the National federation of PUGs, herder primary and secondary cooperatives, natural fiber processors, manufacturers of garments and textiles, Mongolian Wool and Cashmere Association, meat processors, Mongolian Meat Association, Mongolian Leather Association, Mongolian State University of Life Sciences, Mongolian State University of Science and Technology, numerous research and training institutes, the Ministry of Food, Agriculture and Light Industry. In addition, GGC4 cooperated with a large number of national experts and few international experts in order to provide the required inputs for development of the value chains and strengthening of value chain actors. The excellent cooperation which was established with



this network of partners and which was maintained throughout the project implementation was the basis for achievement of the objectives. In doing so, GGC4 together with the partners created numerous innovations and introduced many instruments, which will support the development of the value chains also in the future. Also, the co-production of many products of the project facilitated the sustainability of GGC4 as actors in many ways broadened and deepened their capacities and motivation to deliver services needed in the Value Chains.

## 2.2 Product sheets: achievements, lessons learned and best practices of GGC4 interventions

In the following, a collection of **product sheets** is presented. By using a uniform structure they compile lessons learned and best practices for all relevant interventions of the project. This makes future replication and mainstreaming of the results easier. The product sheets can easily be used to **inform** stakeholders in and beyond Mongolia (Public Relations), and facilitate **learning** (for other projects and stakeholders planning similar projects). This aspect is of great importance and should be facilitated through SDC as well as through the consortium.

Each product sheet is **designed as a stand-alone product** that can be used individually and/or in different combinations. This is why design details differ from the general design of a report (e.g. pages are numbered per sheet, tables and figures are not numbered and therefore do not appear individually in the lists of tables and figures of this Final Report etc.)

Each product sheet is structured into four chapters, which respond to the respective questions:

1. **Needs and challenges:** What was the situation at the start of the project and why was it necessary to intervene?
2. **Innovations and instruments:** Which approaches and methods were used by GGC4 to overcome the needs and challenges? Which lessons learned and best practices have been developed? Which value chain actors and partners cooperated with GGC4?
3. **Achievements:** Which results have been achieved until the end of the project?
4. **Future transmissions:** What should be done to expand or solidify the achievements? Which open questions remain?

The following table provides an overview of the product sheets which are contained in this final report. Product sheets 1 to 15 cover the results achieved in the value chains for yak down and for baby camel wool, while product sheets 16 to 18 cover the achievements in the value chains for livestock/meat and for hides/skins. The order of the product sheets follows the position in the value chain, where the respective intervention was implemented, starting from input supply through processing and manufacturing and ending with marketing. Initially the respective value chain analysis and upgrading strategy is presented.

**Table 1: Overview of Product Sheets with GGC4 achievements, lessons learned and best practices**

#	Product Sheets
1	Analysis and strategy for upgrading of the value chain for yak down and for camel wool
2	Nucleus herd of Terkh brown yak in Arkhangai Aimag as model for development of livestock productivity
3	Optimized combing of yaks for higher productivity of yak down preparation
4	Development and introduction of combed baby camel wool for innovative, cashmere-like products
5	New methods for sorting, packaging and labeling of natural fibers for improved value, quality and traceability
6	Herder women groups qualified for local value addition
7	Strengthening of institutional value chain actors
8	Effective sales of natural fibers through match making between herder cooperatives and processors
9	Optimized processing of baby camel hair for improved quality and usability
10	The “United Yak Brands of Mongolia” established as marketing organization and as brand developer
11	Updated Mongolian National Standards (MNS) of natural fibers and products for better competitiveness
12	Identifying the ideal approach for international certification to overcome market entry barriers
13	Geographical identification (GI) as a tool to improve the competitiveness of camel wool
14	Using media to support the marketing of yak down and baby camel wool
15	Support of international marketing through exhibitions and match making with international buyers
16	Analysis and strategy for upgrading the value chains of livestock/meat and of hides/skins
17	Advantages of cooperation and safety in the meat value chain – examples from Germany
18	Development of the value chain for premium meat



## Green Gold” Project Component 4 (GGC4): Facilitate Market Access by Linking Yak Herders to Processing Companies - Mongolia 2013-2016 “



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Agency for Development  
and Cooperation SDC

### Product sheet: Analysis and strategy for upgrading of the value chain for yak down and for camel wool

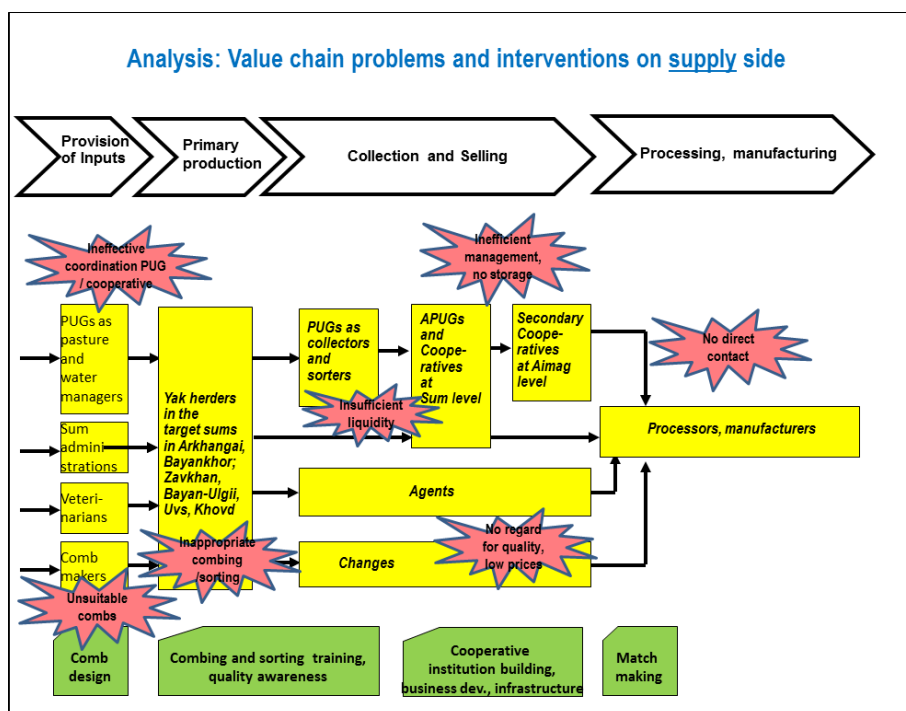
#### 1. Needs and challenges

Together with national experts, GGC4 conducted a study on supply and demand of these natural fibers in order to align project interventions to real potentials and obstacles in the value chains for yak down and camel wool. The results were then incorporated into the GGC4 strategy for upgrading of the value chains and used for planning approaches and activities of GGC4 and its partners.

#### Analysis of the supply side of the yak down and camel wool value chain

The supply study was conducted from 15 January to 15 February 2014 and provided comprehensive and valuable information on the actual supply capacity of raw materials, methods of preparation, and current sales channels of raw materials. It also presented relevant actors on the supply side (APUGs, cooperatives) with their status, activities, establishment, members and management as well as their roles in the supply chain. The study showed the existing quality system in the chain and still limited awareness among herders and their cooperatives about quality of raw material. Potential and conditions for increasing the supply capacity and quality were shown, focusing on the willingness of herders to intensify and improve collection from existing animals and on building potential partnerships between herder cooperatives and processors. Finally, the needs for qualification and consultation were identified such as training of herders on combing, sorting, first processing, training and consultation of cooperatives and closer collaboration with processors.

The study on raw material supply presented important inputs for the understanding of the supply side of the value chains for yak down and for camel wool. First of all it was possible to identify the bottlenecks in the value chains as starting point for the activities as part of the upgrading strategy. The bottlenecks are presented in the following graph of the value chain, which was developed with the ValueLinks methodology.



In order to increase the collection of yak down, an increase in income from yak down for herders is necessary. This can be achieved by:

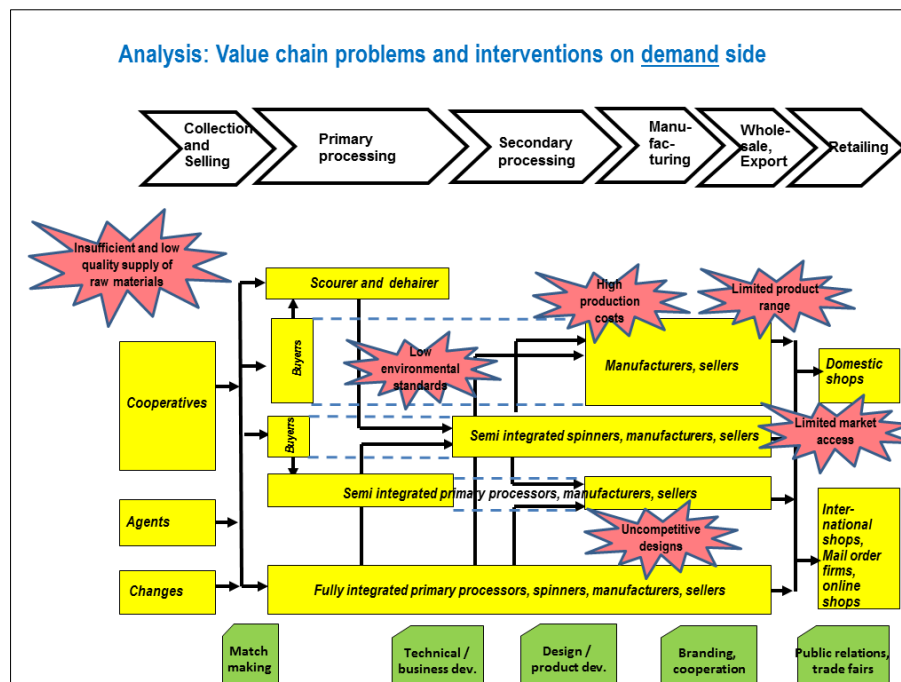
- improving the effectiveness of combing (through combing training and new combing facilities and tools

- direct selling of yak down from cooperatives to the processors at higher prices
- better information on the relationship between the quality of raw materials and the quality of the final products including training on sorting of fibers according to the criteria established by processors.

The study found that the camel herd of Mongolia has experienced a dramatic decline and the herd is only slowly growing again. Only 36% of all camels were living in the project region. Therefore the influence of the project on the camel wool value chain was rather limited. The main constraints for a higher volume of camel wool collection were the low prices of the raw material and the shortage of manpower for this time consuming activity. Most herders did not engage in sorting of camel wool which resulted in higher costs for processing. As regards the sales channels the role of cooperatives was more dominant for camel wool than in the case of selling of yak down. GGC4 based the upgrading strategy on the approach to finding ways by which baby camel wool would achieve higher prices and encourage the herders to better utilize this valuable source of fiber. More research was therefore required to investigate the appropriateness of various camel wool fibers for new and high quality products, which could then be introduced to the international markets.

#### Analysis of the demand side of the yak down and camel wool value chain

From November 2013 to February 2014, GGC4 conducted an analysis on the demand for yak down and camel wool of domestic processors and on the demand potential of the international market for knitted and woven products from yak and camel fibers. The analysis pointed out various bottlenecks which need to be overcome. They are presented in the following graph of the value chain, which was prepared with ValueLinks methodology.



Based on this analysis the following recommendations were developed:

- Processors shall be enabled to purchase raw materials directly from herder cooperatives at determined quality standards and conditions.

This will help them to have a steady supply of higher quality fibers.

- The capacity of manufacturers to design garments and accessories needs to be improved and the product range to be expanded.
- Manufacturers should be assisted to gain better access to important export markets which have not been penetrated so far, especially in Europe.

## **2. Innovations and instruments**

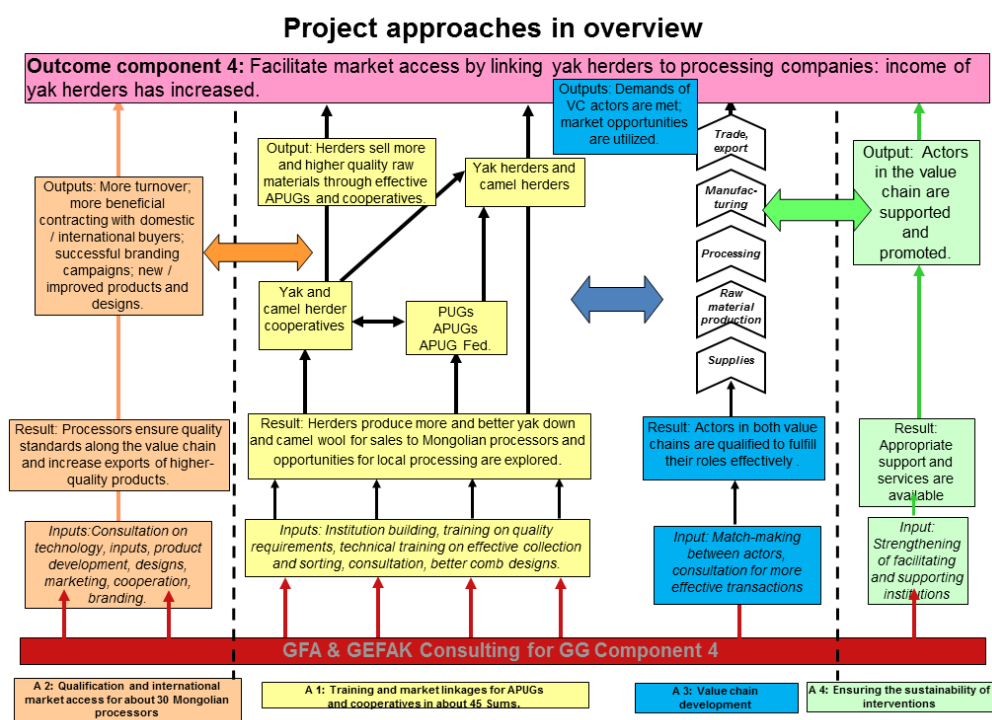
The analyses of raw material supply and demand for finished products provided important inputs for the understanding of the value chains for yak down and for camel wool. The two main problems are on the supply side the

insufficient volume and low quality of raw materials and on the demand side the limited access of processors to the international markets.

Based on the conclusions and the respective recommendations, the strategies and approaches contained in the graph were developed to upgrade the value chains.

On the supply side (herders, cooperative) GGC4 needed to support the increase of the volume and improve the quality of raw materials sold by herder cooperatives to domestic processors; sales at prices which offer sufficient incentives for herders to increase production and allow processors to manufacture in a profitable manner.

On the demand side (processors, manufacturers) GGC4 needed to strengthen the competitiveness of the companies in processing raw materials and in manufacturing finished products of high quality and at production costs, which make them competitive in the international markets.



These two strategies are interlinked with each other and both needed to be executed successfully in order to achieve the expected outputs and objectives of the project. To this end, four parallel approaches were defined, which supported each other, led to the effective development of the value chain and by involving external facilitators supported the sustainability of the achievements.

The strategies were expected to be supported by the favorable market position of Mongolia. The competitors from China were pre-occupied with manufacturing cashmere garments due to the high demand and to the export tariff rebates of up to 13% from their Government. Chinese yak down and semi-finished products are much cheaper than the relevant offers in Mongolia. The organic, social enterprise, eco-friendly and environmental stories behind Mongolian products were well documented and used to promote all the brands. Mongolian processors needed to better establish their brands on the international market and provide the necessary public relations work especially with regard to the sustainability of sourcing. Mongolian products have to benefit from the social and environmental aspects but should also be desired on basis of their design and quality.

Based on this strategy, GGC4 developed the following interventions.

#### GGC4 Short Term Plan of Action

- Train herders on improved combing and fiber sorting to standard requirements agreed with processors.
- Introduce more productive combing tools and facilities, as well as clear packaging and labeling.
- Link herder cooperatives to processors in a formal manner and help to build trust between them.
- Introduce legally binding contracts detailing the responsibilities and obligations of each party.
- Support processors to overcome the identified weaknesses (high production costs, unreliable supplies).
- Assemble best manufacturers under banner of 'United Yak Brands of Mongolia' who can represent the entire process from raw material to finished product. The UYBM would operate as an informal but cohesive unit and combine with herder cooperatives in converting the best raw materials into 'export ready' items.

#### GGC4 Medium Term Plan of Action

- Assist processors with recommendations on technical issues for improving finishing methods, garment construction and equipment selection.
- Strengthen capacity of cooperatives and clarify the sharing of tasks between them and APUG
- Support linking of herder cooperatives to processors to improve quality and reliable supply of raw materials.
- Support presentation of collections of selected manufacturers to major exhibitions and showcase them under the joint banner (e.g. The Green Showroom in Berlin, Magic in Las Vegas).
- Support semi-processing of yak down and camel wool at soum level for local value creation (hand spinning; hand knitting).
- Organize branding competitions for yak down and camel wool products.
- Explore feasibility of registration of geographically identified products.
- Explore feasibility of breeding highly valuable yaks.

#### GGC4 Long Term Plan of Action

- Work with processors and manufacturers on experimentation with complimentary fibers (such as baby camel wool) to enhance quality and appeal and extend the use of yak fibers. Look at longer natural fibers that can be used in conjunction with yak to blend to achieve finer yarn counts.
- The Western European markets of Italy, France, Germany, Switzerland, Austria, Belgium and United Kingdom are initial target for match making between international brands and Mongolian manufacturers. The second target are the United States and Canada then followed by the Scandinavian countries.
- As manufacturers gain experience in dealing with demands of foreign customers satisfactorily they can then begin to look at the prospect of promoting and selling under their own respective brands.
- Support presentations at major exhibitions with new collections and concept of collective representation.
- Launch an UYBM website describing the ethos of the group and linkages between to herder cooperatives and create links into each of the processors websites. Support documentary films on the collection and processing of natural fibers and their link to the nomadic culture.

### **3. Achievements**

Information on the status of the supply of raw materials and the demand for finished products from the respective analyses was shared with stakeholders. It enabled them to make better decisions on their future role in respective markets and for their further cooperation. It also served as a reference for the base line situation of the project.

The development strategy for the value chains was presented at the value chain workshop on 17 March 2014. As a result, the general understanding of the value chains for yak down and camel wool was generated among all stakeholders as a basis for their effective roles in value chain development.

At the same event the value chain upgrading strategy and the approaches proposed by GGC4 were accepted by the stakeholders (APUGs, cooperatives, processors and manufacturers) and were supported throughout the project implementation.

### **4. Further transmission**

Through effective project activities and close collaboration with all stakeholders it was possible to overcome or at least lessen the obstacles which were discovered in the analysis and to upgrade the value chains. Further activities can be foreseen on the basis of a repeated analysis which identifies the obstacles which currently exist (see section 4. in other Product Sheets for details).



GFA Consulting Group GmbH  
Eulenkrugstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)







## **Product sheet: Nucleus herd of Terkh brown yak in Arkhangai Aimag as model for development of livestock productivity**

### **1. Needs and challenges**

In general, the yak herds in the project regions comprise of animals of no specific breeds. Therefore, the benefit herders can derive from their herds is determined more by chance than purposefully. This refers to value not only of yak down, but also of milk and meat, which are the other main benefits herders obtain from these animals. Since decades there has been practically no more breeding of yaks and the respective knowledge and skills have nearly been lost. In order to contribute to overcoming this problem, GGC4 has developed an approach to support the strengthening of a particular yak breed. This pilot served not only to generate more productive animals but also to recall the knowledge and skills for nucleus herd management.

### **2. Innovations and instruments**

#### Establishing the nucleus herd

Since many years it is well known that the brown haired yaks of the “Terkh” breed in Arkhangai aimag have more productivity not only of milk and meat than yaks of other breeds; they also have yak down of a particularly fine quality and light brown color. In order to better utilize this valuable resource, GGC4 has endeavored to support the establishment of a nucleus herd of “Terkh” breed brown yaks in Arkhangai aimag. The aim of this pilot is to create and develop local brand products based on the specific features of the brown yak of “Terkh” breed through partnership between local administration, herder cooperative, processing company and GGC4. In this pilot project the partners included: the Industrial and Agricultural Department of Arkhangai aimag Governor of-fice, “Bayalag Ulzii” LLC manufacturing company and “Khorgiin Misheel” cooperative in Arkhangai aimag.

All partners discussed the pilot, agreed to jointly implement it and signed the cooperation agreement in June 2014. The project was implemented in 3 phases: planning and launching (June-July 2014), implementation (July 2014 - October 2016) and evaluation (November 2016).

The total investment cost of establishing the nucleus herd consisted mainly of the cost for purchasing 20 yaks (1 bull and 19 cows) at the value of 43.5 million MNT (about 18,000 CHF). From this initial investment, 40% were financed by “Khorgiin Misheel” cooperative, 37% by “Bayalag-Ulzii” LLC and 23% by GGC4. In spring 2014, 18 calves and in spring 2015, 15 calves were born. In May 2015, the nucleus herd comprised 53 animals and in June 2016 it had grown to 82 animals, of which 45 are calves. In the same year the “Khorgiin Misheel” cooperative, who is the owner of the herd, started to offer breeding animals to herders.

In order to identify the stock of the nucleus herd GGC4 purchased special ear marks in Germany and had all the animals marked by a veterinarian. Experience had shown that the earmarks available in Ulaanbaatar are not suitable for these wild animals.

#### Research on wool characteristics of the Terkh brown yak breed

The Mongolian “Law on Protecting Livestock Gene Pool and Health” contains clauses on preserving the gene pool of selective breeds, development of nucleus herds, ensuring the health of the livestock, increasing roles of breeding personnel and to providing accurate information to public. Therefore it was mandatory to conduct a research on the quality of the brown yak down and to include the results in the gene bank information database.

Since establishment of the nucleus herd in 2014, GGC4 supported studies on the characteristics of the down and compare them with other yak colors. This information was presented to the National Center for Animal Breeding Fund of nucleus herds of Mongolia. For the studies, GGC4 collaborated with this National Center and with the “Renewable Resource Innovation Center” NGO (RRIC) of the Research Development Institute for Light Industry. Terkh Brown yaks are also studied by the Arkhangai research branch of the Research Institute of Animal Husbandry. Their task was to get samples from all yaks of the nucleus herd and identify the particular quality

of down of this breed (structure, diameter and length) and compare these with reference indicators. The quality indicators of Terkh brown yak would then be integrated into the National Center for Animal Breeding Fund. This is a precondition to register Terkh brown yak under the geographical indication product quality logo.



*Collection of down samples of Terkh brown yak nucleus herd in Tariat soum, Arkhangai province*

The RRCI conducted comparative research to study the particular quality of Terkh brown yak down from May to December 2015. The following table shows the comparison of Terkh brown yak breed fiber characteristics with other yak breeds, as established in research work of the scientists T. Bat-Erdene and Ts. Khishigjargal.

Indicators	Age	Result	Bat-Erdene.T	Khishigjargal.Ts
<b>Down content in %</b>	1-2 years	70.62	56.2	68.8
	3-4 years	58.00	44.33	42.73
	5 and more years	52.15	40.43	36.9
<b>Mid-type hair content in %</b>	1-2 years	11.04	25.57	15
	3-4 years	11.49	15.73	22.15
	5 and more years	17.21	11.41	9.5
<b>Coarse hair content in %</b>	1-2 years	13.26	18.15	15.7
	3-4 years	19.78	41.12	34.95
	5 and more years	25.92	48.16	53.5

According to this comparative analysis, the down content of baby yak from Terkh brown yak is on average 15-20% more, intermediate hair is 14-15% less, and long hair content is 2-6% less than that of ordinary yaks in Mongolia. Yak down combed from the main part of the body of Terkh brown yaks contains 83.4% down which is almost the same yield as with goat cashmere. Another advantage for processing is the much longer fiber length of terkh brown yaks compared to other yaks. These advantages would allow herders to increase the yak down yield and their income.

#### Registration in National Gene Bank of Ministry of Food and Agriculture (MoFA)

GGC4 supported the registration of the nucleus herd in the National Gene Bank of MoFA in order to maintain the possibility to acknowledge Terkh brown yaks as a geographically distinct breed. This is supposed help to attract more attention of the herders and to further research the improved productivity of this breed.

An agreement was concluded in February 2016 with the Gene Bank of MoFA to register the “Terkh brown yak”. A team went to Arkhangai aimag to register the Terkh brown yaks into the national gene system with support of the Gene Bank experts and representatives of the AFPUG in Arkhangai Aimag in June 2016. Until then, the nucleus herd had grown to 82 animals, of which 45 were calves. Each yak was ear tagged, documented with photographs and data was handed over to the gene bank. The registration process has been concluded at the end of 2016 and the relevant information is available online (<http://nlis.mofa.gov.mn/nlismanagement/>; registration numbers from 651357006308 to 51357006389). This registration can help to attract more attention of the herders and to further improve the productivity of this breed. The gene bank experts and the cooperative also started a close cooperation in order to improve the development of this yak breed in future.



### 3. Achievements

This pilot project achieved the following results:

- Setting up of a joint working group comprising state and administrative bodies, herder cooperatives and manufacturers with the common goal of breeding development.
- Establishment of a nucleus herd of Terkh brown yak which grew from 20 to over 80 animals during 3 years.
- Identification and documentation of the superior features of yak down of the Terkh breed over other breeds.
- Acceptance of results of the comparative research by the Mongolian National Livestock Gene Pool Center
- Inclusion of the nucleus herd in the National Gene Pool database (<http://nlis.mofa.gov.mn/nlismanagement/> (registration numbers from 651357006308 to 51357006389).
- Establishing preconditions for registration of the Terkh brown yak as a geographically identified resource

### 4. Further transmission

This pilot project has shown how in close collaboration between the value chain actors, supported by state and administrative bodies, a nucleus herd can be established and maintained. It has also enabled the stakeholders to obtain experiences in cooperating with each other.

The nucleus herd is in the ownership of the “Khorgiin Misheel” cooperative in Tarit soum, who provided the largest share of the initial investment and who is responsible for maintaining the herd and for breeding management. The cooperative is now in the position to sell animals from the herd to its members as breeding stock. This will improve the productivity of the herds of individual members and in the long run increase their income.

The further development of this specific breed should be ensured in close cooperation between the research institute, veterinary specialist in the soum administration, the cooperative and manufacturing companies. This will lead not only to conducting more research in the future but also to register the Terkh brown yak as a geographically identified resource on behalf of the cooperatives.



GFA Consulting Group GmbH  
Eulenkrogstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)





## **Product sheet: Optimized combing of yaks for higher productivity of yak down preparation**

### **1. Needs and challenges**

The research on the supply of yak down conducted by GGC4 in 2014 showed that only two thirds of herders prepare yak down from their animals. Even from those herders who prepare yak down only 40 percent use more than 60 percent of their yaks for combing. It was established that on average yak herder do not utilize over 30 tons of yak down per year. On the other hand, there are processors and manufacturers who are in great need of steady supplies of high quality yak down for their operations.

According to herders the main reasons for not preparing yak down are: lack of market access or lack of knowledge about selling (9,7%), lack of knowledge of proper combing techniques (12.9%), lack of labor (27.9%), low price of yak down (49.6%). Herders are hesitant to prepare the yak down as output per animal is low and their big body size and aggressive nature require much time and extra labor force. It was also noted that most herders use the same small combs for combing goats and yak, despite the fact that yaks are larger and wilder animals and therefore cannot be easily handled. For yaks it would be beneficial to use a large comb, which reduces the time during which the yak must be held.

The survey also showed that 58% of herders sold their yak down to middlemen, 6% to other individuals and only 33% to cooperatives and 3% directly to processing factories. Therefore herders benefit less from their yak down as a large share of the value added is absorbed by the middlemen.

The problems in this area were leading to an insufficient productivity of yak down preparation as well as low income of herders from sales of yak down. This is in contrast to the excellent market perspectives of yak down products, with their distinct features (very warm, soft and attractive natural colors).

### **2. Innovations and instruments**

In order to improve the productivity of yak down preparation GGC4 developed following methods:

- Improved techniques for combing of yaks;
- Identification and introduction of more productive combs;
- Designing and testing of fences for yak combing.

#### Herder training for more productive combing techniques

Starting in 2014 GGC4 provided trainings on new methods and techniques of preparing yak down to herders in all target areas with large yak population. The trainings were conducted in close cooperation with the processing companies from Ulaanbaatar. The presence of their representatives during the trainings served as important step in increasing the partnership between herders and producers. Through the trainings, herders understood the consequences of raw material quality on the productivity at the processing stage and on the value of the raw material and of the final product. Through involvement of herder cooperatives herders were better prepared and willing to supply their yak down to the cooperatives which in turn sold it directly to processors and manufacturers. By cutting out the previously dominating intermediary traders (changes), herders could immediately receive higher sales prices and increase their income.

Additional yak down combing trainings were organized together with AFPUGs in 11 soums of Bayan-Ulgii, Bayankhongor, Zavkhan and Khovd aimags. They aimed at increasing the volume of prepared yak down in those soums with less experience of yak down combing. During the regional expansion of the mandate from SDC, GGC4 has organized yak down combing trainings also in Galt, Shinelder and Jargalant soums of Khuvsgul aimag together with AFPUG of Arkhangai aimag. In these trainings, a total of 92 persons (39% female) participated, including mainly herders but also soum administration, breeding and veterinarian specialists. During the one day trainings, participants saw the combing demonstration and took part in practical training by which

they were qualified with improved yak down combing skills and also with the use of the more productive comb from Tibet.

#### Identification and introduction of more productive combs

One important element in improving the productivity was the introduction of more appropriate combs after careful testing. The best method of increasing the yak down preparation is by combing the yak with the appropriate larger comb and by employing a particular manual technique. During the yak combing trainings GGC4 tested three types of combs produced in China and Mongolia in comparison with herder's own combs which they use for combing of cashmere goats.



China  
Qinghai Region

China  
Tibet

Mongolia, Khungun  
Tsagaan Edlel

620 combs of three types together with an evaluation sheet for comb testing were distributed to the herders. The results of the evaluation show that the comb produced in the Biological Institute in Qinghai region of China was considered as the most effective one by herders. With this comb herders collected 30% more yak down and spent 9 minutes less time in combing compared to their old combs. GGC4 has informed cooperatives how they can make orders for purchasing this effective comb through the AFPUG National Association.

#### Designing and testing of fences for yak combing

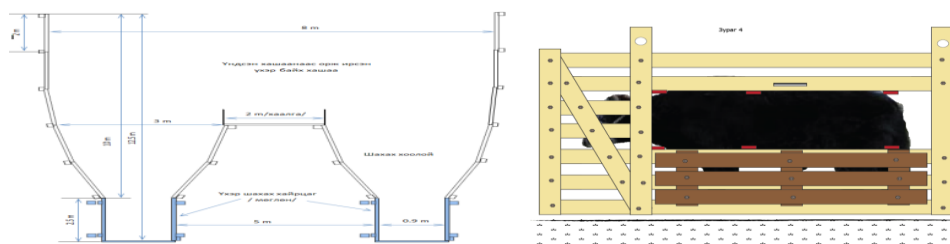
Combing yaks is a difficult, labor demanding and time consuming activity. The animals need to be captured individually, tied, brought down to the ground and held tight by one or two persons while one or two persons do the combing. This work is hard for the herders, potentially harmful for the yaks, and demands much manpower. Herder households who today have only few active family members have little possibilities to comb their yaks. Therefore GG C4 commissioned the design of a new fence which is transportable and has two corridors. The design and construction of fence was coached by a lecturer of the Science Technical University of Mongolia. The advantages of the fence are:

- Two yaks can be combed simultaneously;
- Female herders and teenagers are able to comb yaks in a short period of time, which
- makes it easier to distribute work among the family members;
- Yaks do not need to be tied and held;
- Combing is less hard for herders and less harmful for animals;
- The fence is transportable on a small lorry (2 tons);
- The fence can also be used for veterinary purposes (vaccinations etc).

In 2016 GG C4 and partner cooperatives continued to test fences for combing, for which 3 million MNT (about 1,200 CHF) was invested for each fence.

A fence for baby camel combing was tested in Tugrug soum in Gobi-Altai aimag. FAPUG Gobi Altai developed this fence based on the baby camel height and size. It is therefore different from the fences which were introduced for yak combing. Herders are very satisfied with the multi-purpose fence. A newly designed metal fence in

Gurvanbulag soum, Bayankhongor was used for combing yaks. Mr. Enkhbold, head of APUG Gurvanbulag improved the original wooden fence. Now it is commonly used and moved from one place to another easily.



### 3. Achievements

The following table shows that increased combing results came from aimags in which trainings took place in 2016. The volume of yak down in other aimags without yak combing trainings decreased. While this is also due to climatic conditions it shows that training encourages herders to comb their yaks regularly.

	<b>Aimag</b>	2015 (tons)	2016 (tons)	Difference
1	<b>Arkhangai</b>	29.1	29.3	0.2
2	Bayankhongor	4.4	3.8	-0.6
3	Bayan-Ulgii	3.4	3	-0.4
4	<b>Khovd</b>	3.3	3.5	0.2
5	Uvs	0.6	0.5	-0.1
6	Zavkhan	3.25	2.3	-0.95
7	<b>Uvurkhangai</b>		4	4
8	<b>Khuvsgul</b>		3	3
	<b>Total</b>	44.05	49.4	5.35

For example, as result of the trainings in 3 soums of Khuvsgul aimag the herders prepared 380 kgs of yak down and supplied that to Khorgiin misheel cooperative in Tariat soum of Arkhangai aimag. At the same time the training was used to inform the herders about the structure, benefits and activities of PUGs. This can support the expansion of this GG concept to Huvsgul aimag, which is planned for the future.

Herders expressed their satisfaction that the GGC4 created an opportunity for them to increase their income through combing of yaks while prices of other raw materials are dropping every year. More herders then contacted the AFPUGs and requested to be invited to similar trainings in the future.



*Wooden combing fence*

The fences were tested by cooperatives in Tariat soum of Arkhangai province and Gurvan bulag soum of Bayankhongor province. The results of testing show that the fences help small herder households to comb their yaks in an easier way with less manpower. This increases their yak down production and also helps to obtain yak down with less contamination of dirt. The costs of one fence are 3.5 million MNT (1,750 CHF). The fences used for testing were handed over to the cooperatives who helped to organize the tests.



Herders from Gurvanbulag soum, Bayankhongor aimag received a transportable livestock combing fence made from metal. Apart from combing yaks, it was used for goat combing, sheep shearing and livestock vaccination saving time and decreasing work load. This specific fence has been used to comb over 1,500 yaks, prepare 3 tons yak down, to vaccinate over 26,000 livestock and to shear over 10,000 sheep.

When considering the cost and benefit of this facility it is obvious that it is most useful in joint ownership and operation by members of one PUG or local members of a cooperative. This installation adds to their services and strengthens the cohesion inside the group. As the fence can be moved with a small lorry it could be used in various locations by the members of one cooperative.



*Herders combing yaks using metal fence*

#### **4. Further transmission**

This activity was implemented by GGC4 in close collaboration with partner cooperatives. It was also supported by the respective Aimag APUG associations. The technical partner has been the Science Technical University of Mongolia.

Training for more productive yak combing is an ideal first activity in soums where the GG project wants to initiate support. Herders can immediately see the benefit and are open to apply innovative methods.

During the testing of fences GGC4 prepared a TV program which was broadcast on Mongol herder TV. This provided good guidance for herder groups and cooperatives to build such fences in their own regions.

The installation of combing fences can be organized by the cooperatives possibly with co-funding from processors. Further dissemination of these fences in the soums with large yak population and their proper management by cooperatives will help herder families to make use of this productive tool.







## **Product sheet: Development and introduction of combed baby camel wool for innovative, cashmere-like products**

### **1. Needs and challenges**

According to the supply analysis conducted by GGC4 in 2014 Mongolia has the potential to produce 1,200 tons of camel wool annually. While the domestic need is only 300 tons, there is a good opportunity to increase the export of this natural fiber. However, camel wool faces many challenges such as low fiber yield at the initial stage of production because of high content of coarse hair. Due to the high degree of contaminations (dirt, dust) not all of them can be removed from the raw wool which can damage dehairing equipment. The remaining micro dust also makes the work environment unhealthy for workers.

Moreover, due to the high amount of cheap and low quality camel wool from China on the world market, camel wool prices are decreasing constantly. This is aggravated by the decreasing demand for raw camel wool due to lower interest of consumers for conventional camel wool products worldwide.

Finally, the environment in which the Bactrian camel lives is badly affected by the grazing habits of the cashmere goats. These animals, which are ever increasing in number, graze entire plants which in the long run leads to overgrazing and desertification. Finding an alternative to goat cashmere would reduce the pressure on herders to further increase the goat herds. Following this there was the need to improve the image and perception of camel wool in the local and international markets. The challenge was to create an innovative product, which could compete with goat cashmere but is environmentally more sustainable.

### **2. Innovations and instruments**

Based on Mongolian companies' previous experiences of with baby camel wool, GGC4 experimented with this new natural fiber. Initial research concentrated on the comparison between wool from adult camels and from baby camels.

Following a series of trainings in 2015, camel herders from Govi-Altai and Bayankhongor aimags prepared 1,200 kg of combed hair harvested from two distinct local breeds: the Dukhun Tunglag brown camel native to Govi-Altai aimag and the Lamyn Gegeen red camel from Bayankhongor aimag. As the following table of test results shows, the combed baby camel hair is superior to sheared baby camel wool and to sheared camel wool and to sheared camel wool.

INDICATORS		ADULT CAMEL	BABY CAMEL	BABY CAMEL
Method of preparation		Sheared	Sheared	Combed
Age of camel (years)		Over 3	1,2,3	1
Quality classification		2 grade	1 grade	Premium
Quality indicators	Average fineness, $\mu\text{M}$	19.5	17.5	15.5
	Average length, mm	44	38	40
	Content of coarse hair	5%	3%	1%
Production yield	After washing	55%	60%	63%
	After dehairing	60%	70%	80%
	After primary processing	33%	42%	51%
	After spinning	80%	82%	91%

Secondly, the research aimed at the question, how baby camel wool must be prepared in order to be a successful alternative to goat cashmere.

Then it would be possible to make garments and textiles from this most lightweight, soft and fine baby camel wool which are successful on the markets.

Therefore GGC4 developed a strategy to support baby camel wool, which can better attract the interest of processors and of consumers. To this end GGC4 arranged fiber tests of baby camel wool from two different breeds: Lamiin Gegeenii Ulaan from Bayankhongor aimag and Tuvkhun Tungalagiin Huren from Gobi-Altai aimag (later for these breeds a certification as geographically indicated product was also achieved). The test comprised 58 samples from different herders in 4 soums and from 1 and 2 year old camels whereby the wool was collected by shearing and combing.

The test results first of all showed that the mean fiber diameter of 1 year baby camel wool is 16.4 mikron and 2 year baby camel wool is 17.4 mikron, which is close to the fiber diameter of goat cashmere. Secondly, the test results show that in the case of combed wool of one year old baby camels the down content is 2.8% higher, coarse hair is less by 2.0%, fiber length is longer by 2.8 centimeter and dust and dandruff is less by 0.8% than sheared wool. It can be concluded that the ideal technique for collecting baby camel wool is combing and not shearing as it improves the quality of yarn and of the final product.

Based on these interesting test results GGC4 developed the optimal method for combing of baby camels. It combines in the first step shearing of tops of coarse hair and in the second step combing of the fine down. This reduces the length difference between the down hair and the coarse hair of the camel. It has greatly increased the production yield and quality and helps herders to achieve higher income from this new type of natural fiber. In the year 2014 this approach was used by GGC4 for the first time in Mongolia in close collaboration with Pasture User Groups (PUGs) in Gobi-Altai aimag and with the garment manufacturer Bayalag-Ulzii in Ulaanbaatar. It was also supported by the Mongolian Wool and Cashmere Association (MWCA). The method can be seen in the following pictures.



### 3. Achievements

In 2014 GGC4, conducted pilot trainings for baby camel combing in two soums of Bayankhongor and Gobi-Altai aimags. Based on this experience the project developed the handout and training program for herders.

In May 2015 GGC4 organized trainings for herders together with herder cooperatives. They aimed at introducing the new method of combing baby camel as well as sorting and packaging of the combed wool in accordance with the requirements of the processors.

A total of 13 trainings were organized in the targeted project soums in Bayankhongor, Gobi Altai, Khovd and Uvs aimags which have a large resource of camel wool. The trainings were organized for 1 day, which comprised half day classroom training and half day practical training for combing of baby camel.

In total, 363 herders (42% female) were qualified and learned the new combing method for baby camels. During the trainings a video was produced and disseminated to the respective AFPUGs. Likewise GGC4 has used in trainings for camel herders and it was made available to Mongol Herder TV for public broadcasting.

The project developed handouts with suggestions on how herders can increase their income by supplying good quality baby camel wool which meets the processors standards. Especially the new method of combing the baby camel wool and the joint selling through their herder cooperatives was introduced to the herders. The handouts were distributed to herders in 16 soums of 4 aimags.

As part of the baby camel training, AFPUGs motivated the herders, e.g. Gobi-Altai AFPUG organized the competition “Who is the fastest baby camel comb”. The winning team combed one baby camel in 10 minutes, obtaining 1.8 kg of wool. Apart from showing prepared slides in the classroom training, products made of baby camel wool were shown to the herders. In the field training, combs, scissors, bags and brushes were used.



GGC4 promoted baby camel wool combing in various events, for example on 16 February 2016 in the conference “Camel as heavenly animal” during the camel festival for Gobi region in Bayangobi soum of Baynkhongor aimag. Several fashion shows with baby camel products were also organized with support of GGC4.

In 2015 herders made the selective cutting of 1.3 tons of camel wool, the sorting and washing process was done by “Altai cashmere” LLC and the dehairing (coarse fiber removal process) was done by “ECB” company. The average yield at the end of the primary processing was 52%, the coarse fiber content in the sorted wool was 1%, and average micron measurement of the combed baby camel hair was 15.5 mikron with length of 44 mm. That makes the features of baby camel hair equal to those of goat cashmere.

Due to the lack of experience with this new natural fiber the processors were not prepared to pay a sufficiently high price for the combed baby camel wool. Therefore the National Union of Pasture User Groups NGO bought 1.2 tons of combed baby camel wool and conducted processing tests. The spinning of yarn was done by “Altai cashmere LLC” and resulted in 500 kgs of baby camel yarn, which was distributed by the AFPUG association to four interested manufacturers. They designed and produced garments and accessories against compensation of the production costs. Finally many types of dresses, accessories and home textiles were produced which were owned by the NAFUG. The garments and textiles were successfully showcased at the “Green Show Room” fashion exhibition in Berlin, Germany, in January 2016. The well designed and soft products made from this innovative natural fiber attracted the interest of many potential buyers.

Based on the proven high market potential for baby camel products the processors increased their demand for this natural fiber. The cooperative could successfully respond to this due to the intensive combing training. It was possible to increase the volume of combed baby camel from 1.2 tons in 2015 to 13.7 tons in 2016. 26.7% of total baby camel was prepared by the new method of shearing coarse hair and combing down hair.

It is assumed that combed baby camel wool will increase in future because of high demand and competitive prices offered by processing companies. The practice to comb baby camels will take time to adopt as many herders outside of target soums of the project still need to learn about this new and effective method of camel combing.



The new method of is now a widely accepted best practice that benefits all actors in the supply chain by decreasing the processors cost, increasing the value of baby camel wool, and increasing the income of herder families.

#### 4. Further transmission

This very innovative activity of GGC4 was implemented in close collaboration with AFPUG Associations in Gobi Altai, Bayanhongor Aimags, with the National AFPG Association, with processors such as Bayalag Ulzii”, “Altai Cashmere”, “Blue Sky Cashmere” and “Mongol Nekhmei”.

The price of combed baby camel wool is about 10.000 MNT/kg compared to about 4.000 MNT/kg for sheared adult camel wool. Therefore, baby camel wool has advantages for herders and processors. It is expected that in future the rare baby camel wool will be used for high quality garments, while the common adult camel wool will be used for lower quality garments, home textiles, filling of mattresses, linings etc. This product related differentiation of the traditional raw material camel wool can be seen as an innovation, which was initiated and supported by GGC4.



GFA Consulting Group GmbH  
Eulenkugstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [kruq@gefak.de](mailto:kruq@gefak.de)





## **Product sheet: New methods for sorting, packaging and labeling of natural fibers for improved value, quality and traceability**

### **1. Needs and challenges**

High quality garment and textile products demand high quality raw material which depends on improved collection of fibers by herders and their cooperatives. This concerns the first step of fiber collection (see separate product sheet) but also the following step of raw material handling. In the past cooperatives did not sort different fiber qualities, did not use appropriate transport bags and were unable to provide the information to enable traceability of raw materials.

For example cooperatives used to supply natural fibers to processors in non-standard bags (in fact used plastic bags of various sizes and types). When such bag is ripped while opening, the wool can get damaged and small plastic pieces can get mixed into the wool resulting in damaging equipment and contamination of yarns and products. Moreover, the non-identical sized bags make calculation of volume and transportation difficult and make standardized labeling almost impossible. As another example cooperatives were unable to record the purchases of natural fibers from herders in a standardized and efficient manner, which made it difficult, to ensure traceability.

Improved sorting, packaging and labeling of natural fibers are therefore important tools to improve the product quality, ensure traceability of raw materials and strengthen the trust between cooperatives and processors and between manufacturers and their customers.

### **2. Innovations and instruments**

In order to tackle these issues, GGC4 designed and introduced various new systems for preparation of raw materials:

- Price differentiation for sorted raw materials;
- Registration of purchases of raw materials from herders;
- Improved packaging for quality improvement and systematic labeling for better traceability.

#### Price differentiation for sorted natural fibers

Natural fibers from a specific animal can be categorized in two ways: by color or by age of the animal or in these two ways combined. Many laboratory tests have shown that the wool of younger animals is finer than that of older animals. It is also known that the main color types are distributed unequally. Especially the lighter colors are very rare, but on the other hand are in great demand because they can be dyed without bleaching. The color distribution of 3 relevant animals is as follows.

- Color of yaks: 63% - black, 14% - brown, 8% - grey, 7% - white, 8% - motley
- Color of camel: 56,1% - brown, 34,9% - red, 7.8 % - other, 1.2% - white
- Color of goat: 43.3% - red, 39.4% - black, 11.0 % - white, 6.3 % - grey and other

With regard to color and animal age GGC4 has developed specific grading systems for yak down and for camel wool. For yak down the white/grey hair shall be sorted separately and for the light and dark brown hair sorting should be between young and older animals. For camel hair also white hair shall be sorted separately and darker hair should be sorted in 3 age groups.



## Registration of natural fiber purchases from herders

[illegible]

### Labelling system

 Name of herder	<i><u>T.Dorj</u></i>
Number of membership	333
<u>Colour</u>	<i>Brown</i>
Classification of age	<i>Young</i>
Weight, kg	24.5



Бэлтгэн нийлүүлэгч хоршооны нэр	Хөдөөтэй 16 дүм бэй
Аймаг, сум	Баянхонгор Баянхонгор сум
Матчын /БАХ-ын нэр	41 Мандал (Мандал сум)
Баслаг боодлын дугаар	04
Түүхий эдийн нэр	Ганцагч нэгдсэн нэгдсэн
Түүхий эдийн ангилал (онго ба нас)	түүхий
Бохир жин	83кг
Цэвэр жин	82 кг
Чанар шалгасан хүний нэр	
Савласан огноо	2015.06.21



- 2 -

### 3. Achievements

This price differentiation was introduced in 2016 and was partly used for supplies from some Aimags to some processors. However, it was not yet fully installed. The main obstacle which was observed is the reluctance on the side of processors. They prefer to sort raw materials with their own trained staff and they want to avoid the payment of the premium for the more valuable fibers from light colored and young animals. However, by doing so they take the risk that herders or cooperatives do some initial sorting, remove the more valuable light colored fibers and sell the less valuable dark colored fibers in bulk to the processors. If processors are concerned about this risk they can demand that cooperatives indeed sort the raw materials in the proposed manner.

In 2014, GGC4 has introduced the registration book to document the purchases of yak down and camel wool by the cooperatives. The project has received comments and suggestions from 3 cooperatives, which tested the book for one year. In 2015, the registration book was updated and then distributed to all cooperatives who are involved in yak down and camel wool preparation. All cooperatives are using this documentation tool. This has become a good step to improve the registration of sales of raw materials from herders to cooperatives and also to ensure the traceability of the raw material.

The project distributed 1,000 high quality bags with tags to the cooperatives (capacity each about 100kg). These bags can be used several times as processors were asked to return them to the cooperative upon delivery. This initiative not only enabled cooperatives to use proper bags for wool supply to the processors but also introduced more informative labels into the value chain. They clearly show the volume and quality of the contents and ensure the traceability of the raw materials. The system of packaging and labeling was widely implemented by the cooperatives. The benefit of the superior bags and of clear labeling were so obvious that cooperatives fully and quickly integrated them into their operations.

The improved sorting, packaging and labeling represent important preconditions to improve the quality of the raw materials and enable the later certification of processing and of the products.

### 4. Further transmission

The improved methods for natural fiber handling were developed and introduced in close cooperation with the herder cooperatives on one side and the processing companies on the other side. These methods are a good example how innovations can be introduced to the value chain through cooperation between the value chain actors. It is crucial for cooperatives to maintain the new systems for registration, packaging and labeling. This will increase the traceability of the product origin, and improve the quality of raw materials and products.

There is need to make the new system of sorting and price differentiation according to the value of specific raw materials more accepted by the value

chain actors. Processing companies need to further experience and become aware that cooperatives are indeed able to sort the fibers according to the agreed standards. This allows processors to concentrate more on the processing issues and provides herders and cooperatives with a larger share of the value added.

The bags are only available through bulk order from China, which presents a problem. In 2016, the GGC4 was unable to order the bags, as the supplier in China requested a minimum order of 500 bags for which sufficient demand was not registered among cooperatives. The detailed contacts of the supplier of the bags have been handed over to the AFPUG association. It will organize further orders in the future on behalf of the cooperatives.



GFA Consulting Group GmbH  
Eulenkrogstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)





## Green Gold” Project Component 4 (GGC4): Facilitate Market Access by Linking Yak Herders to Processing Companies - Mongolia 2013-2016 “



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Agency for Development  
and Cooperation SDC

### Product Sheet: Herder women groups qualified for local value addition

#### 1. Needs and challenges

The rural areas provide valuable raw materials for processing firms and in this way help to create economic values especially in Ulaanbaatar. In the home areas of the herders relatively little value added can be created since herder cooperatives have little facilities for primary processing etc. There is a great need for additional sources of income from natural fibers, especially for women in the rural areas. During summer, women herders are busy but in winter some of them live in soum centers with their kids attending school. Therefore summer is the proper time to both train women and for making products from natural fiber. Therefore, GGC4 supported a pilot, by which groups of herder women were enabled to generate additional income from local resources.

#### 2. Innovations and instruments

##### Training in yarn spinning and felt making for female herders

GGC4 provided 10 spinning wheels, 10 knitting machines, 1 carder and 4 circular knitting (nitel) machines to women herder groups in the legal form of NGOs in Khovd, Bayankhongor, GobiAltai andUvs aimags in order to provide opportunities for the generation of income. In 2014, GGC4 organized hand spinning trainings for female herders in 3 locations. In total, 32 women were supported by obtaining semi-processed raw materials, receiving spinning training and provision of spinning wheels. The spinning trainings were conducted in Gobi-Altai and Bayankhongor aimags.



*Participants of spinning training and felt making training*

In this and other cases the equipment was handed over to the NGO as legal entity of the herder women groups. It is therefore property of the entire group and not of individual women. It is also physically stored in the location used by the group. This ensures that even in the long term old and newly joining group members can make use of the equipment. In case women make products with the provided equipment they do this on their own expense and have the right to sell the products individually. However, normally the sales are organized jointly e.g. at a stand of the group at exhibitions in Ulaanbaatar.

In the same year 2014 a felt making training was held in Khovd aimag with cooperation of the “Wool craft support center” in Ulaanbaatar. Later, this NGO supported the direct sales from the women groups to selected buyers such as shops for handicrafts in Ulaanbaatar.

The female processor groups tested the use of production waste (coarse hair and short down) as raw material. To that end GGC4 connected women groups to processors in UB to obtain dehaired yak down and camel wool. This is an innovative way to turn production waste into a raw material for income generation of women. In result of these trainings female herders were able to increase their income and start small scale value added production in their local areas.

### Training in hand knitting for female herders

Based on the positive result of the spinning training, GGC4 organized hand knitting trainings for female herders. Three groups of female herders with a total of 21 women were supported by obtaining yarn, receiving knitting trainings and provision of knitting machines. Also in this case the equipment was handed over to the groups in the legal form of NGOs, stored in the group location and can be used by the interested women. The knitting trainings were conducted in Bayanlig soum of Bayankhongor aimag, Durgun soum of Khovd aimag and Ulaangom soum of Uvs aimags.

As a result of the knitting trainings, small hand knitting workshops were established in the three aimags and started production. In order to achieve sustainable operations of these small workshops, refresher trainings for the female herders, on the job practice in larger factories and improvement in product design and quality were provided. In response to the request from Govi-Altai aimag participants, an advanced level knitting training was provided for three women in Ulaanbaatar from 12 to 16 October 2016. It was guided by a master specialist from Altai Cashmere company. The participants self-financed costs of their stay while the project financed the fee for instructions.



*Advanced knitting training in Ulaanbaatar*

The main intention behind the training was to ensure the knowledge transfer from women who received trainings to herder women in rural areas in the long-term thus contributing to the improvement of their overall income level. Participants learned and practiced to knit hats, sweaters and pants during the training and they suggested including younger people below 30 years to give them also a chance for learning new skills. The skills can be transferred to them by the older and already qualified members. For the group, this is also an effective approach to attract new and more members.

### **3. Achievements**

In 4 aimags members of female herder groups were enabled through provision of equipment and through training to generate income from the local natural fibers. They learned hand spinning, felt making and hand knitting and were connected to buyers in Ulaanbaatar. This pilot activity succeeded in demonstrating effective approaches to help rural women in the aimags to participate in the value addition in the textile sector in Mongolia.

### **4. Further transmission**

It will be useful to transfer the approaches and the training programs which have been developed to further female herder groups in other areas.



## Green Gold” Project Component 4 (GGC4): Facilitate Market Access by Linking Yak Herders to Processing Companies - Mongolia 2013-2016 “



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Agency for Development  
and Cooperation SDC

### Product sheet: Strengthening of institutional value chain actors

#### 1. Needs and challenges

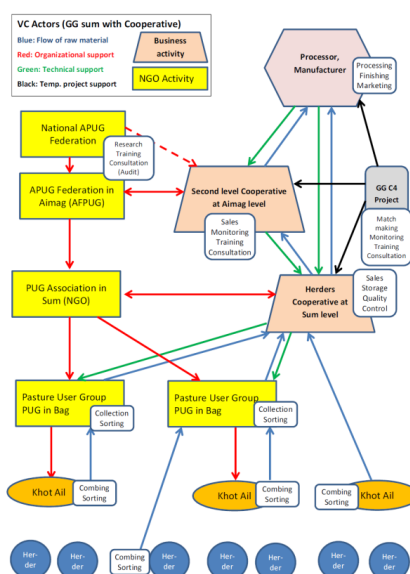
A major result of the analysis of the natural fiber value chain was that only weak links between herders and manufacturers existed. Therefore, GGC4 focused on providing market access for herders. Herder cooperatives play the key role here; they are expected to collect raw materials, ensure high quality and traceability and sell produce at consistently high prices to the processors. The problem here was that cooperatives had no direct access to neither herders for buying raw materials nor to processors for selling them. In order to overcome this challenge, GGC4 worked on the linkages along the value chain and conducted organizational development for cooperatives. In addition, GGC4 strengthened the role of the Mongolian Wool and Cashmere Association (MWCA) as major actor in this sector.

#### 2. Innovations and instruments

##### Effective coordination between Pasture User Groups (PUG) and cooperatives

It is a distinct feature of the institutional landscape in the Green Gold project that Associations of Pasture User Groups (APUG) exist alongside herder cooperatives at soum level. The APUGs were established as second level associations of PUG units in one soum in order to support their demands and to provide commonly required services. When it became clear that APUGs in the legal form of NGOs cannot conduct substantial business, cooperatives were established on basis of APUGs and share the same leadership and membership (twin organizations with different mandates and functions). Nevertheless, the cooperatives need to achieve their own profile as successful business entities and at the same time need to maintain the excellent relationship to the respective PUGs at bag level. Those provide important services to the cooperative in turn (dissemination of information, collection and sorting of raw materials); on the other hand the income of cooperatives from supply and sale activities is one major source of funds to ensure the sustainability of the PUG system in future.

Based on the above, the basis for a productive relationship between APUG and PUGs on one side and cooperative on the other side was to be found. In many events, GGC4 has consistently pointed out on these needs and has consulted the leaders of APUGs and cooperatives on the best modes of collaboration. This contributed to the effective coordination between PUGs and cooperatives and therefore strengthened the core feature of the Green Gold project and its partner landscape.





The good working relationship with the PUGs enabled cooperatives to collect raw materials at reasonable costs and with determined quality. The direct sales to processors, which were initiated by GGC4, then enabled the cooperatives to sell raw material collected from herders to processing factories at better prices. The surplus achieved was then returned to the members in form of member bonus or dividends. This resulted in many positive changes such as increase in herder's trust in cooperatives, herders being more concerned about the quality of their product and it helped to build a long-term partnership between herders and processing factories. Cooperatives with right principles and management were crucial in increasing the supply and quality of raw materials meeting the expectations of processors.

#### Improving governance and performance of cooperatives

Considering the crucial role of cooperatives in the value chains for agricultural products the strengthening of their capacity was a major initiative of GGC4 throughout project implementation. This followed a dedicated strategy and approach which was developed by GGC4 together with the team of international and national experts. It responded to the following requirements:

1. cooperatives are supported in their dual function as group of owners (herders) and as business, which provide services for their members;
2. while cooperatives by principle do not aim at profit, they need sufficient surplus to make their operations sustainable and to allow necessary investments as well as to support the respective APUGs;
3. in order to strengthen the vertical structure of the cooperative sector and to achieve an optimal sharing of tasks between the operational levels, GGC4 actively supported the establishment of new and the qualification of existing secondary cooperatives;
4. the methodological approach aimed at providing knowledge and skills which empower cooperatives to identify opportunities and to solve problems themselves, to intensify the communication inside the cooperative, to strengthen the participation of members and to adhere to the cooperative principles.

In order to improve the structure and performance of existing cooperatives and to support the establishment of new cooperatives in the targeted soums, GGC4 has organized cooperative trainings for heads of cooperatives and APUGs from 7 aimags. The trainings were held in the aimags and enabled the participants to obtain knowledge and skills in the following issues:

- leaders of existing cooperatives are qualified to identify development opportunities and obstacles of their cooperatives, to strengthen their structure and management and to improve their performance as actors in the value chains for yak down and camel wool;
- leaders of herders in soums without functioning cooperative are qualified to support the establishment of new herder cooperatives;
- leaders of cooperatives and APUGs are qualified to support the collaboration between them;
- leaders of cooperatives and of herders understand the benefits and requirements for the establishment of secondary cooperatives at aimag level.



*Capacity Development for Cooperatives*

These trainings were conceptualized and implemented by the cooperative training team consisting of international and national experts. Both experts have very long and extensive experience in qualifying and consulting cooperatives in Mongolia. In order to test the concept trainings for cooperatives in Arkhangai and Khovd Aimags in August 2014 were held and the training material was tested and improved. The trainings were implemented very successfully as is evidenced by the positive response of participation during the training as well as during the evaluation exercise. The training used a variety of methods, many of them participatory: presentation with

discussion, group work, exercises, role plays, visualization, and instructive games. In 2014, a total of 42 participants from 7 aimags (69% male and 31% female) joined the trainings. 66.6% were heads of primary and secondary cooperatives and 33.4% were heads and staff from Aimag Federations and APUGs.

#### Newly established secondary cooperatives in Arkhangai and Zavkhan Aimags are qualified

In order to support the development of a vertical structure in the cooperative sector and to increase the benefits for the herder members GGC4 organized trainings for secondary cooperatives at aimag level in 2015. Their purpose was to strengthen the structure and direction of these cooperatives, which had just been set up by the primary cooperatives in the respective aimags. Three trainings in Zuungobi soum of Uvs aimag, Otgon soum of Zavkhan aimag, Erdenemandal soum of Arkhangai aimag were visited by leaders from 35 organizations (in Uvs 15 primary cooperatives, in Zavkhan 13 primary cooperatives and 1 NGO, in Arkhangai 4 cooperatives and 2 NGOs). The following main activities of the newly established secondary cooperatives are reflected in their by-laws:

- Mediation and sale of livestock raw materials, wool and agricultural products produced in member cooperatives,
- Retail and wholesale of goods needed by members of primary cooperatives,
- Training, consultation and information to members and capacity building of primary cooperatives,
- Preparation and primary processing of livestock raw material.

The trainings were implemented by a national expert and were followed by consultations of each cooperative on identification of the future strategy. In addition, the development of business plans for the secondary cooperatives was consulted and as result all three secondary cooperatives obtained business plans which can guide their future development.

#### Training cascade for cooperative master trainers and cooperative trainers

In 2015, the Green Gold project conducted a comprehensive assessment of 62 herder cooperatives in 7 aimags in order to identify deficits in the structure, organization and performance of the cooperatives and to find approaches for capacity building. According to this assessment, cooperatives were mainly facing the following problems: lack of current assets; low management skills of leaders; low knowledge of members on cooperative development; lack of cooperation with members and with other cooperatives. It was recommended that improving skills of cooperative leaders and increasing participation of members in cooperative activities are important for strengthen the role of cooperatives in the value chains.

In order to overcome these deficits, GGC4 designed and implemented a comprehensive qualification program in form of a training cascade. A Training of Cooperative Trainers (ToT) was held in cooperation with the Mongolian Cooperative Training and Information Center (MCTIC) on 7-11 September 2015 in Ulaanbaatar. 15 cooperative trainers from 7 aimags were qualified by national and international cooperative experts. They were successfully prepared as cooperative master trainers and tasked to organize "Trainings for Cooperative Trainers" in aimags.

In October 2015, these cooperative master trainers with support of the national expert organized two trainings for Cooperative Trainers Educators in Gobi-Altai and Zavkhan aimags. As a result of these trainings, 44 Cooperative trainers from 33 cooperatives in Gobi-Altai, Bayankhongor and Zavkhan aimags were trained. During the events, handouts and books for primary cooperatives were developed and distributed. Another product of the training were operational plans that each cooperative trainer developed for their own cooperative based on results of the previous cooperative assessment. Feedback from the cooperative trainers showed that they have successfully been prepared to train and to continuously coach office holders and members in their own cooperatives. This in turn contributed to an improved organization, member participation and economic performance.

#### Qualification for cooperative leaders

GGC4 organized trainings for cooperative specialists, managers and board members. They were based on the results of the previous capacity and development evaluation of cooperatives which was conducted by GG during March to June 2015: many cooperatives lacked financial capacity for development, they had little knowledge of



cooperative principles and values, there was a lack of written rules or by-laws which are compatible with the cooperative law and they did not operate on basis of carefully developed business plans. In order to overcome these deficits, GGC4 in collaboration with AFPUGs, provided training for cooperative leaders in Uvs aimag which was held 8 to 12 September 2016. 20 participants (out of which 4 female) from 14 cooperatives, animal health and breeding units, and aimag pasture users groups joined in the training, which also used many participatory approaches (such as group work, map developing, role playing, debating and idea development etc.) Further, suggestions concerning cooperative's operational calendar were discussed in the group. At the end, participants gave presentations to each other on chosen topics and got peer feedback. Handouts and guidebooks were presented and explained to the participants during the training. Moreover, they were further upgraded and adapted with participants using their suggestions during discussions.

#### Qualification for cooperative accountants

Training on accounting in savings and credit cooperatives was organized for managers and accountants on request of APUG of Bayan-Ulgii province. This new type of training was held 5 to 9 September 2016 in the Herder Information Center in Ulgii city with 21 participants (of which 8 female) from 13 soums. The training was conducted by a financial instructor from the NGO "Association of supporting the rural microfinance development". Accounting software for credit and saving cooperatives was also presented and participants practiced its use.



*Cooperative accounting training in Bayan-Ulgii aimag*

#### Improved facilities for cooperatives to develop the meat value chain

It was an important lesson learnt that cooperatives require appropriate raw material storages and transport facilities. According to the request from cooperatives, GGC4 co-financed a raw material storage, a refrigerated car, a live animal scale to Zavkhan aimag Toonot tsatsrag secondary cooperative, as well as a refrigerated car and live animal scale to Arkhangai Bayalag khangain sor secondary cooperative. The cooperatives contributed up to 50 percent to the costs.



*Refrigerated lorries and raw material storage*

#### Successful cooperation with Mongolian Wool and Cashmere Association (MWCA)

GGC4 has cooperated consistently and intensively with the MWCA. This had the following objectives:

- to improve the quality of raw materials and final products through new or improved industrial standards;
- to make product designs competitive with foreign market requirements;
- to present yak hair and camel wool products at international exhibitions.

On improving the raw material and product quality, GGC4 in cooperation with MWCA has amended the specific quality classification and camel wool preparation standard (MNS36:2007). This refers to the sorting of camel hair, change of the preparation method and having animal friendly methods and techniques to prepare camel hair. A similar cooperation was pursued with regard to the camel hair processing standard (MNS.4950-2000)

and yak down processing standard (MNS.5248-2003). They did not meet the requirements of customers for wool products with softness and comfortable feeling without any coarse hair. Furthermore, the standards for wool, cashmere combs (MNS 1012 : 2016) and on knitwear sizes (MNS 6635 : 2016) were successfully updated. MWCA served as national consultant in amending all these standards and in supporting their acceptance by the Mongolian Agency for Standardization and Metrology.

In collaboration with the MWCA, GGC4 developed the brochure “Increasing income by accurately preparing camel wool” and it was distributed to herders in soums with large camel population. In addition, the first ever Mongolian-English Dictionary for the Textile sector was elaborated and published in close collaboration with the MWCA. In order to develop yak and camel wool product design and to increase producers’ competitiveness, the following activities were organized together with the MWCA:

- workshops of international fashion designers from United Kingdom and from Germany for designers;
- awarding the best yak wool products and best camel wool products during the annual fair “Ulaanbaatar partnerships” fair, organized by the Ministry of Industry and Trade and the MWCA
- Partner firms of GGC4 also participated in the “KNITWEAR Fashion SHOW-2014”, organized by MWCA and the project supported the award for the “Best designer for yak down products”.
- GGC4 together with MWCA organized the joint stand at the “Sourcing at MAGIC” exhibition, which was held in Las Vegas from 16 to 19 February 2015.
- MWCA assisted in preparing for the exhibitions Green Showroom in Berlin January 2016 as well as Ethical Fashion Show in Berlin and INNATEX in Frankfurt in January 2017.

#### Successful cooperation with National Association of Pasture User Groups (NAPUG)

GGC4 also collaborated intensively with the NAPUG as apex organization of the PUG movement in the Green Gold project. NAPUG supported the development of baby camel wool by piloting the production of first garments and accessories made from this innovative fiber. This was at a time when the manufacturers were not ready to carry the associated risks. After seeing the success of these products, many manufacturers have then taken up this production themselves. NAPUG also piloted the first dyeing of baby camel wool and therefore the first products ever made from combed and dyed baby camel wool. NAPUG therefore played a pivotal catalyzing role in piloting this innovation. In addition, GGC4 supported the NAPUG in playing its role as co-organizer of the match-making event between cooperatives and processors for the trading of raw materials in March 2016.

### **3. Achievements**

GGC4 supported the improved governance and capacity of many primary cooperatives in the project regions in many ways. It also helped to develop the newly created secondary cooperatives so that they became important actors in the value chains. Representatives of cooperatives have provided testimonials for that in their statements during the closing workshop of the project on 7 December 2017.

The collaboration between GGC4 and the MWCA has brought progress to the Mongolian textile sector and to its member firms in various manners. This close and successful cooperation between GGC4 and the MWCA was highlighted in the presentation of MWCA during the closing workshop of GGC4 on 7 December 2017.

### **4. Further transmission**

It is recommended that herder cooperatives maintain their role as major actors in the value chains by up-keeping their good governance, the trust between members and leaders and their high performance in the raw material supply business. Further but decreasing guidance for MWCA and NAPUG to fully grow into their facilitating roles for the sector seems advisable.



GFA Consulting Group GmbH  
Eulenkrogstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)



## Green Gold” Project Component 4 (GGC4): Facilitate Market Access by Linking Yak Herders to Processing Companies - Mongolia 2013-2016 “



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Agency for Development  
and Cooperation SDC

### Product sheet: Effective sales of natural fibers through match- making between herder co-operatives and processors

#### 1. Needs and challenges

The analysis of the natural fiber value chains in Mongolia has shown that one of its major bottle necks is the limited interaction between herders as raw material providers and the processing and manufacturing companies as raw material buyers. Previously they have been linked by intermediary traders (either freelance changes or agents of firms), who collect fibers from individual herders and sell them in bulk to processors. However, these traders offer relatively low prices to herders, they are unable to document the traceability of supplies, they mix fibers of higher and of lower quality and they demand a considerable share of the value added for a mere logistical function. By bringing herders and processors into immediate contact the productivity of the value chain and the quality and quantity of supplies were greatly improved.

#### 2. Innovations and instruments

The main objective of Green Gold project component 4 was to improve the livelihood of herders by linking them to the processors. Therefore it was necessary to ensure that herders can sell natural fibers directly to processors and manufacturers. This approach was based on the assumption that the cooperatives, in which most of the herders had become members take over the functions of intermediary traders. These cooperatives were established alongside Pasture User Groups (PUG) as main actors of the Green Gold project. The close collaboration between cooperatives and PUGs, which operate very close to herders at bag level enables them to collect raw materials from herders in a most efficient manner.

In addition, GGC4 designed and initiated a match-making procedure, which brings representatives of herder cooperatives and of processing companies together. The first match-making event was held on 18 March 2014 and it was then repeated annually.



*Match making event*

Match-making aimed to achieve the following objectives:

- To bring sellers (herders represented by their cooperatives) and buyers (processors) in direct contact.
- To avoid the information gaps and quality deficits connected to other purchasing channels.
- To introduce this central element of the project to develop the value chains.
- To initiate match-making as an annual event to be supported throughout the project period.



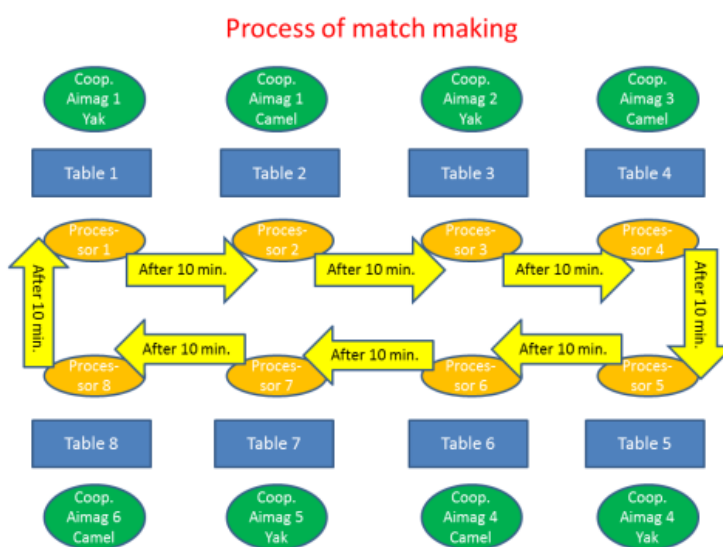
### Requirements for match-making

- Buyers (processors) and primary producers (herders) are interested to directly exchange information on their requirements and offers.
- Match making works best when there is trust on both sides. Also both sides should understand how to present their requirements and their offers.
- Cooperatives and processors utilize the experiences which they already made in selling /buying raw materials in order to improve their successes.
- Besides understanding the potential financial benefits both sides also need to know and be willing to respect the requirements on timeliness, quality, and quantity arising from supply contracts.

### Match making methods

The match making event used a method proposed by GFA-GEFAK, which is innovative in Mongolia:

- Fact sheets are prepared by cooperatives to present their offers in terms of qualities and volumes for potential sale in the respective season to the buyers.
- Every cooperative representative was enabled to meet every processor representative. In order to achieve this there was a round of brief meetings between the participants. This widely used method is called speed dating.
- The cooperative representatives are sitting on the prepared tables and present their offers regarding yak down and camel wool. For each aimag there are one or two tables (in case of many stakeholders). Then the first processor is to sit down at table 1, processor 2 at table 2 and so on. The processors bring along their requests for raw materials for this processing season.
- During ten minutes producers and processors introduce themselves to each other, and explain their offers and requirements regarding raw materials respectively. The cooperative representatives also hand over their fact sheet to the other side.
- After ten minutes the processor representatives move to the next table and repeat the presentation and talks with the next cooperative.
- During the match-making event only the offered and demanded volumes were negotiated. It was agreed between cooperatives and companies that they will negotiate the prices later, when the fibers have been collected and the fiber quality can be checked. It was then implemented in this manner, whereby prices greatly exceeded the prices from the previous year (see below).



### Evaluation of the match making method

- The stakeholders had been prepared for the match-making event by the project experts, thereby creating confidence and trust.
- Within 3 hours all 11 cooperative groups from 7 aimags and 11 participating processors presented their offers and requirements to each other. The speed-dating method proved to be an effective and time efficient tool for match-making.
- The stakeholders used the opportunity for exchange of information and for negotiations, which were concluded on the spot or during the following days.

### Development of the purchasing contract template

A problem which hampered the relationship between sellers and buyers of natural fibers regarded the lack of written purchasing contracts. The trading partners mainly concluded only oral agreements but afterwards conflicts ensued about details of the delivery or payment conditions.

In order to overcome this problem GGC4 commissioned a lawyer to elaborate a contract template for the trading of natural fibers between cooperatives and companies. This template was presented to stakeholders during the



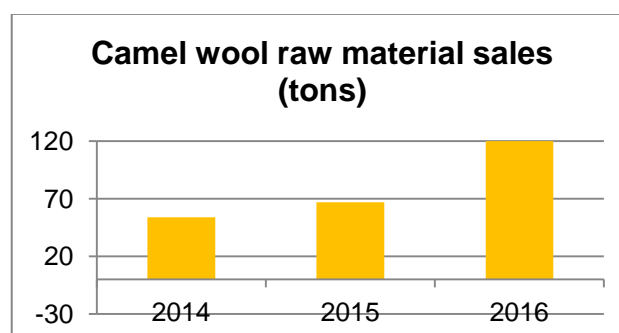
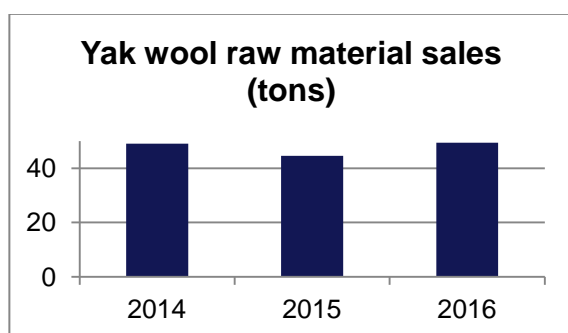
match making event. It was accepted by them and then tested in the actual negotiations and sales. Based on the contract template developed by GGC4 in 2014 some agreements were made in written form for the first time.

### 3. Achievements

Between 2014 and 2016 GGC4 organized annual match-making events, always in the second half of March. This is an optimal period for cooperatives to know the potential volume of supply and for processors to quantify their needs. All stakeholders confirmed their great satisfaction with this new method offered by GGC4.

During these events, large trading volumes were realized with regard to yak down and to camel wool. The total value traded in 2016 alone reached about 350,000 EURO.

In 2015, GGC4 introduced a new feature into the match-making mechanism in the form of price differentiation for specific quality of fibers. The cooperatives agreed to sort the fibers according to quality and color. Processors in principle agreed to pay a bonus of 20% for natural fibers from young animals and of 10% for the rare grey yak hair. Although C4GG trained herders how to sort yak down and camel wool, in 2015 only 26% of all prepared yak down and 12% of all prepared camel wool was actually sorted. Many cooperatives complained that some processing companies did not want to receive sorted qualities. Instead they want to use their own workers for sorting and to obtain lower purchasing prices for unsorted materials.



As the graphs above show, the volume of traded yak wool started at a high level and maintained this throughout. The traded volume of camel wool constantly increased. This is mainly due to the newly developed fiber baby camel wool, which accelerated the previously low sales of camel wool.

Prices on the other hand did not increase constantly, which was mainly due to the economic recession in major sales market for natural fiber garments (Russia, China). Consequently, the world market price of raw cashmere dropped, which serves as the reference price for other natural fibers. It can be concluded that the match-making makes negotiations between cooperatives and processors effective and efficient, but cannot separate the market of natural fibers in Mongolia from international market trends.

However, it is positive to note that the match-making mechanism works even in such a negative environment. Herders prepare and cooperatives deliver the fibers even at prices which are below the prices which they have expected. The fact that in this way the trade relations between the value chain actors could be secured is one of the results of GGC4 leading towards sustainability. This resilience of the value chain is also based on the fact that herder cooperatives serve as collective representation of the interests of the herders and agree among themselves on a minimum sales price for yak down and camel wool. Likewise it cannot be avoided that processors also communicate among themselves on the maximum price which they offer to the cooperatives. The result of negotiations between cooperatives and processors is then a price that clears the market, or in other words a price which allows herders to sell all the raw material which they have prepared. The alternative of a singular auctioning system for example would result in some raw materials not being sold and would leave the respective herders without compensation for their labor. While the herder gate price is the most important indicator for the benefit of the herders, its level is depending on the downstream market developments and international market trends.

#### 4. Further transmission

In order to be successful, the match-making event must be organized either by one neutral body (such as GGC4) or jointly by two bodies, which represent the respective market actors. GGC4 from the beginning has involved stakeholders in the planning and implementation of the match-making events. The partners comprised on the side of herders the National PUG Federation and on the side of processors the Mongolian Wool and Cashmere Association. The match-making event in the year 2016 was already jointly organized by GGC4 and those two associations. They were trained and coached to enable them holding this event without external assistance in the coming years. The GGC4 final evaluation has shown the great satisfaction of all stakeholders with the match-making event as an innovative method to connect the actors in the natural fiber value chain.

Areas which need to be developed further with regard to match-making are: more consistent application of sorting of natural fibers and of the respective price differentiation; consistent application of the contract template for all natural fiber transactions; disconnecting the prices for yak wool and camel wool from the price development of cashmere, which could be achieved by convincing buyers of the advantages in terms of sustainability of these valuable and rare fibers in comparison to goat cashmere.



GFA Consulting Group GmbH  
Eulenkrogstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)



## **Product sheet: Optimized processing of baby camel hair for improved quality and usability**

### **1. Needs and challenges**

GGC4 together with the stakeholders (cooperatives and manufacturers) succeeded in developing baby camel hair as an innovative natural fiber. New products made of baby camel down were presented at the “Green Show Room” during fashion week in Berlin Germany in January 2016. Potential buyers were fascinated by this new natural fiber appearing in the international textile market for the first time. It also appealed to them that in baby camel wool a true alternative to goat cashmere with its extreme environmentally deficits can be found. Buyers were highly interested to distribute the products, which are of an exceptional fineness and cashmere like softness. However, they predicted consumers’ demand to be rather limited because of the limited natural color range (light beige to dark beige). Potential buyers requested products of the already achieved softness but with a wider color range.

As a second challenge, potential buyers also demanded thin garments which can be used in other seasons than winter or as down layer for sportswear.

The third problem regarded the washing of camel wool which is not favored by wool washing and dehairing firms. Camel wool is very dusty and dirty and contains much grease. It causes health problems for company workers and hinders the proper functioning of washing and dehairing equipment.

These three challenges had to be solved in order to provide baby camel wool the market chances it deserves due to its outstanding properties: cashmere-like softness with much better ecological sustainability.

### **2. Innovations and instruments**

In order to overcome these problems, GGC4 and selected stakeholders carried out experiments with the objective to improve washing techniques for camel wool, to develop techniques for dyeing of baby camel to and finally to produce finer yarn from the dyed baby camel wool.

#### Improving washing techniques for camel wool

Camels live in areas with soils that have high levels of saline and they eat bitter grasses such as conch and sagebrush. Their sweat is therefore alkaline and contains high levels of potassium. This makes the camel wool more alkaline compared to other wool and causes higher contaminations. When washing camel wool with traditional technology, not all residues of salt can be removed. This causes difficulties in dehairing as it breaks teeth of equipment and creates fine dust in the working environment. Because of this, processors are reluctant to wash and dehair camel wool. If baby camel hair would be treated in a more appropriate way the problems could be overcome.



*Experts in experimenting on improved techniques of washing camel wool*

GGC4 established a working group with professionals from Mongolia Mining Technology University (MIUS), Light Industry Research and Development Center (part of Science Technology University), Tuya wool washing company and Altai Cashmere Company to research improved techniques for washing of camel wool.

As a first step, GGC4 organized an element analysis of camel wool, which was carried out at the German-Mongolian Institute for Resources and Technology. This research represented the basis for the next step to identify the optimal washing technology.

Experiments established that camel wool needs a multi-step washing process with different strength of detergents. Scoured wool that used this new washing technique was softer and had less smell of grease compared to washed wool using the traditional technique. The grease level was decreased to 0.24%, calcium ion decreased from 94.99 mg/dm<sup>3</sup> to 47.29 mg/dm<sup>3</sup>, magnesium ion decreased from 50.71 mg/dm<sup>3</sup> to 12.77 mg/dm<sup>3</sup>.

#### Pioneering the dyeing of baby camel wool

There are various difficulties in dyeing of camel wool: long hair may not absorb any coloring whereby camel wool contains much long hair compared to goat cashmere (goat cashmere 0.15-0.25%, camel wool 3.5-4.5%). This makes the dyed color look tainted and unclean and therefore domestic processing companies reject to dye camel wool. However, combed baby camel wool contains only 0.2-0.5% of long hair making the dyeing process possible.

Intensive dyeing test were carried out at Ashid Colors LLC with natural baby camel wool owned by Altai Cashmere. The results were very satisfying and succeeded in thorough dyeing of all fibers. In order to comply with demands for sustainability, the dyes of Huntsman brand from Switzerland were selected as they are internationally certified by "GOTS" and "OEKO-TEX 100". Based on the successful results and with consultation from a German fashion designer 20 trend colors for 2017 and 2018 were proposed. From these, the most attractive eight colors were actually chosen and tested on the baby camel wool. Altai Cashmere LLC then produced yarns and successfully manufactured newly designed products. Those products were shown in the fashion show on 7 December 2016.

With facilitating successful dyeing of baby camel wool, GGC4 has provided manufacturers the opportunity to make garments that are equal to cashmere not only in softness but also in range of color. This offers the chance to establish a competitive and more sustainable alternative to goat cashmere on national and international fashion and textile markets. This will support the intended reduction of use of cashmere and correspondingly of goat herds.



*Color catalogue of baby camel down and  
Colored baby camel down product*

#### Making fine yarns from baby camel wool

Due to ecological changes consumers increasingly prefer lighter and thinner clothes compared to thick and heavy wool and cashmere products. They also want to use the garments in the summer season or as down layer under sportswear. Consequently, a higher demand for products made of fine yarns and with small gauge can be expected. It was assumed that such yarns could be made from combed baby camel wool, which has an average diameter of 15.4-16.1 mikron and average fiber length of 38.5-42 mm.

Therefore, GGC4 organized experiments to produce fine yarn (number 48) from baby camel wool in cooperation with Mogol Noos Wool Company in Zuunmod, Tov Aimag and with Altai Cashmere manufacturing firm as raw material supplier and co-financer.



Despite many efforts it turned out that difficulties were encountered in the making of tops due to lack of technical capacity and need for special emulsion for baby camel wool. Therefore it was decided first of all to produce 36/2 yarn instead of 48/2 yarn. Later Mogol Noos company reported that it succeeded in making 48/2 yarn, even though in a blend of Baby camel wool and Australian Merino sheep wool.



The tests allowed these conclusions:

- The technical capacity of Mogol noos LLC for making fine yarns requires average length of the fiber not less than 45 mm and variation of no more than 10 percent, both of which cannot be fulfilled by combed baby camel wool.
- To make fine yarns it is necessary to add longer length fibers with a content of 50% at least. Such a technical mixture of baby camel wool and sheep wool also requires applying a special emulsion.
- For knitting up to 30% and for weaving up to 50 % of sheep wool or adult camel wool can be added in order to make fine baby camel wool yarn.

Industry professionals and customers were satisfied with the result. It is recommended in the future utilizing this new technology, to improve it further and to introduce it to other spinning companies.

### 3. Achievements

The experiments conducted by GGC4 together with partner companies yielded various results:

- A washing process for baby camel wool was developed, which reduces the grease and dust contamination in the wool and makes dehairing easier and more productive. This helps to overcome the hesitation of processors to wash camel wool and makes this fiber better available.
- A dyeing process for baby camel wool was developed, which allows dyeing this fiber in up to 20 different colors. It will lead to more attractive products with a wider color range.
- It was possible to produce fine yarn from baby camel wool (number 36/2) which enables manufacturers to produce thinner garments for use in summer season and as sportswear.

These achievements rounded up the initial discovery of combed baby camel hair and greatly increase the market chances of this innovative natural fiber.

### 4. Further transmission

These activities to overcome bottlenecks in the value chain were conducted in close cooperation with actors in the textile sector, Mongolia Germany Mining Technology University (MIUS), Light Industry Research and Development Center, Tuya as wool washing company, Ashid Textile as dyeing firm, Mogol Noos Wool company as spinner and Altai Cashmere as manufacturer. Of course no exclusivity for dyed baby camel wool can be demanded by any partner and this attractive new natural fiber is available to all manufacturers. It is a great opportunity for their designers to create attractive and well selling garments and textiles.



GFA Consulting Group GmbH  
Eulenkrugstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)





## **Product sheet: “United Yak Brands of Mongolia” established as marketing organization and as brand developer**

### **1. Needs and challenges**

Global market prices for luxury consumer products, in particularly garments made of light, soft and warm fibers are increasing over the last years. As a consequence research for new specific fibers is undertaken and hair and wool from various types of wild and rare animals is getting used. In this context the soft under hair or down of the yak has come to the focus only a few years ago.

In Mongolia, about 100 tons of yak down are prepared annually when the herders manually comb their yaks in the spring. This is tough work because yaks are strong and wild animals, and the yield from each animal is only a handful of down. After dehairing and scouring only 30 tons of pure yak down are remaining which are spun into about 25 tons of yarn annually. This small volume makes Mongolian yak down to be one of the rarest natural fibers not only in the country itself but globally. There is a great motivation to increase the benefit of this new resource not only because yaks ecologically friendly but also it can increase income of the herder families. This is crucial especially for those herders who live with their yaks in isolated rural areas. Improving their livelihood from selling more yak down would be an appropriate step towards nature and ecology and overcoming rural poverty at the same time.

Most of the yak down products made by 14 manufacturers in Mongolia are destined for export markets: 4 companies export more than 81% of their products, 2 companies 61-81%, 2 companies 41-60% and 6 factories export up to 40% of their products in 2013. Despite these positive results there is still a large market potential which is underutilized. This is also due to the fact that yak wool is still hardly known as a raw material for attractive and soft garments. And there hasn't been any “Made in Mongolia” logo for these yak

wool products which would make them better distinguishable from similar products from e.g. China.

Therefore GGC4 together with several partner companies has seen the need to develop a brand, which would help to better introduce Mongolian yak wool products to the international markets.

### **2. Innovations and instruments**

#### United Yak Brands of Mongolia

As a result of the intensive consultations provided by GG C4 several yak wool processing factories of Mongolia agreed to establish a joint label. They intended to introduce yak wool products to the international market and to expand the volume of sales. Initially five companies, who source their raw materials from within Mongolia especially from the partner cooperatives, joined the initiative. They aim to develop and advertise the reputation of Mongolian yak down products in the international market, to collaborate with herders and their cooperatives to increase income by improving quality and yield, to create an encompassing value chain with traceability from the area of origin to the final exquisite product, to collaborate with other factories and to welcome the business relationships with international buyers interested in exquisite products from this rare fiber. These seven companies have joined the UYBM initiative: Altai Cashmere; Blue Sky Bodio's of Mongolia; Jinst Murun; Mongol Textile; Sor Cashmere; Snowfields; Uujin.

In further consultations the concrete structure of this grouping was defined. Firstly it was decided that the group would remain an informal grouping in order to reduce administrative costs and to maintain flexibility. Secondly the group members choose the name “United Yak Brands of Mongolia” or in short UYBM. By this they intended to express their intention to work together in informing customers about this relatively new natural fibre, but on the other hand to be seen as individual brands. This approach enables the members to maximize benefits from cooperation but at the same time maintain their independence as garment and textile producers with distinct styles.

## UYBM Members Code of Ethics

In order to demonstrate to customers the concerns for quality, sustainability and fairness UYBM members have established this code of ethics. It is a guideline for the members for sourcing of raw materials, production and marketing:

- Obtain raw materials directly from herder cooperatives to ensure high quality and traceability to areas of origin.
- Using only yak down from Mongolia.
- Manufacture products with highest quality requirements of export markets.
- Cooperate with other processors and manufacturers in developing and advertising the reputation of yak down products in the international market
- Provide fair, safe, and decent working conditions for their employees.
- Maintain social and environmental responsibility and striving for fairness and sustainability in the value chain.

## UYBM officially registered brand name and logo

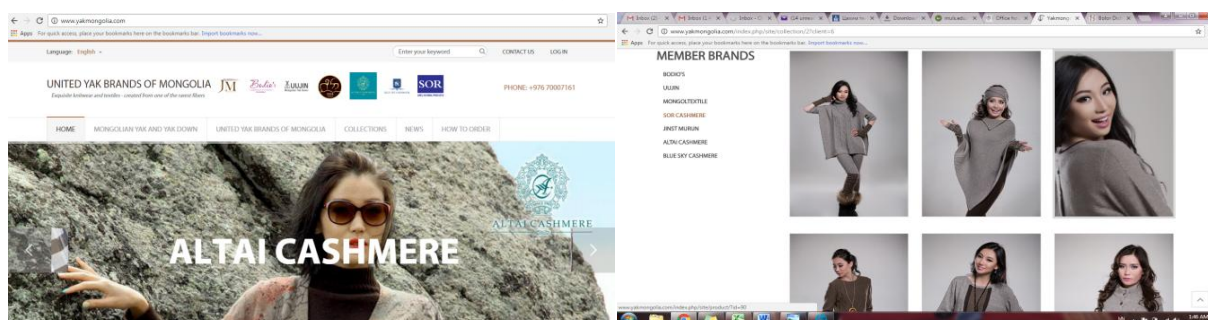
In order to create a unique selling position and to safeguard the property rights of UYBM, GGC4 together with the group members commissioned the creation of a logo of UYBM. The logo has yak picture in brown colour and Yak Mongolia is written as caption. On behalf of the group GGC4 then submitted a request to the Authority of Intellectual Property of Mongolia to register the brand name and logo of UYBM. In June 2015, the permission to use the brand logo in all yak down textile and knitwear products was officially granted. This information was disseminated to all member companies. The brand logo will be attached to the products of the producers which are UYBM members when they are sold at international markets.



*Certificate for registration of brand name and logo of UYBM*

## UYBM Website with online product catalogue

GGC4 supported UYBM further by commissioning the professional development of a web page to present the group and the specific features of yak down. The webpage [www.yakmongolia.com](http://www.yakmongolia.com) was launched in February 2015. It enables customers to gain knowledge and information on pasture friendly yaks as well as characteristics and advantages of yak down. They also learn about the intentions of the UYBM groups itself (incl. code of ethics and company profiles). In addition, the website contains an online catalogue of products made by member companies. If visitors are interested in such products they can use direct links to the websites of manufacturers



*UYBM web page with online product catalogue*

### UYBM joint presentation at international exhibitions

Members of UYBM jointly participated in several international exhibitions: Sourcing at Magic in Las Vegas February 2015; Green Showroom Berlin January 2016; Ethical Fashion Show in Berlin January 2017; INNATEX in Frankfurt January 2017. This helped much to showcase the high quality, attractive and soft garments and textiles to institutional buyers (such as Manufactum, Grüne Erde) as well as to retailers.



*UYBM members present yak wool products at Berlin Green Show Room in January 2016 and in January 2017*

### **3. Achievements**

GGC4 has helped to establish the informal company grouping United Yak Brands of Mongolia as a respected presenter of yak wool products to international markets, incl. brand name and logo, website, code of ethics and joint stands at exhibitions. This enables members to better market their products and make use of the positive features associated with Mongolia and nomadic lifestyle.

### **4. Further transmission**

The rights of the logo and brand name as well as the website of UYBM have been handed over to the group of companies. They will use them to strengthen the market position of their yak down products. It is recommended that more manufacturers join UYBM in the future. Key is to continue having common stands at international exhibitions and help to pursue the certification of yak wool yarns with the OEKO-TEX 100 label.



GFA Consulting Group GmbH  
Eulenkrugstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)







## **Product sheet: Updated Mongolian National Standards (MNS) of natural fibers and products for better competitiveness**

### **1. Needs and challenges**

Buyers of garments and textiles especially in the international markets demand products conforming to international standards as well as documentation about the quality of the products. However, natural fibers which are delivered by cooperatives to the processors do not comply with this need for standardization. Research which was carried out by GGC4 has shown that some relevant Mongolian National Standards (MNS) are already outdated while other standards do not exist. The adaptation of MNS to international requirements improves the competitiveness of the finished products and consequently increases the value of natural fibers sold by the herders.

Therefore, GGC4 in close collaboration with the Mongolian Wool and Cashmere Association (MWCA) has initiated and supported a complex program for the revision of existing and creation of new standards.

### **2. Innovations and instruments**

GGC4 and MWCA initiated and supported the enacting of the following revised or newly created standards:

- Preparation of camel wool (technical requirements) MNS 0036 : 2015
- Processed long hair camel wool (technical requirements) MNS 4950 : 2015
- Processed yak down (technical requirements) MNS 5248 : 2015
- Wool and cashmere comb (technical requirements) MNS 1012 : 2016
- Knitwear sizes (technical requirements) MNS 6635 : 2016

The complex work on these standards started in 2014 and partly continued until 2016. GGC4 elaborated an effective approach for processing the revision procedures. It was necessary to establish working groups consisting of representatives of the processing and manufacturing firms, the MWCA and experts from the Textile Institute at the Mongolian University of Life Science (MULS). The working groups reviewed the standards in the light of current requirements and discussed necessary amendments. Through the close collaboration between GGC4 and the MWCA the entire textile sector was included in this process. This procedure continued until the proposed amendments were agreed by the stakeholders. The draft proposed amendments were then submitted to the respective technical committees of the National Council of the Mongolian Agency for Standardization and Metrology. After thorough discussions, the standards were finally approved by the National Council. Since the National Council holds only few meetings per year the entire revision process usually takes one to two years.

The dissemination and introduction of the new standards was supported by GGC4 by informing the AFPUGs and APUGs in the aimags. On initiative of GGC4 the standards were also published in daily newspapers. MWCA was responsible to inform processors and manufacturers about the new standards.

#### Updated standards related to preparation and processing of yak down and camel wool (MNS 0036 : 2015; MNS 4950 : 2015; MNS 5248 : 2015)

There was a need for updating the quality standards of raw camel wool and processed camel wool as well as yak hair. This aimed at creating incentives for herders to increase the quality value of yak down and camel wool, and to increase the quality of final products according to the requirements of the international market.

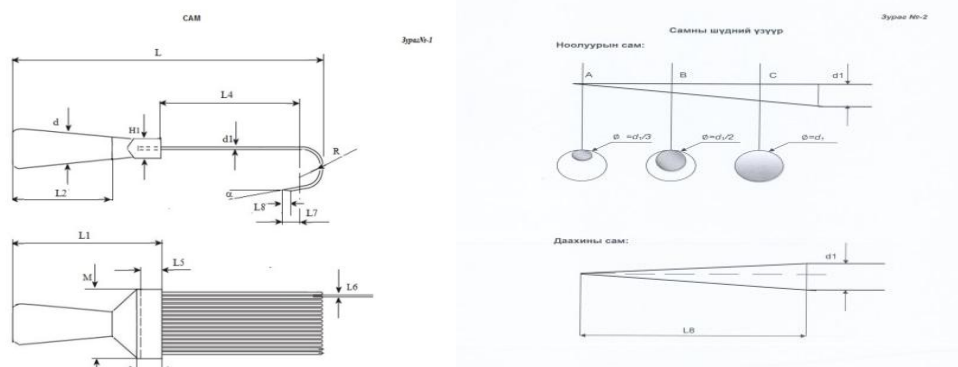
The quality standard MNS 36 : 2007 for raw camel hair was updated in order to give an understanding to herders for preparation and classification of camel wool, including the appropriate preparation method. Based on experiments and studies conducted by GGC4, the standard was improved in terms of terminology and identification, technical requirements, classification of camel wool, and preparation method.

Likewise, GGC4 organized working groups for updating the standards of processed camel wool (MNS 4950 : 2000) and processed yak down (MNS 5248 : 2003). It aimed at defining the quality indicators that are achieved by processors in washing and dehairing high quality yak down and camel wool that meets the requirements of the markets.

#### New standard for combs for combing of yaks and camels (MNS 1012 : 2016)

The content of coarse hair in processed camel wool and yak down used to be 4-6%, while in goat cashmere it is 0.2%-0.3% or 20 times lower. One reason is that goat cashmere is prepared by combing while camel wool and yak down used to be prepared by shearing. In order to reduce the content of coarse hair, GGC4 tested yak wool combing in Arkhangai, Bayankhongor, Bayan-Ulgii aimags since 2015 and baby camel combing in Gobi-Altai, Bayankhongor and Umnugobi since 2014. Comb type, design and size are very important factors to get higher yield in short time. Therefore it was realized that combing of yaks and camel cannot be done with the ordinary combs that herders use for combing of cashmere goats. To define the size and design of the ideal comb these requests from herders were considered:

- The comb has to be sharp but should not hurt the animal skin;
- It should collect large part of under hair (down) from the animal;
- It should withstand the force the herder when using it;
- The teeth of the comb have to be made of steel;
- The working length should be wider to cover a wider area;
- Sharp teeth allow easier combing down from the hairy cover and are more durable.



Technical drawings for combs

In order to document this result for future use and to help Mongolian producers to manufacture the appropriate combs C4GG initiated and supported the elaboration of the respective MNS standard. The technical drawings (see above) are based on the goat cashmere comb standard (MNS 1012-89). It was improved and updated to the technical requirements. The technical drawings show for example that the space between each teeth of the comb is even, variance of length of the teeth is low and the tips are streamlined and blunt.

#### New clothing size standard MNS 6635 : 2016

Especially foreign customers of the partner manufacturers often complain about incorrect garment sizes. They point out that the actual size of a garment depends on the respective manufacturer. Indeed companies establish and follow their own standards instead of applying a uniform system. This makes it difficult to foreign buyers, who want to offer correctly fitting garments to their customers. In order to rectify this problem, CCG4 in partnership with MWCA elaborated a new national standard and submitted it to the MASM (Mongolian Agency for Standardization and Metrology). In general, sizes can be indicated either by letters (S, M, L etc.) or by numbers (36, 38, 40 etc.). However, in recent years, the numbered code has become prevalent as it helps customers to clearly understand the size. Such a system was also used for the revised Mongolian standard.

### 3. Achievements

The two standards for processed camel hair MNS 4950 : 2015 and for processed yak down MNS 5248 : 2015 were finally approved by the National Council of the Agency of Standardization and Metrology on 19 November 2015.

The standard for technical requirements for the preparation of camel wool (technical requirements) MNS 36 : 2015 was approved by the National Council in April 2015.

The comb standard for baby camel wool combs MNS 1012 : 2016 was approved by MASM on 28 October 2016 and was merged to the existing goat combing standard (MNS 1012-89). It is now valid as "Wool and cashmere comb standard 1012 : 2016".

Clothing size standard MNS 6635 : 2016 was finally approved by the MASM National standardization committee on 28 October 2016.

The new standard will enable the manufacturers to apply the international size standards and to harmonize the sizes between all companies.

### 4. Further transmission

The development of standards was greatly supported by the close collaboration with the Mongolian Wool and Cashmere Association (MWCA), since a NGO seems to be more eligible to present proposals to MASM than a development project. The separate working groups were supported by representatives of the companies and by experts from the Textile Institute of the Mongolian University of Science and Technology (MUST).

The participatory approach which was used by GGC4 turned out to be very successful. The partners were able to acquire skills and experience in using it for establishing and adjusting standards in future. The most relevant standards regarding yak down and camel hair have now been revised. However, the necessary international certification of products and processes in future may lead to new requirements for amendments of the national standards.



GFA Consulting Group GmbH  
Eulenkrugstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)







## **Product sheet: Identifying the ideal approach for international certification to overcome market entry barriers**

### **1. Needs and challenges**

Mongolian textile and garment manufacturers increasingly wish to market their product as sustainable ones and make use of the growing demand for sustainable or “green” fashion. In order to do so, they strive to participate in Sustainable and Organic Fashion Events, such as Green Showroom at the Berlin Fashion Week or INNATEX in Frankfurt. The organizers of these and of other fairs demand that exhibitors provide a proof of the sustainability of their products. Marketing of “green products” to large buyers demands that sustainability can be proven. Therefore, the lack of certification of products and processes represent an increasingly relevant market entry barrier for the Mongolian manufacturers.

From this follows the need that manufacturers obtain the certification with regards to quality as well as to fair and sustainable nature of their products. Such certification must include not only the production itself but also the supply chain of raw materials and all inputs.

### **2. Innovations and instruments**

In order to overcome this challenge, GGC4 has elaborated an approach which will lead manufacturers to successful certification. It consists of the following steps: identification of most suitable certification system; identification of most appropriate level for certification in the value chain; preparation for certification; costs of certification.

#### Identification of the most suitable certification system

First of all GGC4 has assessed the relevance of four widely used certification systems:

- **Fair Trade** based in Germany was only applicable to fair trade cotton in the textile sector. Since March 2016 this certification can be applied to textiles made from all animal fibers. Fair Trade is much focused on decent living conditions for workers in the textile sector. However, the procedures of certification for the primary production of animal fibers by herders have not been yet clarified by the certifying body. Fair Trade can be considered in the future if such procedures have been established.
- **Global Organic Textile Standard (GOTS)** also based in Germany is a widely accepted certificate. It demands not only the certification of the production but also of the entire supply chain (chemicals, fibre raw materials). However, GOTS only covers animal fibers which are certified as controlled biological livestock keeping (kbt). Extensive (nomadic) livestock keeping is not considered as kbt and therefore the entire value chain cannot be certified under GOTS. The required expansion of the GOTS system is being considered but may be implemented in the distant future if at all. The International Association for Natural Textiles (IVN) considers a project to develop a certification for extensive livestock keeping even in Mongolia, but this is a distant solution.
- **Bluesign system** based in Switzerland is a comprehensive approach for certification of the value chain for a particular product. However it is only starting from the processing level and does not foresee any controls for the primary production level. Such certification would leave out the certification of the supply of raw materials by herders and cooperatives.
- **OEKO-TEX** based in Switzerland provides several certification products which can be applied to the actual needs. The nearest testing facility is in Beijing which reduces the costs. OEKO-TEX 100 is the certification product that can be applied more easily than others. Therefore this certification procedure has been evaluated as the most suitable for Mongolian manufacturers at this time.

More concretely, this was followed by informing the manufacturers in several meetings on the OEKO-TEX standard which was assessed as most suitable. There are two certification products offered by OEKO-TEX:

- The **OEKO-TEX 100** standard tests for harmful substances and can be applied to any level of the value chain: raw material, yarns, finished products. Due to a modular approach double testing is avoided, i.e. a garment made from tested yarns does not need to be tested again as long as it is not treated chemically. It is recommended to test all yarns and all further inputs (zippers, buttons etc.) which are used by the partner firms. Then products receive the label “Confidence in textiles. This lower grade certification does not cover environmental and social issues and therefore does not yet classify the products as sustainable or “green”. However, since the certification process is easy to manage it is a good starting point into the certification of products in general. At a later stage and on this basis it can be expanded to the OEKO-TEX STEP certification (see below).



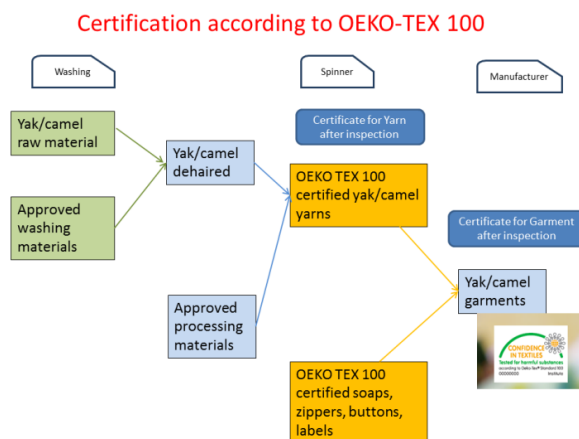
- **OEKO-TEX STEP:** is a higher grade and comprehensive standard which certifies the entire supply chain as “Sustainable Textile Production”. In contrast to other approaches like GOTS the raw material primary production is also included here. The process is that the suppliers of raw natural fibers must sign a comprehensive declaration (Code of Ethics), in which they state that specific sustainability criteria have been fulfilled in the primary production. This declaration will then be signed by the cooperatives and will also bind their members. It is recommended that manufacturers obtain the OEKO-TEX STEP certification in future after they have successfully obtained the OEKO-TEX 100 certification.



#### Identification of most appropriate level for certification in the value chain

The second clarification regards the question at which stage of the value chain the certification with OEKO-TEX 100 shall be applied. There are three main stages in the processing procedure, which are differently useful as stage for certification:

- At the washing stage certification would demand that samples from all raw material lots which have been supplied from herders must be tested.
- At the manufacturing stage it would be necessary to test every individual product. In calculating the respective high testing costs it must be considered that the samples are destroyed in the testing procedure.
- At the spinning stage only few processors operate in Mongolia. All raw materials must pass this bottle neck before they can be turned into products. Therefore each product could receive the OEKO-TEX 100 label even though only the few different types of yarn have been tested.



### Preparation for certification

Thirdly, the requirements for certification of yarns with OEKO-TEX 100 have been identified:

1. The spinning company must declare all different source materials used (dehaired, processing chemicals, finishing chemicals). For example dehaired wool received from two different washing plants are considered different source materials. The declaration forms must be filled and send to OEKO-TEX branch in Beijing.
2. The OEKO-TEX branch will issue an instruction for the taking of samples. In general from each different yarn a sample of 100 grams must be taken. Different means: different dehaired materials or different chemicals.
3. Samples are sent to Beijing and from there for testing to Switzerland. When the samples conform to OEKO-TEX standard (do not exceed limits of harmful substances) the certificate is issued.
4. The OEKO-TEX branch then sends an inspector to the company for a site visit. It aims at checking the conformity of the application. For example if only the declared chemicals are used. Site visit is done for 1<sup>st</sup> application and for each second review.
5. It is of great advantage if the respective company has a QM system in place (e.g. ISO 9000). However, this is not mandatory but then an effective lot management must be used. This allows to check easily the inflow and out
6. flow of materials and to ensure that only certified materials and parts have been used.

In meetings with manufacturers (which GGC4 jointly organized with MWCA) many manufacturers declared their interest and willingness to undergo the process of certification with OEKO-TEX 100. In this step GGC4 assisted the manufacturers to complete a set of declaration forms which are required to determine the sampling program for yarns.

### Costs of certification

GGC4 also informed the manufacturers about the costs and benefits of the certification. Validity of the certificate and the expected costs of certification are as follows:

1. The certificate is valid for one year from the effective date. If yarns are still stocked after one year they must be certified again.
2. Fixed cost 1: Certificate fee is about USD 1.400, it must be paid every year for each certified company.
3. Fixed cost 2: Cost of site visit is about USD 1.500, it must be paid in the 1<sup>st</sup>, 3<sup>rd</sup>, 6<sup>th</sup> etc. year.
4. Sample testing costs depend on the number of samples and the types of necessary tests.
5. The estimated total costs of certification for undyed yarns of one processor is about USD 4000 to USD 8.000.
6. The estimated total costs for garment manufacturer is USD 3.000. This is under the condition that all components used in their garments
7. (buttons, zippers) are also certified by OEKO-TEX 100.
8. Costs of certification must be included in the prices for yarn and later into the prices of finished garments/textiles. At the end the consumers must pay for the certification as they
9. are also the beneficiaries of the tested products.

### 3. Achievements

It has been possible to achieve these preliminary results:

- Most manufacturers and the MWCA are aware of the need and the usefulness of certification, which is an important step towards implementation.
- The OEKO-TEX 100 certification approach has been identified as most suitable and the spinning stage has been identified as most appropriate stage to apply the certification procedure.
- Manufacturers have been supported to complete declaration forms as important requirement to initiate the OEKO-TEX 100 certification procedure.
- A dialogue has been started with the OEKO-TEX testing laboratory in Beijing, which is the nearest contact organization for the manufacturers.

### 4. Further transmission

The proposed certification of yarns demands the cooperation of all manufacturing companies. This will ensure that in future each company will only use certified yarns. Due to the certification costs it must be assumed that the costs of certified yarns will be higher. However, when all manufacturers are using them the higher cost will affect them equally and no firm will be disadvantaged because they use certified yarns. The MWCA has declared its support for certification and will inform and convince companies to actually pursue the certification process in future.

It remains now to implement the actual certification of yarns which are produced by the cooperating spinning companies. In addition, manufacturers need to be consulted how the certification costs can be incorporated into the pricing of products and certification can be used for better marketing in organic textile markets.



GFA Consulting Group GmbH  
Eulenkrugstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)







## **Product sheet: Geographical identification (GI) as a tool to improve the competitiveness of camel wool**

### **1. Needs and challenges**

The market position of camel wool products is weakened over the years. On one side consumers turn to apparently more valuable fibers such as cashmere, on the other side manufacturers were less active in making attractive products out of camel wool. Furthermore, low quality camel wool yarns have been imported from China to Mongolia recently. Small knitting factories use these cheaper yarns to make products under the name “Mongolian camel wool”. Their low quality negatively affected reputation and sales of Mongolian camel wool products. In order to better distinguish Mongolian camel wool from the low quality imports and to improve its market reputation, GGC4 developed geographical identification. The Mongolian Wool and Cashmere Association (MWCA) already registered the “Gobi camel wool” geographical identification in 2007. However, it excluded the aimags the Green Gold project is active in, namely Bayankhongor and Gobi-Altai aimags with have high number of camels of special breeds.

### **2. Innovations and instruments**

Geographical identification (GI) is a kind of intellectual property right. It attaches an additional value to a resource on the basis of its area of origin. This is often combined with a specific way of production or processing, which is a traditional knowledge or skill in that particular area. GI can be used as a distinguishing sign on products that are prestigious by their geographical state and are unique in origin or those that contain a special attribute. It is acknowledged by customers who not only can recognize the origin of the raw material but also appreciate the positive attributes of the products, which are made of it.

In cooperation with the Aimag Federations of PUGs (AFPUG) in Bayankhongor and in Gobi Altai aimags GGC4 selected as example two camel breeds (“Lamiin gegeenii red” and “Tuhum tungalag brown”) for processing of GI. The AFPUGs of Bayankhongor and Gobi-Altai aimags have been registered as owner of the GI property right.

#### Tuhum tungalag brown camel

Mongolians judge camels by their production volume of meat, milk as well as their body strength and reproduce them on basis of these criteria to create new breeds. One of them is Tuhum tungalagiin brown camel as result of nature’s and intentional selection in Tugrug, Sharga, Khaluin soums in Gobi-Altai aimag. This breed has noticeable advantages to other camels.

Due to the particularly harsh climatic conditions in these soums Tuhum Tungalagiin brown camel has better wool efficiency compared to other breeds. Every part of its body has equal and thick wool and on its thighs it has mane-like wool. 47% of the herd has the property of developing two manes between head and chest with the resulting large volume of long hair. Its wool output per animal is up to 4,6 kg or up to 53.6% more than from other camel breeds. Fiber research has shown that the male (fierce) wool content is 03-1.5% higher and the female (soft) wool content is 6.4-44.2% higher as in other camel breeds.

#### Lamiin gegeenii red camel

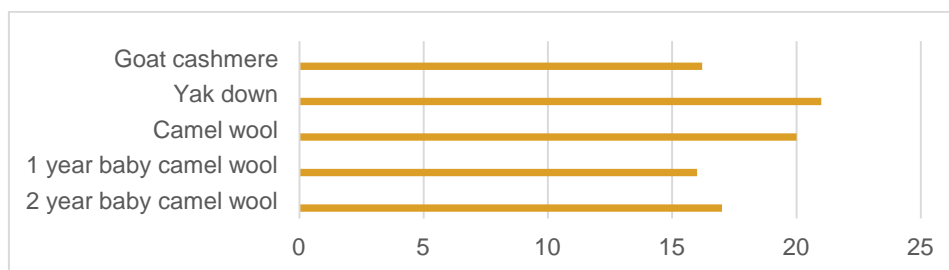
This breed has been raised and reproduced from the Lamiin gegeenii, lh shaviin hoshuu, and Tamgatai hutagtuudiin area in Bayankhongor Aimag. 80% of all camels in that aimag are raised and reproduced in Bogd, Bayanlig and Bayangobi soum territory.

The average wool output of Lamiin gegeenii red camel is 7.2 (±2.13 kg). Compared to Galbiin gobiin red camel it is 29.1% and to Haniin hetsiin brown camel 35.4% higher. From the above two breeds, GGC4 and AFPUGs took wool samples of 1 and 2 year old baby camels’ wool for laboratory testing. The results show that the thickness of the wool is almost identical but the Tuhum tungalagiin brown camel fibers were longer (see table below).

### Wool quality index

Camel breed	Average diameter mikron		Average length mm	
	1 year	2 years	1 year	2 years
Tuhum tungalagiin brown	16.5	17.1	55.9	56.1
Lamiin gegeenii ulaan	16.5	17.3	45.0	50.2

Judging from these test results, the above breeds' one year old baby camel wool thickness is the same as goat cashmere. This makes it possible to create specially high quality products and to advertise it better as a geographically identified product.



Comparison between the diameter of the natural textures mkm

### Qualification of AFPUGs on the GI approach

GGC4 also conducted training on GI product features for the AFPUGs. It also assisted them to set up a technical commission on GI in the respective AFPUGs and developed the draft working procedure of this commission. This enables the AFPUGs to pursue the approval of the GI on their own behalf in a sustainable manner.

### Registration of GI

GGC4 supported the registration of geographically indicated camel hair products from specific indigenous camel breeds in Gobi-Altai and Bayankhongor aimags. Requests with regard to the wool of Tuhum tungalagiin huren Camel and Lamiin gegeenii ulaan Camel were submitted to the Authority of Intellectual Property of Mongolia in December 2015. The request includes the identification of geographical location, specific characteristics of camel wool of the two breeds as well as the connection of the camel hair with the local natural environment and customs of people.

The image shows two identical registration forms for Geographical Indications (GI) for camel wool. The forms are in Mongolian and English. The left form is for 'Говь-Алтай аймгийн Төхөм Тунгалагийн Хүрэн' (Govi-Altai Aimag's Tuhum Tungalagiin Huren) and the right form is for 'Баянхонгор аймгийн ламын гэгээнгийн улаан' (Bayankhongor Aimag's Lamin Gegegenii Ulaan). Both forms include details about the product, its characteristics, and the registration process. The forms are dated 2015.12.28.

Registration of natural fibers from two camel breeds as protected by geographical indication (GI)

The registration of the GI documents at the Agency of Intellectual Property of Mongolia was finally achieved on 28 December 2016 (see certificates below). This enables the relevant AFPUGs as well as manufacturers to market the respective products under the GI distinction and to create unique selling propositions against similar products.

### QR code as GI mark

By placing a QR code on the geographically identified product, informations such as raw material quality, origin, breed and its specialties can be included. By scanning the code with a smart phone using a specific application (app), detailed information about the origin of the raw material can be retrieved by the buyer.



*Example of QR-code mark for GI certified product*

### **3. Achievements**

This pilot activity produced the following achievements:

- It succeeded in developing an effective approach for obtaining a geographical identification (GI) certification for natural fibers.
- The GI certification from the Agency of Intellectual Property of Mongolia for natural fibers of two camel breeds in Bayankhongor and in Gobi Altai aimag respectively was achieved.
- The AFPUGs in Bayankhongor and Gobi Altai aimags have obtained a valuable intellectual asset, which can generate more income in future.

This has created the opportunity for manufacturers to attach a higher value to their products made from the GI certified camel wool and in appreciation of that to achieve relatively higher prices. As a consequence of that, herder cooperatives selling the wool from these two breeds to manufacturers can do so with a premium price and create higher income for their members.

### **4. Further transmission**

This GI certification pilot serves as an example which can be used by the partners (AFPUGs, manufacturers) to develop a GI protection for natural fibers of further animal breeds in different locations (such as yaks, camel, cashmere, sheep wool).

The AFPUGs as legal owners of the GI protection mark can further cooperate with the respective manufacturers to advertise and develop this valuable resource and the resulting products. Here they can use the experiences of the partner MWCA in utilizing a similar GI mark for Gobi camel.



GFA Consulting Group GmbH  
Eulenkrußstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)





## **Product sheet: Using media to support the marketing of yak down and baby camel wool**

### **1. Needs and challenges**

Many project activities of GGC4 were conducted in the aimags for isolated target groups and for restricted audiences. The challenge then has been to inform all target groups of the project about successful approaches and instruments. In addition, it was necessary to inform potential buyers about the advantages of products made from innovative fibers such as yak down and baby camel. In order to respond to these challenges, GGC4 has continuously utilized media to document project achievements and to inform wider audiences.

### **2. Innovations and instruments**

#### Video and TV program on improved skins/hides preparation

Trainings on improved skins/hides preparation were held in two soums of Arkhangai aimag on 14-17 November 2015 in cooperation with “Darkhan Nekhii” Leather Company. This company in the city of Darkhan is the largest buyer of hides and skins in Mongolia and is an important partner of GGC4 for value chain upgrading. Darkhan Nekhii provided their company experts at own expenses. The one-day trainings comprised half day classroom training and half day practical training for preparation of skins/hides. During the classroom training, “Darkhan Nekhii” Company introduced their own procedure for quality assessment of skins/hides. A brochure had been developed and was distributed to the herders. In total, 64 herders qualified and learned the appropriate methods for skins/hides preparation. This will enable them to prepare the raw material in accordance to the quality requirements of “Darkhan Nekhii”. This in turn enables that company to pay higher prices to herder cooperatives.

During the trainings, a video was produced, disseminated to the respective AFPUGs and published in the internet (<https://www.youtube.com/watch?v=hQmHryb9wL0>) in 2016. It can be used by the AFPUGs in their informing and qualifying herders. This will contribute to better preparing raw materials according to quality standards of buyers and to achieving higher prices. Together with an interview with the skins/hides expert this video was also part of a TV program, which was broadcasted to a nationwide audience through Mongol Herder Channel in December 2015.

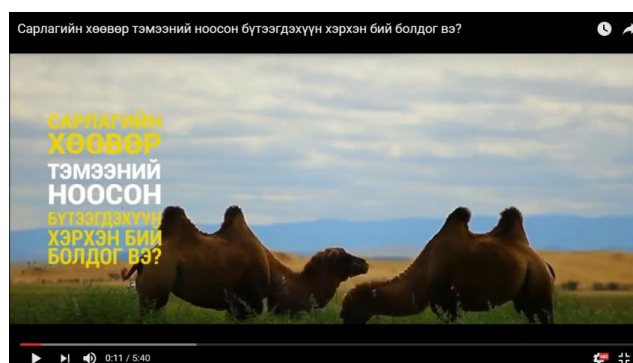
#### Comprehensive video coverage of the natural fibre value chains

All major inputs to the value chains of yak down and baby camel wool were documented on videos and in this way were made available to the interested public. GGC4 has created several videos and TV programs on various topics such as:

- “How to prepare high quality raw material”,
- “Benefits for preparing raw materials through cooperatives”,
- “Yak festival”,
- “Hides and skin preparation methods” and other videos for herders published on CD and online.
- In order to round up this series one further video was produced: “From yak down and baby camel wool to fashion product”. This video informs the interested public and also helps herders to better understand technological requirements of processing factories and the importance of high quality raw materials. In this way the video supports the necessary close partnership between herders and producers
- GGC4 also contributed to the program of video productions of the GG project by making two further videos: “Cooperative benefit and herder cooperation” as well as
- “Requirements for raw material preparation”

Soum administrations, AFPUGs and NGOs use the videos during herders’ meetings. To support this, the videos were burnt on CDs and delivered to all APUGs in project aimags. They were also included into 400 herder information bags of the GG extension component. In Youtube all videos receive strong interest and high frequency.





Screenshot of the video: "From yak down and baby camel wool to fashion product"

The following table contains an overview of all videos which were produced by GGC4 during the project implementation period.

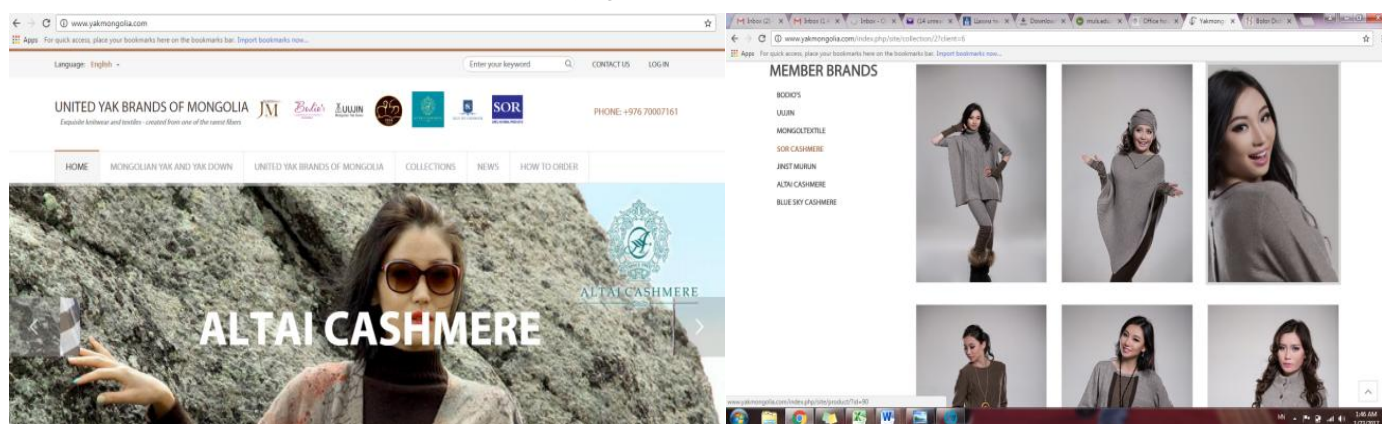
	Topic, languages, link, production partner	Significance of the videos
1	Yak wool preparation (Mon and Eng) <a href="https://youtu.be/iJsdbq-VK60">https://youtu.be/iJsdbq-VK60</a> MNC TV	DVDs sent to 44 soums of 7 aimags with yak down resources, 10 copies to the aimag cooperatives of Uvurhangai aimag. During yak down preparation period, streamed on "Mongol Malchin" TV 12 times.
2	New preparation method: combing baby camels Mongolian with English subtitle <a href="https://youtu.be/qL66nwYvIQs">https://youtu.be/qL66nwYvIQs</a> MNC TV	DVDs given to 5 APUGs of 5 aimags and data files given to 28 APUGs of soums and cooperatives. Also used during baby camel combing training.
3	'Tuhum tungalag brown' breed camel/ <a href="https://youtu.be/5U9ZlssBt3o">https://youtu.be/5U9ZlssBt3o</a> MNC TV	Prepared during the Gobi-Altai camel festival to present the Tuhum tungalag brown camel breed. Supported introduction of breed's geographical identification. Shown at various project seminars and meetings.
4	'Lamiin gegeenii ulaan' breed camel <a href="https://youtu.be/dVYoLfKnUZ4">https://youtu.be/dVYoLfKnUZ4</a> MNC TV	Prepared during baby camel wool preparation in Bayankhongor, to present the Lamiin gegeenii red camel breed. Supported breed's geographical identification. Shown at various project seminars and meetings.
5	Fashion show of yak down products <a href="https://youtu.be/UviHqNK6Poc">https://youtu.be/UviHqNK6Poc</a> MNC TV	Shot during Mongolian Yak Festival organized in Tariat soum of Arkhangai aimag in July 2015. Including a fashion show for yak down products. Also used during international exhibitions.
6	MNC TV trailer on yak festival <a href="https://youtu.be/NLLd1m01-PA">https://youtu.be/NLLd1m01-PA</a>	A short version of the video above.
7	Fashion show of baby camel down products <a href="https://youtu.be/7oglvFwYn40">https://youtu.be/7oglvFwYn40</a>	Shot at the fashion show to introduce products made from the new baby camel preparing method.
8	How are yak down and camel wool products made? <a href="https://www.youtube.com/watch?v=aiYWYRNaG2s&amp;t=11s">https://www.youtube.com/watch?v=aiYWYRNaG2s&amp;t=11s</a> ; Terranigma Studio	Prepared to show herders and customers how raw materials undergo different processes in factories to become the final product. Presented during closing ceremony of project.
9	Camel wool preparation and quality improvement <a href="https://youtu.be/o2mD5ajv5LU">https://youtu.be/o2mD5ajv5LU</a> Mongol Malchin TV	In cooperation with Mongol Malchin TV this video produced to show how to correctly prepare camel wool and to increase one's income. It also featured the new yak combing fence.
10	Fence for yak combing <a href="https://youtu.be/rKp2DDItPz8">https://youtu.be/rKp2DDItPz8</a> Mongol Malchin TV	In cooperation with Mongol Malchin TV this video featured the new yak combing fence.
11	Study tour of PUG herders in Arkhangai and Zavkhan aimag to the meat, wool, cashmere, skin and hides processing companies <a href="https://youtu.be/PEGWzVNzsUU">https://youtu.be/PEGWzVNzsUU</a> Mongol Malchin TV	Prepared by Mongol malchin TV during the study tour of meat, hide processing factories, organized for raw material suppliers and herders' representatives.
12	"Cooperative benefit and herder cooperation" ( <a href="https://youtu.be/hGHZi0ILT8">https://youtu.be/hGHZi0ILT8</a> )	Produced for the program of video productions of the GG project
13	"Requirements for raw material preparation" ( <a href="https://youtu.be/DP8kMa7Eaxo">https://youtu.be/DP8kMa7Eaxo</a> ).	Produced for the program of video productions of the GG project

### First English/Mongolian dictionary of textile terms

Although the Mongolian wool and cashmere sector is over 80 years old, there has been no Mongolian/English dictionary on specific terminology. Therefore, based on the demand of partner companies GGC4 supported the publication of a dictionary. The editing team comprised specialist from institutions closely linked to the textile sector: Light Industry Research and Development Center; Ministry of Industry; Mongolian Wool and Cashmere Association (MWCA).

The vocabulary of the dictionary comprises 2,207 terms from English to Mongolian and 2,107 terms from Mongolian to English. 1,000 pocket sized copies were printed and distributed to MoFALI, Light Industry Research and Development Center, Mongolian University of Life Sciences (MULS), Mongolian University of Science and Technology (MUST), Mongolia-Korean Technical College, Ulaanbaatar University, Research Institute of Animal Husbandry, MWCA and all partner companies free of charge.

Students of MUST asked GGC4 to receive additional copies against payment, which shows that this initiative of GGC4 responded to a real need of students, researchers and companies. This need can be further responded to by the co-publisher MWCA, who owns the copyright of the dictionary.



*UYBM web page with online product catalogue*

### Website of the United Yak Brands of Mongolia (UYBM)

GGC4 supported UYBM by commissioning the professional development of a web page to present the group and the specific features of yak down. The webpage [www.yakmongolia.com](http://www.yakmongolia.com) was launched in February 2015. It enables customers to gain knowledge and information on pasture friendly yaks as well as characteristics and advantages of yak down. They also learn about the intentions of the UYBM groups itself (incl. code of ethics and company profiles). In addition, the website contains an online catalogue of products made by member companies. If visitors are interested in such products they can use direct links to the websites of manufacturers.

### Brochures on yak down and baby camel

GGC4 developed two brochures for information of buyers and of consumers:

- Brochure on benefits of products made from yak down, on features of yaks and how they support the sustainability of their habitats (in English and German).
- Brochure on specific features of baby camel hair and on benefits of this innovative natural fiber with regard to ecological, economic and social sustainability (in English and German).

### Brochure on animal health and safe meat production

In November 2016, GGC4 organized pilot trainings for herders in two soums of Arkhangai and Zavkhan Aimags on the subjects of animal health and safe meat production. This supports the value chain for premium meat which is being developed together with secondary cooperatives and one meat processing company. In order to inform the herders a brochure with the training contents and further reading material was prepared and handed over to the herders.

In addition, GGC4 developed a flyer, which informs herders about the benefits of keeping livestock healthy and of selling it at the appropriate time for beneficial prices. It Highlights and addresses the problem that herders tend to increase herds instead of using the herd in a productive manner to achieve regular income. This flyer was designed in form of a dialogue between an informed younger herder and an older herder and was kept in simple and clear language.



Brochure, handbook for herders during training on animal health and safe meat

### 3. Achievements

GGC4 has succeeded in documenting all major innovations developed by the project on professional and informative videos. This supported first of all the various training programs. These documentary videos are also an important tool for the future mainstreaming of the best practices which were generated in the GGC4 project.

GGC4 developed also brochures on yak down and baby camel wool which were printed in large numbers and were mainly distributed during exhibitions. In this way interest was created among buyers and the public in general in products made from the innovative natural fibers yak down and baby camel wool.. It is expected that this will help to improve the market position and the sales of these Mongolian products especially in the international markets.

### 4. Further transmission

All media (videos, brochures, dictionary, website) have been handed over to the respective project partners, namely MWCA, UYBM. They can be used by them in future to strengthen the market position and international presentation of yak down and baby camel wool products. The maintenance of the website has been covered for the year 2017 by GGC4 and after that will be maintained by the UYBM group of companies



GFA Consulting Group GmbH  
Eulenkrugstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)





## Green Gold” Project Component 4 (GGC4): Facilitate Market Access by Linking Yak Herders to Processing Companies - Mongolia 2013-2016 “



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Agency for Development  
and Cooperation SDC

### Product sheet: Support of international marketing through exhibitions and match making with international buyers

#### 1. Needs and challenges

At the beginning of the project implementation in 2014, GGC4 conducted a detailed analysis of the marketing side of the natural fiber value chain. It turned out that manufacturers were already actively engaged in selling garments and textiles to export markets. Products were mainly sold to markets in Japan and Russia where they attracted great interest as high quality and luxurious products. However, the market in Japan is limited and not easy to penetrate and the Russian market closed up since the economic down-turn in that country. Therefore it has become increasingly important for the manufacturers to explore and utilize other markets such as North America and Europe. It was expected that especially markets in Europe would react very positively on the sustainability story of products made from yak down and baby camel wool.

However, manufacturers had little experience of marketing in these countries and therefore GGC4 has supported their presentation at exhibitions in USA and Germany. As an important preparation, GGC4 also facilitated the improvement of designs to be presented at exhibitions

#### 2. Innovations and instruments

##### International designer consulted manufacturers on improved designs new markets

In order to develop a collection of knitted and woven yak down products and to strengthen the capacity of national designers, GGC4 contracted a professional designer from Great Britain in 2014. This assignment follows these steps: developing design concept, preparing themes and design ideas, delivering tech packs for new products, making first and second proto-types and approving final samples to be introduced at targeted fashion exhibitions.

Based on the technical capabilities of the processors and their ability to interpret and produce design specifications, the international designer allocated various designs to the appropriate manufacturers. Then a one-day training was organized for their designers. The international designer selected some products from manufacturers and evaluated their readiness for international exhibition. Based on the design recommendation, a collection of knitted and woven yak down products including men's and ladies' sweaters, cardigans, shawls, ponchos, scarves (total of 25 items) was produced and selected for exhibition.



##### Technical and marketing consultation for Mongol Textile as home textile manufacturer

Studies and consultations have shown that several manufacturers have deficits in the production and finishing of garments and textiles. C4GG hired a technical and marketing consultant and offered his services to all participating companies on a cost sharing basis. Three companies (Bodio's, Uujin, Jinst Murun) used the technical consultation service to solve specific production and finishing issues.



All companies were highly satisfied with the inputs provided. C4GG paid only a basic consultation fee which was topped up by the companies, which also took over per diem and transport expenses.

Some firms (Uujin, Bodios, Blue Sky Cashmere) were already beneficiaries of the home textile marketing project of CBI (Centre for Promotion of Imports from developing countries) and were not supported by GGC4 in this field. The largest home textile producer in Mongolia namely Mongol Textile (MT) was not involved in the CBI project. Therefore, GGC4 commissioned a home textile expert from Germany to consult Mongol Textile on International Marketing and to introduce the company to buyers in Central Europe. The objective was to cover also the segment of home textiles made from yak down and from baby camel wool in the project activities. Among partner companies MT was the only home textile producer without external facilitation and was therefore selected for this consultation.

From October 2015 to February 2016 the expert consulted MT in Ulaanbaatar and Germany. He arranged visits to three large exhibitions: Hometextile and Ambiente in Frankfurt and Maison et Objet in Paris. In addition, contacts were arranged with firms such as Georg Auzinger in Vienna, Claro Fair Trade AG in Switzerland, Dinnerware in Holland, Fashion-1 in Bochum. The garment marketing expert of GGC4 introduced MT to the large buyer Manufactum in Germany. In this way MT could secure a sales contract with Manufactum and with Fashion-1. As a further result of the consultations, MT has produced a new look book, which is available online, and a new sample book. This helps institutional buyers to obtain more information about the product range.

Additionally, the expert organized a one day workshop on "Export Marketing" for all manufacturers on 10 November 2015 in close cooperation with the MWCA. Representatives of 16 companies participated in this event and were qualified on successful approaches and tools for international marketing in a practical manner. Many useful tools were introduced which enabled them to introduce immediate improvements in their marketing activities.

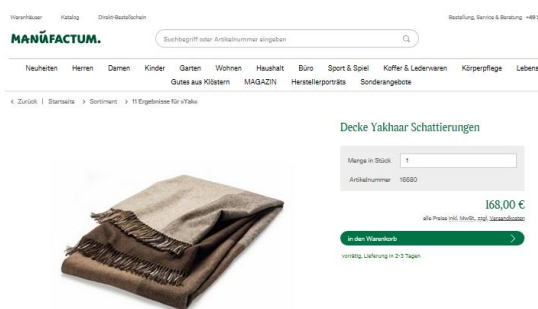
#### Successful matchmaking between manufacturers and institutional buyers in Europe

There is a trend, that institutional buyers visit exhibitions less frequently. Therefore, visits to their offices must be arranged in order to approach them. GGC4 commissioned a German marketing expert to make various "road trips" from October 2015 to March 2016 to visit potential buyers in Germany, Switzerland and Austria. There was great interest in the Mongolian products expressed by institutional buyers like Manufactum, Markenherberge, Grüne Erde. Contrary to that, some large garment producers like Hugo Boss and Marc O'Polo are less interested to buy finished garments. They have their own designs and established producers and are more interested to purchase yarns (see below). More perspectives had presentations with medium sized buyers. The expert successfully presented yak and camel products of all manufacturers. Consequently, Manufactum and Grüne Erde asked several manufacturers for samples and offers or provided their own designs. After sometimes longer negotiations, which were consistently facilitated by the GGC4 team, total sales amounting to about 100.000 EURO could be achieved by the manufacturers during the sales season 2016.



*Logos of institutional buyers targeted at European market*

It is interesting to note that the buyers point out the sustainability story which supports the products made of yak down and baby camel wool in their information to customers (see example of Manufactum).



#### Zurück zur Vielfalt.

Einige mongolische Yakgarbhersteller haben sich zusammengeschlossen, um die Nomaden darin zu unterstützen und zu bestärken, wieder mehr Yaks in ihren Herden zu halten. Ursprünglich umfassten diese neben Yaks und Kamelen nur etwa 10% Kaschmirziegen. Aufgrund des Kaschmirbooms der letzten Jahre haben die Nomaden den Ziegenanteil jedoch auf bis zu 50% erhöht, mit ökologisch weitreichenden Konsequenzen: Die Ziegen beißen beim Fressen nicht das Gras ab, sondern rupfen die ganze Pflanze heraus. Das Wasser kann dadurch nicht mehr im Boden gehalten werden, der in der Folge erodiert und versandet. Auch der Hersteller unserer Yakhaardecke gehört der Vereinigung UYBM (United Yak Brands of Mongolia) an, die sich nicht nur für eine nachhaltige Weidennutzung und damit eine verbesserte Lebensgrundlage der mongolischen Nomaden einsetzt, sondern auch für angemessene Arbeitsbedingungen und faire Entlohnung der Mitarbeiter.

#### *Presentation of sustainable Yak products at Manufactum Homepage*

This positive response and the volume of sales even exceeded the expectations and were very promising. This proves that with effective support yak down and baby camel products can be successfully introduced to the European market.

#### Participation in Las Vegas Sourcing at MAGIC fashion exhibition (February 2015)

The member companies of United Yak Brands of Mongolia (UYBM) participated in the international exhibition "Sourcing at MAGIC", which was held in Las Vegas from 16 to 19 February 2015. It is one of the largest shows worldwide for the global fashion supply chain. In the exhibition, 35 countries were represented and about 15,000 visitors mainly from USA and Canada attended (wholesalers and retailers, not consumers). GGC4 in cooperation with MWCA supported the costs of the stand in the exhibition. Three UYBM members participated and financed their own travel expenses themselves. The yak down products met great interest. As a result of the exhibition, member companies got direct orders, made many contacts and created new business ideas (handbags, shoes, functional clothing). Before the exhibition, GGC4 developed a new brochure of UYBM in English and distributed it during the exhibition. The new website of UYBM ([www.yakmongolia.com](http://www.yakmongolia.com)) was also helpful to inform the visitors about the UYBM and the products of its members.

#### Participation in Green Showroom at Berlin Fashion Week - January 2016

GGC4 in cooperation with MWCA organized the presentation of products of seven manufacturers at the Berlin Fashion Week from 19 to 21 January 2016. GGC4 rented a stand of 24 sqm: Yak down products were shown by five firms (Jinst Murun, Sor Cashmere, Bodio, Uujin, Mongol Textile) and baby camel hair products by four companies (Altai, Blue Sky, Bodios, Uujin).



*Impressions from the international trade fairs*

In three days about 150 visitors came to the stand and intensively discussed with company representatives as well as two international marketing experts contracted by GGC4. Most visitors came from retail shops which intend to expand their sales portfolio with new products. Also representatives of large buyers were received,

such as Manufactum, Grüne Erde, Markenherberge and Hess Natur. Noteworthy are also the visits of well-known politicians (among them the German former Minister of Agriculture), who showed great interest in the sustainability of raw material production and processing.

Six companies presented one look each in the salon show (four yak, two baby camel outfits). The looks drew great interest from the audience of about 400 buyers and fashion experts. Many companies reported sales to retail shops, which reached a total of over 15.000 EURO. Other companies reported little sales because they presented home textile products (Mongol Textile) or baby camel hair products only (Altai Cashmere).

The following lessons learned were drawn from this activity:

- The joint and large stand of Mongolian companies created much interest and the group approach strengthened trust by buyers into products.
- The stand design can be improved by placing racks on the outer edge of the stand. Boxes of individual companies or separate space for one company shall be avoided.
- Success of companies depends to a wider extent on ability and openness for communication. The presence of German experts was of great value as most German shop owners do not communicate in English.
- Yak down products were very successful and many smaller orders were registered. Baby camel hair products were ordered in smaller volume. Visitors mentioned the limited color variations of this material. It is recommended to consider either combination between baby camel wool and cashmere or dyeing of baby camel hair (with natural color shades). This was then introduced in late 2016.

#### Participation in the Ethical Fashion Show in Berlin and at INNATEX in Frankfurt January 2017

Even though these exhibitions were held in 2017, GGC4 facilitated the participation of the partner companies as one of the last project activities. In total, seven firms exhibited their yak down and baby camel products at the joint stand. Again, the high quality and fashionable products attracted much interest and negotiations with several buyers could be started by the partner firms. There was especially great interest in the garments and accessories made from dyed baby camel wool, which were presented in Europe for the first time.

#### Participation in other exhibitions

With consultation and technical support from GGC4 several manufacturing companies (Bayalag-Ulzii, Altai Cashmere, Mongol Textile and Blue Sky) designed and produced garments from combed baby camel hair. These products were presented for the first time to the Mongolian public at the “Wool, Cashmere and Leather 2015” national exhibition on 16-19 October 2015 in Ulaanbaatar. Products attracted customers and one baby camel hair product from Altai Cashmere company won the prize for “Best product 2015” in the sector of wool and cashmere industry.

From 23 to 27 October 2015 several manufacturers participated in the “China-Mongolia Expo” in Hohhot (China) and presented the new products of baby camel hair. The participating firms and National Association of Pasture Users Groups (NAPUGs) sold products worth 35 million MNT (about 15,000 CHF).

#### Consultation on effective order execution

Presentations at exhibitions or contacts to buyers must be followed up effectively. The GGC4 team consulted all partner firms in order to ensure a timely and correct execution of the orders which were obtained through the marketing efforts. To ensure this, an order confirmation form was designed and sent to buyers and sellers. An offer form was designed to ease offers to larger buyers. GGC4 consulted the firms with regard to the export regime from Mongolia, low cost transport options and customs issues in the EU. It is positive to note that Mongolia has been granted a special status by the EU (for development and good governance) and the duty tariff of 12% has been exempted. However, it is necessary to provide the correct EU import codes for each type of product. GGC4 prepared a table with EU import codes in English/Mongolian to be used by the partner firms. In addition Certificates of Origin must be presented, on which GGC4 also consulted the firms.

### Supportive information materials

To support the presentation of yak hair and baby camel wool products GGC4 produced information materials:

- Brochure on benefits of products made from yak down, on features of yaks and how they support the sustainability of their habitats (in English and German).
- Brochure on specific features of baby camel hair and on benefits of this innovative natural fiber with regard to ecological, economic and social sustainability (in English and German).
- Product hangers for yak down and for baby camel down products in English language were developed and introduced, which inform customers about the benefits and sustainability issue of this innovative product

### **3. Achievements**

GGC4 has coached the partner manufacturers in entering the garment and textile markets especially in Central Europe, where a high and constant demand can be found. The company representatives gained experience in booking space at exhibitions, designing and setting up the stand, presenting their products and negotiating with prospective buyers.

The participating companies were able to secure orders from buyers at the exhibitions and from institutional large buyers (such as Manufactum, Gruene Erde) up to the amount of 115,000 EURO in 2016 alone.

Through consultation and coaching there has also been much progress with regard to the effective execution of orders.

### **4. Further transmission**

It was noticed that in the case of exhibitions in German speaking countries there is need for German speaking representatives at the stand. Otherwise the negotiations with potential buyers are ineffective.

For the future it shall be considered to complement presentations at exhibitions and visits to institutional buyers with other measures. For example, it can be assessed if the cooperation between manufacturers and a specialized sales shop e.g. in Germany would be beneficial. It would allow a permanent presentation and selling of the products and a steady flow of income. It could be combined with a storage from which orders to manufacturers by European customers could be fulfilled directly and at lower costs. Such a potential partner shop of the Mongolian companies has already been identified and is known to them. It remains to negotiate and to conclude mutually beneficial agreements. It was also noticed that Gobi Cashmere is opening several retail shops in Germany and there is a need for the smaller firms to join forces in order to compete with this large manufacturer.



GFA Consulting Group GmbH  
Eulenkrogstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)







## **Product sheet: Analysis and strategy for upgrading the value chains of livestock/meat and of hides/skins**

### **1. Needs and challenges**

In January 2015, SDC expanded the mandate of the consortium GFA-GEFAK for the implementation of GGC4. Based on the positive results of the match-making for yak down and camel wool, the consortium was tasked to consult the upgrading of the two value chains livestock/meat and hides/skins. This amendment of the contract was valid until December 2016 with a spatial scope on Zavkhan aimag and Arkhangai aimag.

GGC4 conducted a thorough analysis of the livestock/meat and hides/skins value chains (VC) and elaborated a value chain upgrading strategy in order to initiate this pilot project. After the strategy was endorsed by the stakeholders it was translated into a detailed support program and operation plan, focusing on pilots.

#### Analysis of the supply side (herders, cooperatives)

The supply study was conducted in selected soums of the two pilot aimags in order to collect data from herders, PUGs, herder cooperatives (primary and secondary), as well as representatives of the soum administrations. It covered the following issues: resource potential (volume and quality) of raw material, sales of live animals, meat and hides/skins, main sales channels, opportunities for establishing direct links between herder cooperatives and processors, the role of cooperatives in the value chain of meat and skin/hides, training needs on strengthening the capacity of cooperatives, PUGs and APUGs; and further issues related to improving the value chain and quality of products.

#### Analysis of the demand side (meat processors, leather processors)

The demand study was conducted in selected processing companies in Ulaanbaatar and Darkhan with interest to buy livestock and hides/skins from herder cooperatives in the pilot aimags. It covered the following issues: volume, quality, prices and seasonality of demand of animals for slaughtering; processing and installed/actual production capacity; main markets (including export) of processed and semi processed products and demand for such. The main goal of the study was to analyze preparation and supply as well as demand of livestock/meat and hides/skins. It presented the situation in form of a value chain map and identified interventions for upgrading the value chains.

The studies were implemented by experts from the Mongolian State University of Life Sciences (MULS), the Leather Industry Association and the Meat Association, joined by the GGC4 staff. Both studies were incorporated into one value chain analysis report, which contained the elaboration of value chain maps, identification of constraints and the recommended upgrading strategies and respective activities.

#### Constraints in the livestock/meat value chain

The supply and demand studies revealed the following constraints in the value chain for livestock/meat (see also the graph below).

Input supply:

- Inadequate and weakly monitored veterinary services (does not meet policies of the World Organisation for Animal Health OIE) leading to low animal health status
- No continuation of previously existing breed improvement programme and herd management
- Fodder is limited due to pasture degradation and retracting underground water level

Procurement of live animals:

- Number of livestock provided to market is limited due to an sub-optimal herd structure (many old animals).
- Knowledge related to running business-oriented livestock production is weak and labor resource is insufficient.
- Herders have little knowledge of needs and conditions in the meat market.

- The integrated preparation and supply of meat is uncompetitive against cheaper and preferred channels
- Roles and duties of the herders' cooperatives in livestock supply are not clear.
- Much meat reaches consumers at high prices through interim-traders who add little value.
- Requirements of hygiene and inspection is not ensured in the common meat preparation and supply.

#### Slaughtering and processing:

- Insufficient working capital of modern slaughter houses to purchase large volumes of live animals.
- Majority of animals are slaughtered by traditional method under unhygienic conditions.
- New standard for slaughtering of animals has just been introduced and needs to be applied by meat processors.
- Lack of storage facilities to keep carcasses and to ensure steady supply of meat products.
- Portioning of meat is done in very rough way and not according to consumer's needs.
- Only small share of meat is sorted and packaged at meat processing companies, while largest share is slaughtered by herders in the aimags or in sub-standard abattoirs around Ulaanbaatar.

#### Wholesale trade and retail trade:

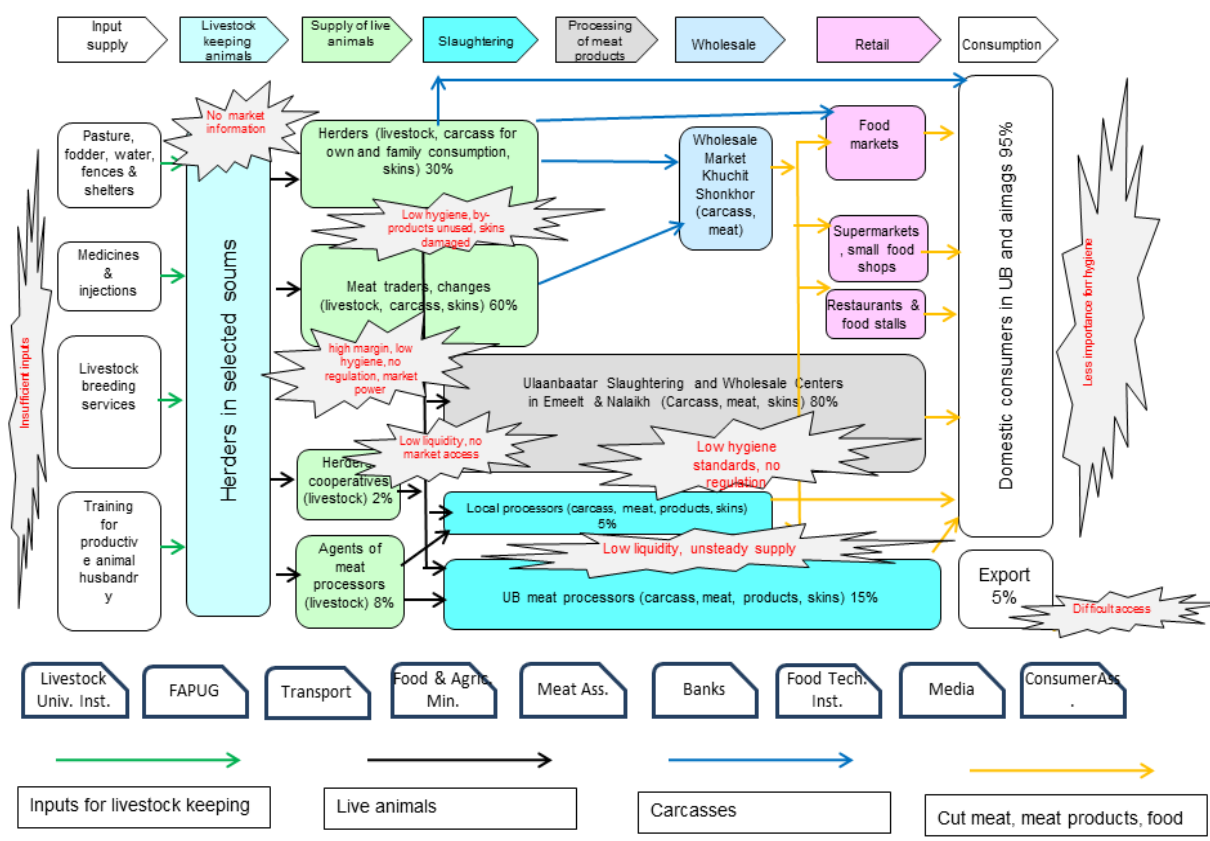
- Wholesale centers have insufficient storage to keep meat in accordance with food technology.
- Wholesale centers do not meet requirements for hygiene and sanitary conditions.
- Retail shops have insufficient display facilities to keep meat in accordance with requirements of food hygiene.
- Meat processors are unable to debone carcasses and cut meat according to needs of quality demanding consumers.

#### Domestic consumption:

- Low concern for quality and safety of the meat.
- Less choice for consumers and high market price for meat.
- Purchasing power of majority of consumers is low.
- Little communication between customers and producers.

#### Export markets:

- Many obstacles to export meat to foreign countries (animal health, hygiene standard).
- Little knowledge of market needs and conditions in foreign countries.

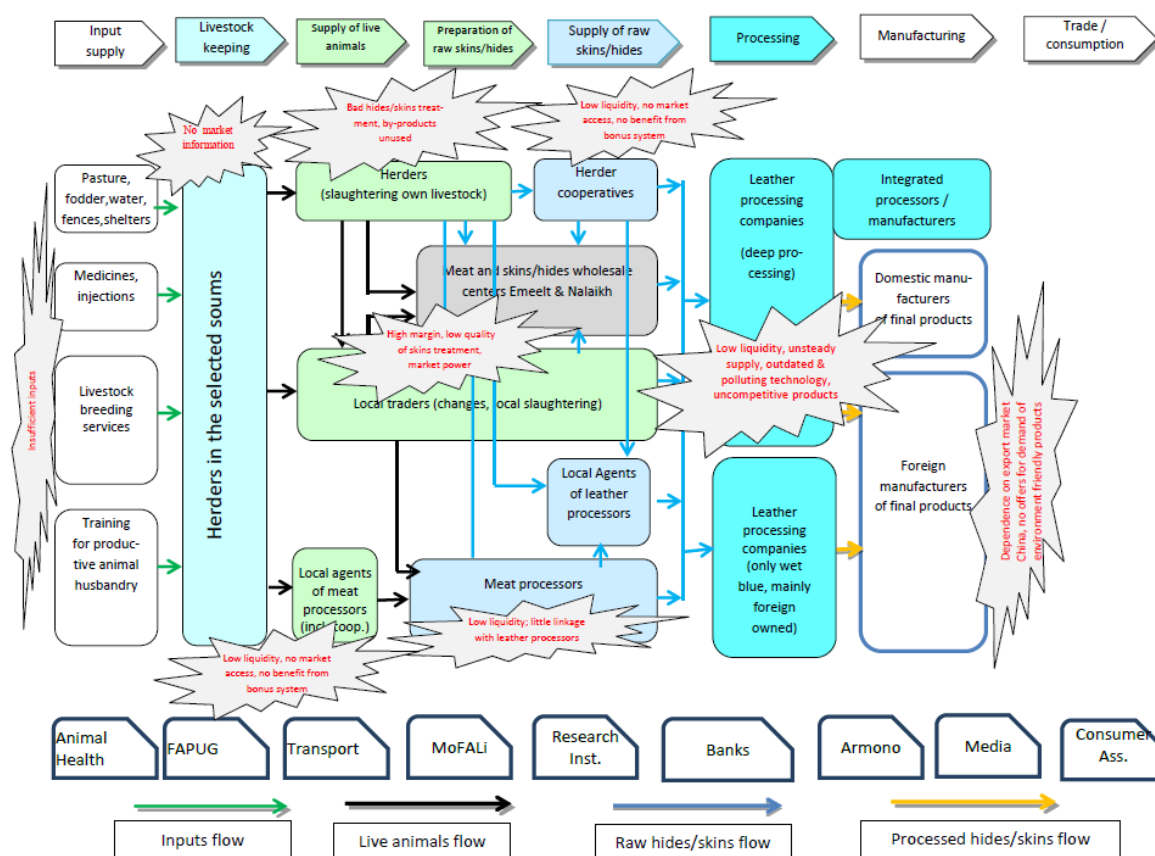


Identified constraints in the livestock/meat value chain

## Constraints in the hides/skins value chain

The supply and demand studies revealed the following constraints in the value chain for livestock/meat (see also the graph below).

- Insufficient inputs to the livestock sector, especially insufficient veterinary services, which lead to raw materials with skin errors caused by ecto parasites.
- Technical inability of herders on raw material treatment, especially on slaughtering animals without damage the skins/hides as well correct drying, stapling and storing of skins/hides.
- Technical inability of local traders (changes) on correct slaughtering and primary treatment of hides/skins.
- Limited capacity of cooperatives: insufficient liquidity to purchase large quantities of skins/hides, lack of treatment and storage facilities, lack of quality control and grading of raw materials, weak connections to processing companies to sell to them directly.
- Lack of processors interest to purchase from cooperatives, as they fear that factory standards are not met.
- Lack of capacity of processors for deep processing of hides/skins, especially low capacity to manufacture large amount of box-calf, chevette, and other demanded types of leather.
- Inability of manufacturers to produce final products (clothes, shoes, leather items), which are competitive enough to be sold in the international market.
- Lack of waste management in leather processing factories leading to environmental problems.
- Weak collaboration between leather processors and meat processors, which rather sell hides/skins to foreign processors than to domestic processors.
- Limited financial resources of processors leading to outdated technology and low utilization of processing capacities.
- Dependence on the single export market China due to insufficient knowledge of alternative markets.
- Lack of response to changing consumer demand for environmental friendly products and especially need for chrome-free leather processing.



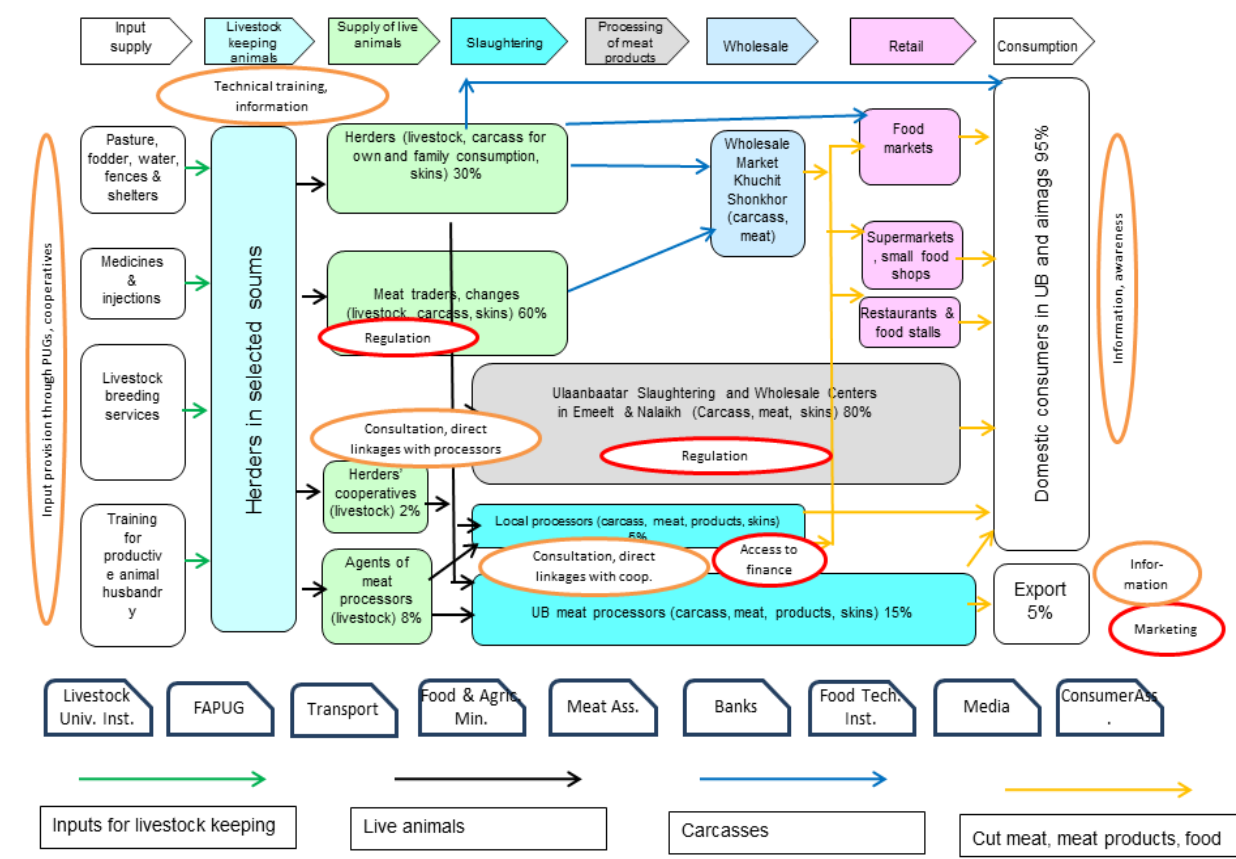
Identified constraints in the hides/skins value chain

## 2. Innovations and instruments

The study results as well as upgrading strategies and proposed activities developed on its basis, were presented on 14 May 2015 at a workshop to the stakeholders and were supported by them (cooperatives, processors, associations).

### Objectives and activities for upgrading of the livestock/meat value chain

Objectives for upgrading of the livestock/meat value chain: (i) to improve and increase the sales of live animals; (ii) to increase livestock prices for herders and improve their income; (iii) to help processors obtain steady supply of live animals; (iv) to provide access of consumers to quality meat at reasonable prices throughout the year and (v) to utilize the market potentials for export especially of meat products.



*Proposed intervention points in the livestock/meat value chain*

The following activities were agreed with the stakeholders in order to overcome the challenges mentioned above and to implement the upgrading strategy.

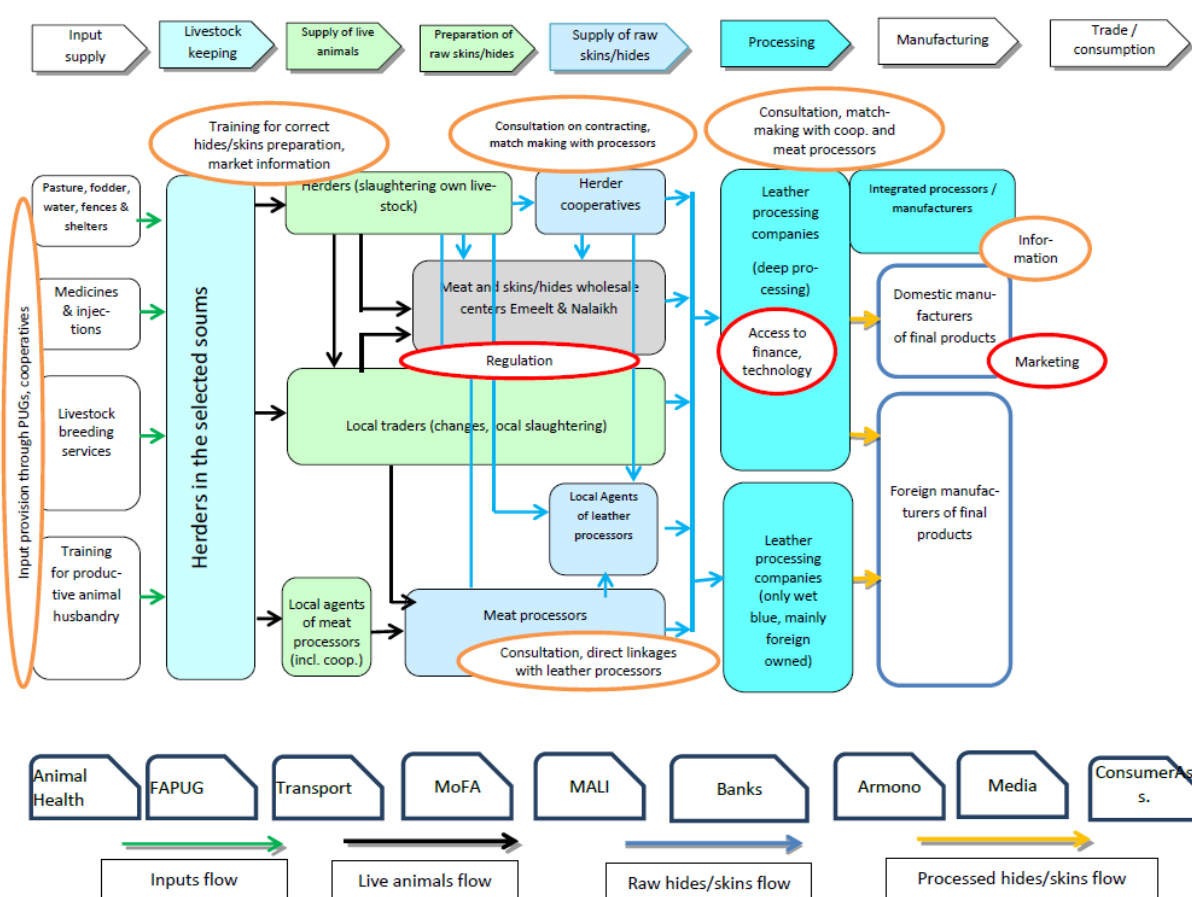
1. Agree with all stakeholders on the upgrading strategy and on the joint plan of action.
2. Qualify herder organizations to improve the provision of inputs to herders, e.g. making agreements with veterinarians, establishing nucleus herds etc.
3. Conduct technical training for herders on hygienic slaughtering and hides/skins preparation, provide them with market information and qualify them for their roles in the value chain.
4. Consult cooperatives on marketing of livestock incl. management, rights and duties of members, market information etc.; develop business plans for cooperatives for selling livestock; establish sales contracts with appropriate local and processing companies in the capital.
5. Consult meat processors to ensure a steady supply of livestock through direct linkages with cooperatives, on improving infrastructure and product quality and on accessing external finance.
6. Consult and inform media on improving the awareness of consumers towards better quality of meat processed under hygienic conditions and with ensured animal health and traceability.

7. Help the processors in solving issues of exporting meat on a regular contract basis by providing information on market and trade opportunities and by selecting overseas market segments.
8. Consult the appropriate facilitating organizations such as MoFALI, Meat Association, Institutes, banks etc. on improving their contributions to the value chain for meat.

These intervention points are also presented in the following graph of the value chain for livestock and meat. The interventions marked with orange frame are planned immediate activities of GGC4, those marked with red frame are proposed activities of other stakeholders (such as Government, Meat Association), which can be facilitated by GGC4.

#### Objectives and activities for upgrading of the hides/skins value chain

Objectives for upgrading of the hides/skins value chain: (i) to increase skins/hides prices for herders and improve their income; (ii) to help processors obtain steady and sufficient supply of skins/hides and (iii) to utilize the market potentials for export of skins/hides and leather products.



Identified intervention points in the hides/skins value chain

The following activities were agreed with the stakeholders in order to overcome the challenges mentioned above and to implement the upgrading strategy.

1. To inform all stakeholders on the results of the value chain analysis and to agree with them on the upgrading strategy and joint plan of action.
2. To qualify the herder organizations in selected soums (cooperatives, PUGs) to improve the provision of inputs to the herders, e.g. by making contract agreements with veterinarians, establishing nucleus herds etc.
3. To conduct training for herders especially for correct skin/hide preparation, including taking skin off, spreading, separating head and legs, drying, stapling, storage and transport, also on proper treatment of small animal intestines.
4. To inform herders about the advantages to market skins/hides through their cooperatives to domestic industrial processors.
5. To consult cooperatives on marketing of skins/hides including management, communication with members, market information etc. To develop a business plan for cooperatives for selling skins/hides. To establish sales contracts with processing companies. To support storage facilities for skins/hides of cooperatives.



6. To consult skins/hides processors on direct linkages with cooperatives, on introducing environment friendly technology, improving product quality and on accessing external finance.
7. To consult the MoFALi and the Leather Industry Association to analyze the legal environment of the skins/hides sector and to develop policy changes, especially on regulations for premium payments for skins/hides and the regulation of local traders of skins/hides.
8. To consult actors on exporting semi-processed and finished products by providing information on market and trade opportunities for exporting to China and other markets.
9. To consult the appropriate facilitating organizations such as MoFALi, Leather Industry Association, Institutes, banks etc. on improving their contributions to the value chain for skins/hides.

These intervention points are also presented in the following graph of the value chain for hides/skins. The interventions marked with orange frame are planned immediate activities of GGC4, those marked with red frame are proposed activities of other stakeholders (such as Government, Leather Association), which can be facilitated by GGC4.

### 3. Achievements

The analysis of the value chain for hides/skins made it clear that the main approach is the arranging of direct trade contacts between cooperatives and processors. The latter have a large demand for raw materials in order to utilize their processing capacity. The limiting factors are the price, observing quality requirements of processors and the communication between the partners.

The situation in the value chain for live animals/meat is much more complex. This is due to the pressure under which the processors are operating (insecure export markets, low domestic demand for industrially prepared meat, lack of liquidity to purchase animals etc).

Information on the status of the supply of livestock and on the demand for animals and for hides/skins from the respective analyses was shared with the stakeholders. It enabled them take better decisions on their future role in respective markets and for their further cooperation. It also served as a reference for the base line situation of the project.

The conclusions and recommendations of the value chain analyses were presented at the value chain workshop on 14 May 2015. As result the general understanding of the value chains for livestock/meat and hides/skins was generated among all stake holders as a basis for their effective roles in value chain development. At the same event the value chain upgrading strategy and the approaches proposed by GGC4 were accepted by the stakeholders (cooperatives, meat processors, leather processors) and were supported throughout the project implementation.

### 4. Further transmission

Through effective project activities and close collaboration with all stakeholders it was possible to develop an approach for the value chain of premium meat, which aims at overcoming the obstacles and to upgrade the value chains. This approach was then implemented in close collaboration with the respective stakeholders (see separate product sheet on Value Chain for Premium Meat).



GFA Consulting Group GmbH  
Eulenkrußstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)



## **Product sheet: Advantages of cooperation and safety in the meat value chain – examples from Germany**

### **1. Needs and challenges**

Since 2015, GGC4 in cooperation with stakeholders worked on upgrading of the value chain for meat. The focus of activities was on creating awareness and concrete (pilot) approaches for improvements of animal health, safety, traceability and improved marketing. As a main approach, GGC4 initiated the development of an innovative supply chain for meat which ensures quality, safety and traceability.

However, it has been difficult for stakeholders (cooperatives, processing company) to imagine the actual benefits they could derive from improved cooperation within the value chain and from a higher concern for animal health, safety and traceability. Therefore, GGC4 organized a study tour to Germany between 28 August and 6 September 2016 for a group of stakeholders and experts in the meat value chain upgrading project. Objectives of the study tour were:

- To study the meat value chain development in Germany and to visit relevant actors ;
- To study practices of live animal trading, slaughtering, meat processing, meat wholesale and retail trade, animal health and meat inspection by veterinarians;
- To study the meat marketing network and its management system with regard to quality and safety.

### **2. Innovations and instruments**

14 companies, organizations or state bodies in the meat sector were visited during the study tour. In the following, important best practices observed are presented briefly. This contains valuable information for stakeholders of the livestock/meat value chain in Mongolia, who had no opportunity to visit this sector in Germany.

#### Inspection and hygiene at the small-scale meat processing plant

The butcher and retailer with small-scale meat processing plant produces a famous regional sausage from raw pork meat. It is made durable by smoking or by air drying. On every day of slaughtering a veterinarian conducts sanitation control of the slaughtering plant facilities as well as ante mortem and post mortem examination. Sanitation control is done for both the slaughtering process and retailing section. It is necessary that workers observe strict hygiene and that complete washing cabinets are available in the slaughtering plant.

The origin of the swine is essential, therefore every meat carcass is attached with its traceability information, e.g. it is born and fattened in Germany. The enterprise owner takes whole responsibility towards the customers, while the veterinarian takes responsibility for the food safety only. The veterinarian has to ensure the following 5 conditions in the slaughtering plant: animal welfare, animal body condition, animal health, herd health and food safety. On random basis, in this plant 4 cattle and 100 pigs are examined annually for drug residue risks. If there is a case of drug residue, there will be a fine for the plant owner. Through proper documentation he can then trace the farmer who delivered this pig.



*Systematic combination of public and private duties for meat security*

In Germany, veterinary inspection is task of state governments and is implemented by district administrations. They belong to the local authority and are part of the customer protection and veterinary department. 50% of total staff of its district office is veterinarians. There are 20 veterinary units in the Federal state Hessen. Food safety and meat hygiene are top priority aspects. Official vets inspect private veterinarians and the meat hygiene. The whole value chain is inspected and all produce for human consumption is controlled. The inspectors are contracted by the veterinary office but their costs are charged to the respective plant in form of inspection fees. Inspectors receive 35 EUR per hour or a fee of 5 EUR per head of pig slaughtered. Working at night time is paid an additional 5 EUR.

Veterinary affairs, chemistry and food hygiene are tasks of the state veterinary laboratory in which 500 specialists are working all over the federal state. Prevention of animal infectious diseases through vaccinations is not paid by the Government but by a private body the Animal Disease Fund. It is financed by contributions from farmers. The veterinary office, veterinarians and farmer associations are also members of this fund.

Many binding laws and bylaws exist with regard to animal welfare. Every farmer is controlled once per year. Documentation is essential and everything has to be registered such as sanitation of the plant. Livestock owners are supposed to control all these activities; if not, they are prohibited to sell their products. Additionally, slaughtering plants regularly control drug residue.

Importing of live animals from non-EU countries has to follow strict rules. Also in export trade partners' requirements are very important.

Antibiotic control is strict and they can be used only by veterinarian prescription. Vets get medicine from registered veterinary pharmacy. Documentation on each use is a must and before use, the diagnosis must be done. If there is a sign of more usage of veterinary drug, then the inspectors will test. Random samples from the slaughtering plants are collected for the drug residue test. Farmers must inform the authority of the reasons of using more medicine.

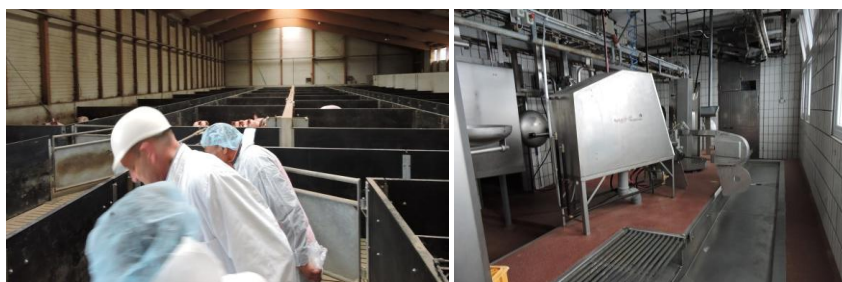
#### Duties of veterinarians and official meat inspectors

Main responsibilities of the veterinarians are; 1. Animal welfare, 2. Injury and diseases of animals, 3. Herd health, 4. Animal health, 5. Food safety, 6. Environment protection. Food safety is the number one issue for German veterinarians. Food safety refers not only to final products but to the whole production cycle from hay/grass till carcass. Veterinarians tell the public what is safe for consumption. New rules are introduced into meat inspection. The physical checking of organs is replaced by visual checks. Under the new rules an abscess is no more problematic from the view point of meat inspection. However, it concerns the meat quality and is an issue for the food producer. Meat processors must firmly control their products. Checking for salmonellosis, colibacteriosis and listeriosis are tasks of veterinarians, Drug residue, antibiotics and hormones are inspected by taking samples randomly, as not every piece of meat can be inspected. Witnessing every step of slaughtering is essential. In 2015, from 60 million swine only 140,000 were found as unfit for human consumption (0.23%).

#### Meat quality and safety at the medium-scale meat processing plant and its supplying farmers

The capacity of a medium-scale plant is 1,000 heads of swine and 200 cattle per week. Staff number in one shift is 12. The plant receives swine and cattle from their partner farmers based on long-term contracts. Many farmers supply animals for two generations. This traditional and trustful way of cooperation with each other ensures that every partner is convinced to obtain the best possible offers when selling or buying livestock.

In the plant there are 3 veterinarians who take turns as inspectors to perform all tasks from ante mortem to post mortem incl. meat inspection. For documentation of results IT equipment is used.



*Processing plant*



Farmers deliver swine and cattle to the meat processing plant based on a long term contract. In the case of a cattle farmer they keep about 200 cattle for fattening. Bulls stay in their feedlot for 18 months and then are sold and delivered to the meat processing plant. The main problem of the farmer family is the workload because there is no staff employed. The selling of livestock is smooth and very reliable. Because of the long term contract the farmer can totally concentrate on high quality production. This includes animal health and animal welfare which are of highest priority for the responsible farmer.



*Cattle rearing*

#### Retail meat shop and ("shop in shop" concept) and mobile meat sales point in open markets

Some local butchers have a meat shop in the local supermarkets. This concept is called "shop in shop". Customers buy the meat at the meat counter but pay later at the cashier when leaving the supermarket. Every evening the butcher is informed about the revenue belonging to him. The shop is fully equipped with all necessary facilities and equipment to provide meat cuts as well as ready to eat products. This shop also sells meat snacks. All cooking and grilling activities of products are freshly done in this shop. All raw meat products are delivered to the shop through a separate back door and they have spacious cooling rooms.

The regular open market is held weekly in an open space. There are several stands of regional butchers selling meat and meat products. The stands are actually specially prepared vans with counter and cooling equipment. This form of meat retailing is popular in Germany as customers have the impression to receive good quality directly from the processor.



*Retail systems*

#### Close cooperation between farmers and meat processing plant owned by them

One farmer cooperative visited during the study tour was founded in 1969 and has 450 farmers as members. Most of them are pig keepers (110 produce piglets and 100 are fattening pigs) and only 70 farmers have cattle. In the beginning the cooperative purchased the livestock and had it slaughtered in other plants. In 1989, the cooperative established its own large slaughtering facility and later purchased a company for sausage production. It incorporates all stages of the value chain: farmers, sales of livestock, slaughtering, processing, final products, marketing. Feed for livestock is purchased on behalf of the farmers at the volume of 40.000 tons per year. Farmers either agree on a contract price which is valid for 6 months or on daily prices. Types, ingredients and inputs of feed are specified and feed production follows strict rules. The cooperative provides consulting on feeding and performance to farmers through its own team of advisers.

Consultation is provided to farmers whose animals have shown defects during the inspection in the slaughtering plant. Farms for piglet production are routinely inspected 2 times per year. If any suspicion is detected with animal health, vets go to that farm, whereby information comes from farmers or from the slaughtering plant.



All information on quality, weight, fat content, health issues and prices is stored in the IT-based Foodvision database. The information is returned to each farmer and used for food and health management. Farmers receive their data in comparison with the average of all farmers during the last 3 months. This benchmark enables them to know the performance of their farm and stimulates improvements.



*Meat processing plant*

### State agency manages effective establishment of reference prices for meat

The Agricultural Chamber in Oldenburg was established in 1911 as an implementing agency under Ministry of Agriculture in the state of Niedersachsen. It is a non-profit and professional institution, which is organized by the state together with the private sector. Over 400 people work in the Chamber including voluntary and paid officers. Main tasks are training, consulting, marketing information etc. Based on a database, there is an analysis on market trend which is important for EU agriculture policy. One of the tasks of the Chamber is to establish price recommendations for pigs and cattle. This is done on weekly basis every Wednesday. The chamber cooperates with the Association of Livestock Marketing Cooperatives which has about 20 members in Germany. These members report the prices obtained for sales of pigs and cattle from slaughtering plants during the previous week. From all prices the median price is calculated. In addition, a telephone conference is organized with members for finalizing the price. Then the recommended price is publicly announced and published on the website. Minimum standard and maximum prices are given.

This system has several advantages: Buyers and sellers do not have to negotiate lengthily about the price but can easily agree on the recommended price; the price is not influenced by extremely high or low prices; price changes develop very slowly and allow actors to adapt to changing market conditions. The recommended price from the chamber in Oldenburg is widely used in Germany and even in other European countries. This is a useful example of close cooperation between the public and the private sector.

### **3. Achievements**

The study tour program was drawn up and fully arranged by Carl E. Krug, international advisor of GGC4 from GEFAK mbH. He achieved to arrange visits to all actors of the meat value chain being implemented in different parts of Germany. The team visited farmers, small, medium and large scale animal slaughtering plants, meat processing firms, sausage production, veterinary units, meat retailer, livestock marketing cooperatives, agricultural chamber and National Park administration on marketing of regional products in Hessen and Niedersachsen. The interaction with farmers, veterinarians and entrepreneurs was intensive and useful in every visit.

Through the well planned tour and the varied visits the group members were able to obtain a comprehensive insight and good understanding of the entire meat value chain in Germany. As it was intended, the main focus was on quality and safety of meat and the respective sharing of responsibilities between the private and public value chain actors. In this regard, the following lessons learned were obtained as results of the study tour:

1. The value chain for meat in Germany is well developed and ensures steady income for farmers as well as reliable supply of high quality and secure meat to consumers at competitive prices.
2. Involvement of all stakeholders in the value chain development is essential for an effective flow of livestock to the market. The relationships between actors should be based on responsibility, reliability, trust and the interest to maximize benefits over long period of time and not only in the short run.

3. In order to achieve high quality and secure meat it is necessary to establish and observe production standards for all actors and to observe whether they are fulfilled.
4. This demands e.g. intensive inspection at slaughtering plants and farms. The meat inspection is done by private vets who have a contract from the regional veterinary office. The costs are then charged to the slaughtering plants in form of fees. Therefore, meat inspectors act as public agents but are paid privately.
5. Enforcement of meat security demands a framework of standards, control infrastructure and sanctions for violations.
6. It is necessary to collect relevant information about each animal, to identify anomalies and to refer the data back to the respective farmer. The farmer is responsible on improving the situation or will lose the market.
7. Initiatives for regional product development are very useful with many benefits (landscape, animal products). They need to be implemented at many levels which are mutually supportive and by involving all important stakeholders.
8. Vertical integration (combination of livestock trading, slaughtering animals and processing into final products) can help to earn more income.
9. There is a great variety of retailing concepts for meat and meat products (own shop, shop in shop, mobile shop, plant outlet, certified sellers, village shop). Entrepreneurial skills are important to exploit the various marketing concepts.
10. Group/cooperative/contract farming are good options for small holder farmers. Cooperatives can ensure selling of livestock at market prices and some even operate slaughtering plants and meat processing plants. So farmers obtain a larger share of profit along the value chain.
11. Technology interventions for more productive and hygienic slaughtering are necessary but require big investments. Value addition demands relevant skills e.g. for optimized deboning according to consumers needs.
12. Stakeholders along the value chain are qualified to fulfill their role and to cooperate with the other actors. Farmers understand the benefits of joint action as actors in the value chain.
13. A system of ante mortem and post mortem inspections is established based on standards, financed by the private sector and with strict public supervision
14. Veterinary inputs are acknowledged as services for the value chain and financed by the market in order to be sustainable.
15. A system for more effective pricing in the meat value chain exists through recommendations based on the market situation.

A variety of retailing concepts for meat are in operation, which allow more profitability

#### 4. Further transmission

It is important that the actors in the meat value chain in Mongolia study the elements of a more productive, profitable and safe supply system as it is working in Germany very carefully. Then they should be supported to develop pilots on how to adapt lessons learned from the systems operating in Germany to the Mongolian context. Such adjusted systems should then become operational step by step.



GFA Consulting Group GmbH  
Eulenkrogstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)





## **Product sheet: Development of the value chain for premium meat**

### **1. Needs and challenges**

Based on the results of the value chain analyses and according to the value chain upgrading strategies developed with the stakeholders, GGC4 has constantly consulted the actors to overcome the obstacles for more effective transactions of livestock and of hides/skins. To this end, GGC4 was continuously in contact with the Secondary Cooperatives of target aimags of Arkhangai and Zavkhan and with the interested meat processors in Ulaanbaatar. This aimed at identifying and using approaches for upgrading of the livestock/meat value chain and especially at concluding direct contracts between these partners.

These efforts have been strongly influenced by ongoing activities of the Mongolian Government in 2015 to support the export of meat products to China. Even though this generally created good perspectives, uncertainties remained: hygiene certifications of processing companies, agreements on prices and payment conditions; written contracts between Chinese and Mongolian partners, etc. For long periods, no meat was actually exported but herders developed great expectations, hoping for large scale exports to China. This expected high demand for livestock lead herders to demand prices above the domestic market price for all offered livestock. In the light of still insecure exports, high livestock prices and lack of liquidity for livestock purchases, the local processors further reduced their livestock purchases. These circumstances and events resulted in some kind of deadlock with large potential supplies on one side and limited demand on the other side. In this difficult and ongoing context, GGC4 nevertheless piloted some interventions in most promising areas of the sector.

### **2. Innovations and instruments**

#### Match making between secondary cooperatives and meat processors to develop the livestock/meat value chain

Despite this difficult environment GGC4, continuously consulted the two secondary cooperatives as well as interested meat processors with regard to direct sale/purchasing agreements between them. During 2015 the secondary cooperatives of Arkhangai and Zavkhan aimags held negotiations with the following potential buyers for direct sales of livestock to them.

- Both secondary cooperatives negotiated with Meat Market company in Ulaanbaatar for direct sales of sheep in winter 2015/2016. But the company could finally not place a confirmed order.
- Zavkhan Secondary Cooperative negotiated with Zavkhan Khuns meat processing company on sales of goats and sheep to the plant in Uliastai. However, an agreement on sales of livestock could not be reached. The reasons are low offered prices and the linkages of the meat business with political campaigning in the aimag. Later the company itself organized buying events in the Aimag but only few animals could be purchased.
- Arkhangai secondary cooperative held negotiations with Darkhan meat factory to deliver up to 6,000 yaks. The negotiations finally failed due to the low price which was offered by the company.
- Secondary cooperatives of Arkhangai and Zavkhan aimags negotiated with Sayan Uul LLC in Emeelt on the long term project to develop direct selling of meat with shortest possible value chain between herders and consumers. This approach is promising as it would enable consumers to obtain higher quality meat in retail outlets of Sayan Uul all over Ulaanbaatar. The meat would be sold at higher prices corresponding to the higher quality which in turn would enable herders to obtain higher prices and to cover the additional costs for preventive animal health and for health inspections of livestock and carcasses (ante mortem and post mortem inspections).

### Developing the value chain for premium meat

During the match-making efforts in the year 2015 only the negotiations between the secondary cooperatives and the meat processor Sayan Uul LLC seemed to be productive and useful. Therefore during 2016 the team of GGC4 was continuously in contact with the Secondary Cooperatives of Arkhangai and Zavkhan Aimags and Sayan Uul LLC in Ulaanbaatar. This aimed at identifying and initiating approaches for upgrading of the live-stock/meat value chain and especially at concluding direct sales contracts between these partners.

In order to intensify these efforts, GGC4 commissioned an international expert to consult the upgrading of the livestock/meat value chain. His tasks included: analysis of Sayan Uul with regard to potential for retail sale of premium meat in Ulaanbaatar; respective consultations of Sayan Uul; consultation of improvements of the marketing channel for premium meat of Sayan Uul; consultation of the respective sales/purchasing arrangement between cooperatives in Arkhangai and Zavkhan and Sayan Uul; elaboration of a marketing concept for Sayan Uul LLC; recommendation of further steps for development of the approach. The two missions of the assignment were conducted from in May 2016 and in October 2016.

During the first mission, the following results were achieved: assessment of the slaughter facilities and sales outlets of the company Sayan Uul LLC concerning set up, technical status, compliance to hygiene standards, veterinary inspection etc. ; observation of the meat markets in Ulaanbaatar with regard to prices and price finding mechanisms, market structure, food safety issues (hygiene) and consumer preferences; elaboration of the draft marketing concept for direct selling of premium meat (see below) including the shortest possible supply chain from the herders to the sales outlets in Ulaanbaatar. This included approaches on how to target consumers with incomes above average and sensitivity for safer meat.

### Marketing concept for premium meat value chain

After a thorough analysis, the international expert drafted the marketing concept for premium meat. The following conclusions were drawn: the company Sayan Uul LLC belongs to the few meat processing companies in Mongolia that possess sufficient potential to face future challenges and to upgrade the value chain. It has a market position that allows efficient marketing of meat, technical facilities for a safe meat supply chain and a motivated and well trained management team. To develop the value chain for premium meat these recommendations are provided:

- Long-term animal supply and buying contract: contractual agreements with herder cooperatives should focus on a stable supply of livestock all over the year according to seasonal demand. Agreements should include regulations for reasonable advance payments, fair prices for animals, transparent price finding procedures with regards to meat quality and animal health, bonuses for above average meat-bone ratio and an information feedback system concerning animal health status. GGC4 has helped the stakeholders to conclude this long-term agreement.
- Local collection of livestock in the supply regions is needed in order to develop a local market for livestock in form of a supervised collection point near the soum center. This facility should be managed by the respective cooperative in the soum. In the collection point the mandated soum veterinarian would undertake true health inspections of the livestock and only healthy animals would be allowed for sale. Such a regular animal market would open new business opportunities for the cooperative, enable health inspections, make animal transportation easier and ensure the application of true market prices for live animals.
- As regards to technical development of facilities, the slaughter capacity of Sayan Uul is sufficient for the current needs. Therefore, the company should concentrate on improving hygiene and inspection issues: installing more hand washers along the slaughtering line; at least one shower for carcasses before meat inspection point ; hygiene lock at entrance from locker rooms to slaughter bay with rubber boot cleaner, hand sanitizing system and bar; use of health marks according to post mortem meat inspection standards (separation of health markings and quality markings); regular hygiene checks on carcasses with swab tests; use of high pressure cleaner.
- For Sayan Uul's shops it is recommended to install one cooler showcase for fresh meat, hand washers, mincers, deep freezers and a separate room for cleaning and disinfection means and for storing street clothing. At least one shop should be opened in a permanent location in the Zaisan area near to the consumers with above average income.



### Survey on consumer preferences regarding meat in Ulaanbaatar

In order to analyze the potential market demand for premium meat, GGC4 in collaboration with the Mongolian State University of Life Sciences (MSULS) conducted a survey among consumers in Ulaanbaatar. It was one of the first and one of the largest surveys of this kind. The objective was to analyze the demand for meat in order to plan the upgrading of the value chain for premium meat.

It was directed at a representative sample of consumers in Ulaanbaatar and included a total of 861 respondents. They were interviewed in five types of locations: at home, at meat markets, at supermarkets, at special meat shops, at small food shops. As regards to age, gender, household size, education level, household income etc., the sample was sufficiently representative for the population of Ulaanbaatar. A questionnaire with 12 questions was used for the survey.

According to this survey there is a prime target group of consumers for sales of premium meat at higher prices. It comprises consumers who have these distinct features: consumers who buy meat very frequently and in smaller amounts (15% of all respondents); consumers who want to buy meat close to their residential area (39%); consumers who already buy between 50 to 100% of their meat in special meat shops (29,5%), ; consumers who intend to pay 10% or 20% more for premium meat (62%). All these consumers make up a substantial number which is the ideal target group for the intended sale of premium meat. There is also a tendency of about 25% of consumers to eat less meat in order to have a more balanced diet. This allows them to buy premium meat at higher prices but maintaining the same purchasing budget for meat due to the lower consumption.

In the survey consumers were finally asked how much more they would spend to purchase premium meat, which fulfills the following specific quality criteria: clear source of origin, healthy and inspected animals, hygienic slaughtering, testing for residues of medicines, convenient sales locations and provision of information to consumers on these quality features of the premium meat. About 20% of the respondents stated that they are ready and willing to pay at least 10% more for premium meat compared to the prices in the other meat markets.

The consumer survey showed clearly that there is a sufficiently strong demand for premium meat in Ulaanbaatar. This result represents an opportunity to develop a market channel for premium meat in Ulaanbaatar, connecting herders and consumers directly via the slaughtering plant and decentralized retail shops of Sayan Uul LLC.

### Meat quality and animal health trainings organized in Arkhangai and Zavkhan aimags

For developing the value chain for livestock and premium meat, the lack of understanding of animal health issues and meat quality among herders was identified as one major bottleneck. Therefore, GGC4 in cooperation with the Secondary Cooperative of Private Veterinary Clinics of Mongolia developed and organized trainings for herders on these topics. They were held in November 2016 in the pilot aimags Arkhangai and Zavkhan in soums, where APUGs work closely with veterinarians and herders. This has helped that herders accept the advantages of keeping their livestock healthy and do this in cooperation with the soum veterinarian. The trainings were held in or near bag centers for smaller groups of local herders with a total of 150 participants.



*Animal health/ meat quality trainings in Arkhangai and Zavkhan aimags*

In training sessions with a total duration of 3.5 hours the following 4 topics were covered.

1. Quality and safety of raw material products related to animal husbandry/meat, milk quality, hides and skins, wool, cashmere quality, origin of animals, medicine usage, herder's role etc.
2. Effective veterinary services with appropriate sharing of responsibilities and activities between veterinarian, herders, soum and local administration.
3. Zoonotic diseases that are transmitted from animals to humans (e.g. brucellosis, malignant anthrax, pearl disease, echinococcus).
4. Usefulness of herders to sell livestock and need for good meat quality to establish the value chain for premium meat and to support meat export.

All local stakeholders (veterinarians, bag governors, PUG heads) worked well together to organize the trainings. The expected numbers of herders participated and all were highly satisfied about relevance and effectiveness of the training. Each participant received a copy of the handbook on animal health and a flyer on the advantages of selling livestock timely.



Flyer and handbook for herders during animal health training

Based on the discussions with veterinarians and herders during trainings some recommendations were given:

1. Prescribed examination of live animals in the value chain to be performed by veterinarians.
2. Examination of meat for residues of antibiotics to be arranged by meat processors.
3. More trainings to be organized for herders on these topics: herders' role in preserving livestock health, how to effectively receive veterinary services, protecting from contagious diseases, ensuring proper veterinary medicinal use; correct application of veterinary medicines and preventing the risks of medicine residue in milk and meat.
4. To create a system of veterinary pharmacies that serve proper medicines (no negative effects on humans).

#### Training for calculation of meat value and deboning in Sayan Uul LLC

A further bottleneck which has been observed was the insufficient ability of Sayan Uul LLC to debone carcasses in an optimal manner and to provide meat cuts according to the needs of consumers. Therefore, in cooperation with the partner company Sayan Uul, a special training for meat processing was held by GGC4 on 10 December 2016. It focused on methods for calculation of meat volume and value of animals and on optimal deboning. The training was conducted by a national meat specialist in the Sayan Uul meat factory for 19 participants (slaughter men, retail shop assistant, packer, sorter and veterinarian of Sayan Uul LLC.) The calculation of meat value, importance of workplace hygiene and handling of meat were further topics covered.

In the practical session the expert demonstrated how to remove bones from meat in the optimal way. This is a precondition before the calculation of actual meat value can be made. Participants exercised this actively and also learnt how to calculate selling prices after deboning and after sorting of the meat. In the case of goat meat the value can be increased by about 30% if the meat is cut and sold as specific meat parts compared to the sale



by weight. This pilot training showed how profitability can be increased for small scale meat processors and participants are interested to apply this useful calculation method.

Ямаа 2016-12-10		Гууш 25,6 кг x 2100 = 53,760 ₮			
Амьтаа	Хүрвүн жий (%)	I хуу. абагч	II	III	IV
1-р амьтаа 8,65 кг	33,9	(4,2) 4,200 → 36,330 ₮			
2-р амьтаа 8,80 кг	34,5	(4,8) 3,780 → 33,264 ₮			
3-р амьтаа 1,60 кг	6,3	(1,5) 3,150 → 5,040 ₮			
4-р амьтаа 0,8 кг	3,1	(0,5) 1,050 → 840 ₮			
5-р амьтаа 0,55 кг	1,9	(0,3) 630 → 346 ₮			
6-р амьтаа 5,10 кг	20,0	(0,2) 420 → 2,442 ₮			
Σ 25,5 кг	99,7	Σ 77,962	53,760	24,202	(31,02%)



*Training on optimal deboning and calculation of increased meat value*

### Provision of facilities to develop the premium meat value chain

It is an important lesson learnt from previous activities that cooperatives require appropriate raw material storage and transport facilities. According to the request from cooperatives, GGC4 co-financed raw material storage, a refrigerated car, a livestock scale to Zavkhan aimag Toonot tsatsrag secondary cooperative, as well as a refrigerated car and livestock scale to Arkhangai Bayalag khangain sor secondary cooperative. The cooperatives contributed about 50% to the costs.



*Raw material storage and refrigerated lorry for transport of livestock products*

In addition, equipment for the premium meat retail shop of Sayan Uul LLC was supported in order to facilitate the development of the innovative premium meat VC. It was agreed that the company would open a retail shop with optimal location and equipment for selling of premium meat purchased from the cooperatives. The company has then purchased a retail shop in the Zaisan area. Being a part of town for the better-off people, this is the appropriate environment for sales of premium meat at higher prices. GGC4 contributed to the costs of the necessary equipment and furnishing: meat mincer; vacuum packaging machine; working tables; scales; freezer and a cooled display. Photos of some items are provided below.



*Equipment for premium meat shop of Sayan Uul LLC in Zaisan and activities in the shop*

This support is based on a written agreement between GGC4 and Sayan Uul LLC, which ensures the use of equipment for the intended purpose and secures its return to GG project in case the purpose is not or no longer fulfilled. The retail shop was opened at the end of February 2017 and is well received by the residents in this area of Ulaanbaatar. It can be expected that the retail shop performs well and is profitable. This in turn the opportunity provides for Sayan Uul to purchase livestock from Arkhangai and Zavkhan Aimags and to process it into high quality and safe meat.

#### Standard supply contract for livestock initiates livestock sales in the premium meat value chain

GGC4 drafted the contract "Supply and purchase contract on livestock to provide premium meat" in cooperation with the stakeholders Zavkhan aimag Toonot Tsatsrag secondary cooperative, Arkhangai Bayalag Khangain Sor secondary cooperative and Sayan Uul LLC. As a result of several consultative meetings with the stakeholders, the standard contract for supply of livestock from cooperatives in Arkhangai and Zavkhan aimags to Sayn Uul LLC was negotiated, approved and signed by the respective parties. This contract regulates the long-term cooperation between the trade partners for regular and planned supply of livestock, duties of both sides with regard to animal health and meat safety, agreement on prices above the prevailing market price for the premium meat value chain. This allows the partners to negotiate and agree the supply and purchasing of livestock for the entire slaughtering season and provides planning security.

#### Stakeholders in the premium meat value chain informed about residue testing of meat

According to media the experts, the uncontrolled and unregulated use of medicines by herders creates high amount of residues of antibiotics in meat, which negatively affects the immune system of the human body. In order to support the premium meat value chain for high quality and safe meat, tests were ordered to define the risk of contamination with antibiotics. Examinations were carried out on beef and sheep meat from Ider Soum of Zavkhan Aimag, Undur-Ulaan soum of Arkhangai aimag, and meat in various supermarkets in Ulaanbaatar including Minii delguur, Orgil, Nomin, Bumbugur, as well as retail shops of the partner company Sayan Uul LLC. In total, 20 samples were taken and examined in November 2016 by the State Central Veterinary Laboratory.

However, the results show that there were no signs of tetracycline or of avermectin groups of antibiotics in any of the samples. The reason for the negative test results can also be due to the timing of testing in the winter season, when livestock is well fed and healthy and herders have less reason to apply antibiotics themselves without prescription of veterinarians. It is recommended to repeat the same test in summer when more antibiotics are applied and the risk of contamination is higher. However, the implementation of tests at this time helped the stakeholders to understand where, how and at which costs such tests can be made.

#### Match making between secondary cooperatives and leather processor

Besides developing the premium meat value chain, GGC4 also supported the secondary cooperatives in selling hides/skins to leather processors. As this is another part of the upgrading of the livestock value chain it is mentioned here. During the entire project period GGC4 consulted the two secondary cooperatives as well as the interested leather processor Darkhan Nekhii LLC in Darkhan with regard to direct sale/purchasing agreements between them. In 2015 the secondary cooperatives of Arkhangai and Zavkhan aimags agreed with Darkhan Nekhii to deliver an unlimited volume of hides/skins. The price was determined as providing a margin of 1.000 MNT above the reference price at the Emeelt livestock market near Ulaanbaatar. Unlimited means that Darkhan Nekhii purchases any volume of raw material which the cooperatives can deliver and which is according to the quality requirements of the buyer. During the pilot sales in the year 2015 about 600 yak hides and 600 sheep skins were delivered with a total volume of 15 million MNT (about 6,500 CHF).

### 3. Achievements

The upgrading of the value chain for premium meat was initially disturbed by the perspectives for large scale meat exports to China, which turned the attention of processors and herders away from the domestic meat market. Through close collaboration with the selected partners of this pilot activity, the following achievements were reached:

- Closing of long term purchasing contract for livestock between Sayan Uul LLC and secondary cooperatives in Arkhangai and in Zavkhan aimags. This is the basis for the steady supply of more healthy livestock with known area of origin.
- As a pilot delivery in at the end of 2016, a total of 500 yaks (61.5 tons of meat) and 161 goats (3 tons of meat) was supplied to Sayan Uul LLC from Arkhangai aimag. An advance of 10 million MNT (4,000 CHF) was given by Sayan Uul LLC to Zavkhan aimag secondary cooperative to buy animals. The first delivery of 100 goats (2 tons) was to be transported early January 2017 and further shipments are to follow.
- Herders in pilot soums understand the importance of animal health and the task sharing between them and soum veterinarians. This helps to prevent the self-medication of animals by herders with antibiotics and reduces the contamination of the meat.
- Capacities of the two cooperatives and of the meat processing firm were improved through provision of lorries and storage on one side and equipment for the retail shop on the other side.
- Employees of Sayan Uul are trained in deboning and cutting meat according to customers' needs.
- The main conditions have been provided to make the value chain for premium meat fully operational.

### 4. Further transmission

It is recommended that the selected partners, the secondary cooperatives in Arkhangai and Zavkhan Aimag as suppliers and Sayan Uul LLC as meat processor continue to implement the direct marketing of premium meat from the cooperatives in Arkhangai and Zavkhan aimag to the consumers in Ulaanbaatar. A further opportunity is in supplying restaurants in Ulaanbaatar with fresh meat cuts. Since prices for custom made meat cuts are higher than the cuts for the ordinary consumers this distribution channel is promising but needs time to establish business relationships.

Further market potential can be seen in the export markets especially in China for livestock like horses and yaks if the market conditions there allow this move. The establishment of the direct marketing channel will also improve the image of Sayan Uul LLC company vis-à-vis its international customers.

Big future challenges for Sayan Uul are: (i) the large-scale abattoir under construction in close distance to Sayan Uul's facilities that will compete for livestock to be slaughtered for export, while higher prices for live animals will be a consequence; the lack of formal management skills for the meat business and the absence of an effective bookkeeping system as a basis for controlling; the lack of sufficiently trained personnel with regards to animal welfare, GMP, GHP, HACCP, carcass grading and marketing. It is recommended that these and other challenges shall be followed up in the future.

Of course other meat processors may develop similar approaches in collaboration with cooperatives in other Aimags. This would improve further the quality and safety of meat for consumers and would create higher income for more herders.



GFA Consulting Group GmbH  
Eulenkugstraße 82 - 22359 Hamburg  
- Germany  
Phone +49 (40) 6 03 06 – 366 Fax  
+49 (40) 6 03 06 – 169  
E-mail [anna.weber@gfa-group.de](mailto:anna.weber@gfa-group.de)



GEFAK mbH  
Ockershäuser Straße 40b –  
35037 Marburg - Germany  
Phone +49 (6421) 1820-0 Fax  
+49 (6421) 1728-29  
E-mail [krug@gefak.de](mailto:krug@gefak.de)



### 3 Monitoring of final progress with regard to project indicators

In the following table the final status of progress made with regard to the indicators of the GGC4 project as contained in the Log Frame is being analyzed. It is identical to the assessment made in Progress Report 2016/2, being the last such report during the project period. In addition, statements on the outlook, which is the expected future development of performance with regard to the indicators, are provided and the right column.

**Table 2: Progress Reporting Against Project Indicators**

Indicators	Status and achievements	Analysis /comments/OUTLOOK
Indicator 4.1.  Change in turnover of value added domestic products made from yak down and camel wool (%).  Baseline 2013: 100 Target 2014: 120 Target 2015: 130 Target 2016: 140	Result 2014: 115 (+15%) Result 2015: 95 (-18%) Result 2016: 100 (+5%)  The value increased slightly from 2015 to 2016 but is below the target.  The indicator is not fulfilled.	The sales of finished products from raw materials which were collected in the framework of GGC4 increased only little in 2016. This is caused by the still low demand on the domestic and international markets due to the negative economic outlook especially in China, Russia. Despite this difficult market environment manufacturers were able to turn around the negative trend of the previous year. It is expected that the newly developed product line of dyed baby camel wool with its cashmere like features provides good perspectives that sales will increase in the near future.
Indicator 4.2:  Change of herder gate fiber price as percentage of Mongolian consumer price of finished products (%).  Baseline 2013: 100 Target 2014: 110 Target 2015: 115 Target 2016: 120	Result 2014: 111 Result 2015: 106 Result 2016: 107 The value increased slightly from 2015 to 2016 but is below the target.  The indicator is not fulfilled.	In 2016 the herder gate price for yak down was slightly increased to 8.500 MNT/kg compared to 8.000 MNT/kg in 2015. From 1 kg of raw material one typical garment can be produced at average value of 126.000 MNT. Processors report that their domestic sales prices in 2016 are the same as 2015 due to the bad market situation. (Remark: In 2016 the herder gate price for camel wool was maintained at 3.600 MNT/kg as in 2015.) It is remarkable that despite the negative market situation and decline in the reference price of cashmere the price for yak down and camel wool remained stable.  It is expected that herders can increase their share in the total value added if they succeed in effective sorting of raw materials to sell more valuable fibers (light colors, young animals) at premium prices.
Indicator 4.3:  Change of HH income for sales of combed yak down	Result 2014: 200 Result 2015: 113 Result 2016: 120	The income of all involved herders from yak down and camel wool increased from 2015 to 2016 by 55% due to the largely increased sales volume

Indicators	Status and achievements	Analysis /comments/OUTLOOK
and camel wool (%)  Baseline 2013: 100 Target 2014: 120 Target 2015: 125 Target 2016: 130	The value increased from 2015 to 2016 but is below the target.  The indicator is not fulfilled.	(from 110 tons to 170 tons of which 60 tons from new aimags). Herders reacted positively on stable prices and maintained the high level of raw material collection. It is expected that with eventually increasing prices of raw materials the income of herders will also increase.
Indicator 4.1.1:  Herder households marketed combed yak-down and camel wool (%).  Baseline 2013: 100 Target 2014: 140 Target 2015: 160 Target 2016: 180	Result 2014: 300 Result 2015: 600 Result 2016: 700 The number of herders covered in the value chains increased from 6000 in 2015 to 7000 in 2016 mainly due to the expansion to further aimags.  The indicator has been fulfilled.	The number of participating herder households is based on estimates of herders selling to the cooperatives. This has no influence to the fact that indicator is fulfilled. The impact of the project was expanded to three more aimags due to the effectiveness and support of cooperatives in the existing aimags.  It is expected that the satisfaction of herders with the role of cooperatives in the value chains will increase the number of cooperative members and consequently the number of participating herder households.
Indicator 4.1.2:  Change in herder gate price of yak down and camel wool (%)  Baseline 2013: 100 Target 2014: 130 Target 2015: 150 Target 2016: 180	Result 2014: 160 Result 2015: 90 Result 2016: 100 The herder gate price of yak down increased from 8.000 MNT/kg in 2015 to 8.500 MNT/kg in 2016, for camel wool it remained stable at 3.600 in 2016. The price for the new fiber baby camel wool at 10.000 MNT provides good income perspectives for herders. The indicator is not fulfilled.	Despite reduced sales expectations of processors and drop in the reference price of cashmere the herder gate prices were slightly increased for yak down and remained stable for camel wool. But prices fall behind the expected large increases which are reflected in the indicator.  It is expected that the prices for yak down and baby camel wool will increase. This is supported by the strong increase in the price of raw cashmere in 2017.

Indicators	Status and achievements	Analysis /comments/OUTLOOK
<p>Indicator 4.1.3:</p> <p>Change of sales volume of combed yak down sold by cooperatives/APUGs.</p> <p>Baseline 2013: 100 Target 2014: 140 Target 2015: 160 Target 2016: 180</p>	<p>Result 2014: 160 Result 2015: 146 Result 2016: 160</p> <p>The sales volume increased from 44 tons in 2015 to 49 tons in 2016 despite the minimal price increase.</p> <p>The indicator is not fulfilled.</p>	<p>It is a considerable achievement that the sales volume was increased despite the only slightly increased price. This demonstrates the continued resilience of the value chain and the effective performance of the cooperatives even under difficult market conditions. (Remark: The sales volume of camel wool increased from 66 tons in 2015 to 110 tons in 2016.)</p> <p>It is expected that the sales volume of yak down will increase in future with the addition of further soums with large yak herds in Huvsgul Aimag to the project. It is expected that the sales of baby camel wool will continue to raise strongly based on the high demand for products from this new cashmere like fiber.</p>
<p>Indicator 4.1.4:</p> <p>Raw cashmere output per kg of combed yak down (%).</p> <p>Baseline 2013: 20% Target 2014: 25% Target 2015: 30% Target 2016: 35%</p>	<p>Result 2014: 30% Result 2015: 30% Result 2016: 30%</p> <p>The value did not increase further in 2016. It is slightly below target.</p>	<p>This assessment is based on technical analysis by processors buying yak down. With the existing equipment of processors it is difficult to increase the yield beyond 30%.</p> <p>It is expected that the yield cannot be increased further with the existing equipment of processors. It is advised to focus combing on younger yaks only and to increase the yield in this way.</p>
<p>Indicator 4.2.1:</p> <p>APUG's and cooperatives with new supply chain (%).</p> <p>Baseline 2013: 5 Target 2014: 6 Target 2015: 8 Target 2016: 12</p>	<p>Result 2014: 18 Result 2015: 30 Result 2016: 55</p> <p>The value has increased from 30 cooperatives in 2015 to 55 cooperatives in 2016, which represent 75% of all GG (66) cooperatives.</p> <p>The indicator is fulfilled.</p>	<p>In the 2016 collection season 4 secondary coops (with about 50 member cooperatives) and about 5 primary cooperatives in 3 new aimags sold yak down or camel wool to processors.</p> <p>It is expected that the addition of further aimags to the GG project will lead to the establishment of many more herder cooperatives. These additional cooperatives have to participate in the value chain without crowding out the cooperatives which are already active.</p>
<p>Indicator 4.2.2:</p> <p>Annual turnover of APUGs and cooperatives from sales of yak down and camel wool (%).</p> <p>Baseline 2013: 100 Target 2014: 115 Target 2015: 120</p>	<p>Result 2014: 200 Result 2015: 113 Result 2016: 120</p> <p>The value increased from 113 in 2015 to 120 in 2016 (against the target of 130).</p> <p>The indicator is not fulfilled.</p>	<p>The turnover of cooperatives from sales of yak down and camel increased from 583 mln MNT in 2015 to 863 mln MNT in 2016. This is due to the slightly increased volume and price of yak down and the largely increased volume and price of baby camel wool.</p> <p>It is expected that the volume and prices of baby camel wool will continue to rise and lead to increasing turnover in future, while the volume</p>

Indicators	Status and achievements	Analysis /comments/OUTLOOK
Target 2016: 130		and price of yak down are expected to remain at the current level.
Indicator 4.2.3: APUGs and cooperatives selling semi processed yak down and camel wool (%).  Baseline 2013: 2 Target 2014: 10 Target 2015: 25 Target 2016: 50	Result 2014: 14% Result 2015: 40% Result 2016: 75% The indicator is fulfilled.	About 55 participating cooperatives (75% of all cooperatives) sell sorted raw materials to domestic processing companies. This refers most of all to the sorting of baby camel wool from adult camel wool, because the price of baby camel is 2.5 times higher.  It is expected that the high level of sorting will be maintained especially for baby camel wool. It is expected that sorting for yak down can be increased if buyers indeed provide the offered price premium for more valuable fibers.
Indicator 4.3.1.: Increase in volume of yak down products exported (%).  Baseline 2013: 100 Target 2014: 120 Target 2015: 130 Target 2016: 140	Result 2014: 130 Result 2015: 100 Result 2016: 110 The value increased from 2015 to 2016 but is below target. The indicator is not fulfilled.	In general processors report that their export sales are still affected by the negative market situation in Russia and China. However, the presence at the Berlin exhibition and direct marketing to large institutional buyers have increased exports compared to the previous year.  It is expected that with new sales channels like direct retail sales e.g. in Germany the manufacturers can further increase their sales in future. The general trends in the textile industry towards sustainability, traceability and fairness support the positive perspectives for the products from Mongolia.

## 4 Feedback of partners regarding GGC4 interventions and collaboration

### 4.1 Respondents and methods of the evaluation

In this part of the final report beneficiaries and stakeholders provide their opinion on project implementation and communication with the GGC4 project team. This represents the summary of a survey which was carried out with the main stakeholders of the project between 24 November and 8 December 2016. It provides valuable feedback of the main partners and suggestions for the possible continuation of the project activities. Questions were asked on the basis of a standardized questionnaire but respondents were encouraged to reply in an open manner in order to really capture their opinion.

In total, 32 stakeholders participated in the evaluation of which 8 (or 25%) were manufacturers and 24 (or 75%) cooperatives. They represent the main partners of GGC4 in implementing the

project activities and cover all stages of the value chains. As respondents always the leaders or heads of the respective organizations were targeted as respondents. Figure 3 and Figure 4 below present the shares of companies and cooperatives and the methods by which opinions were collected from the respondents. (Question 1 in Annex I)

Figure 3: Companies and cooperatives by percentage

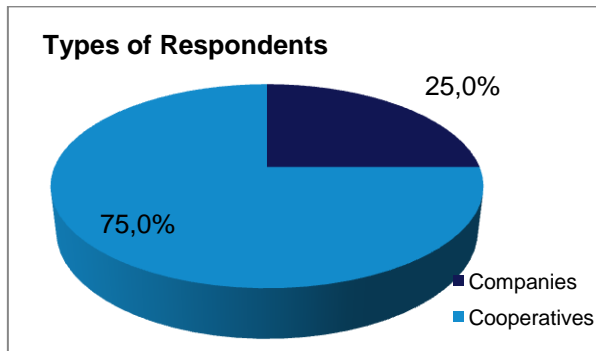
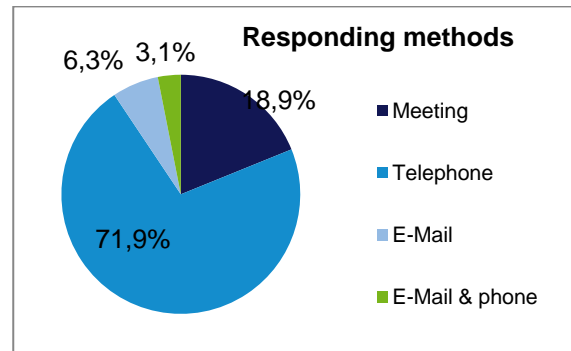


Figure 4: Methods of collecting opinions by percentage



The questionnaire consisted of 8 questions, which were given to respondents in personal talks, by telephone or by email to obtain their opinion. Each respondent could choose which method of answering they preferred. The questionnaire is included in annex 2. The opinion of respondents was obtained by the following methods: 71.9% by telephone, 18.9% face to face, 6.3% by email and 3.1% by telephone and email.

The Figure 5 and Figure 6 below show the job positions of respondents and the function of their organizations within the natural fiber value chain (Question 2). All respondents had leading positions either as directors of companies or as chair persons in primary and secondary cooperatives. Few respondents did not provide information on their role.

Figure 5: Job title of respondents by percentage

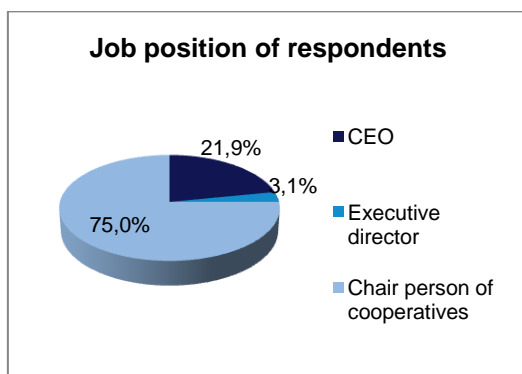
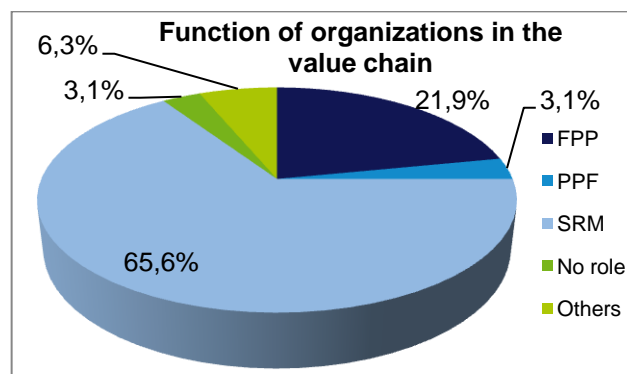


Figure 6: Role of respondents' organizations in the value chain



As regards to the function of the organizations within the value chain of baby camel wool and yak down, 65.6% of respondents were cooperatives which collect raw materials prepared by herders, 21.9% were producers of final products, and 3.1% were processing factories which scour and dehair the natural fibers. This reflects the share of these types of organizations among the number of partners of GGC4.

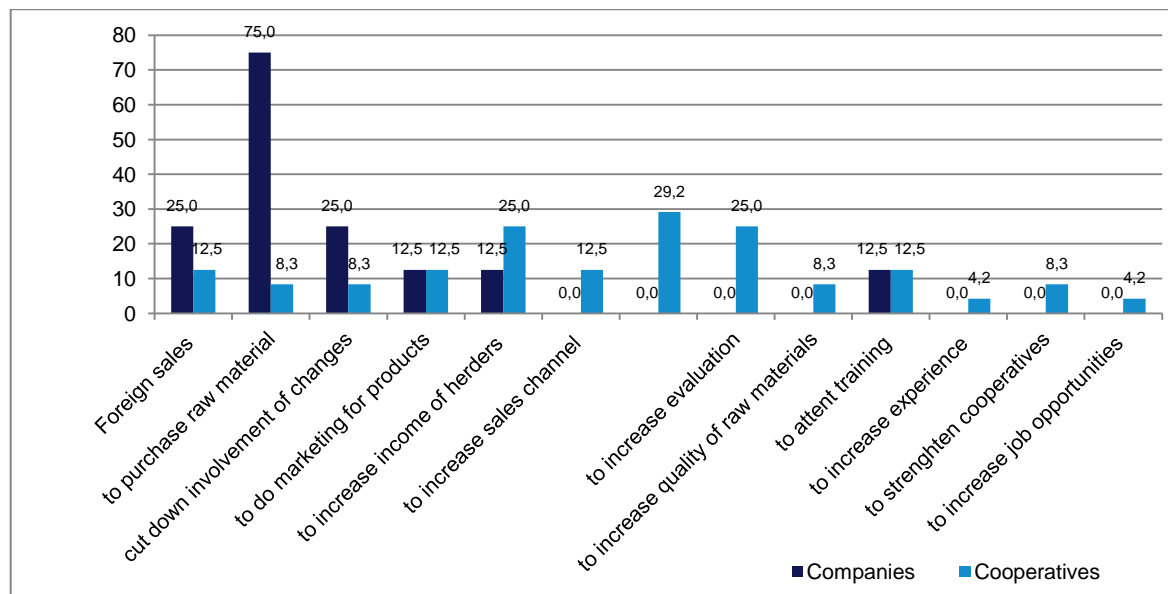
## 4.2 Needs of benefits for stakeholders

Participants gave answers to question 3 "What was your main purpose and need to start collaboration with the GGC4 in 2014?". The results are presented in

Figure 7 separately for cooperatives and companies.



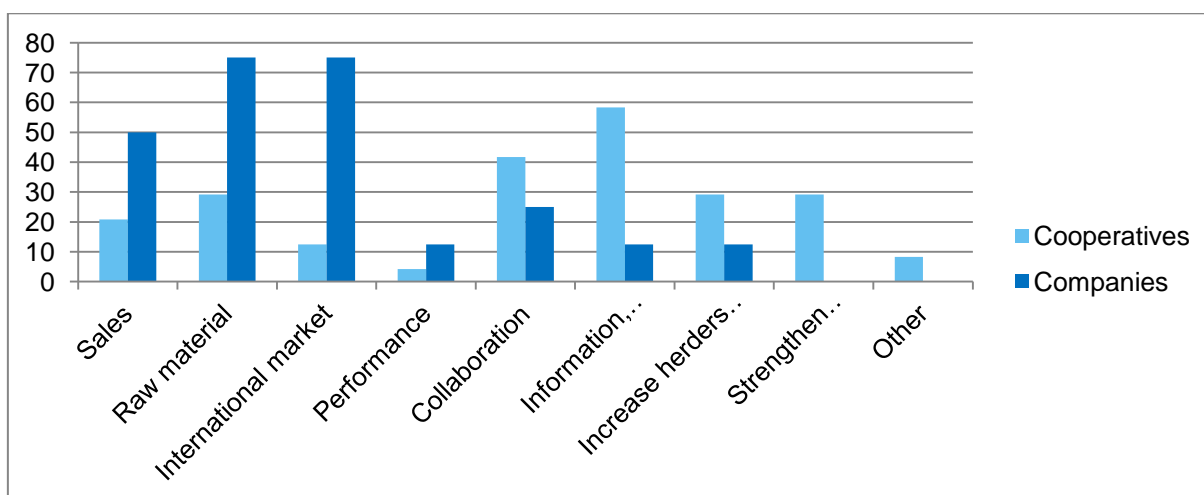
Figure 7: Main purposes and needs to collaborate with GGC4 (by percentage)



According to their position in the value chain, companies articulated the main needs being sourcing raw materials, improving sales on the international market and limiting involvement of changes (middlemen) in the supply chain. The main needs of cooperatives were to build relationships with companies, to increase the value of raw materials and to increase the herders' income.

Figure 8 gives an overview on the observed advantages and benefits respondents realized by collaborating with GGC4 (Question 4). In order to make the presentation brief the responses of cooperatives and companies to each category have been accumulated.

Figure 8: Advantages and benefits from involvement in the project (in percent)



The companies mainly indicated the increase in sales and marketing, the regular supply of good quality raw materials, and access to the international markets being advantages. For cooperatives the main advantages were the information and training on the preparation of raw materials, the gained experience in collecting raw materials and the direct contact with the companies for supply of raw materials.

In the following, the main advantages and benefits of the collaboration with GGC4 which were pointed out by the respondents (cooperatives and companies) are presented:

1. improved raw material preparation (combing of animals on regular basis, better quality of raw material, clear origin of raw material, fixed timeframe for raw material preparation, increased value and improved supply system);
2. increased information and experience (good information on the price of raw material and skills to implement the supply operations through trainings);
3. improved cooperation between companies, herders and cooperatives;
4. improved access to the international market;
5. increased demand and sales and the new sales channels;
6. improved livelihood of herders (increased income and employment, new incentives to prepare raw materials);
7. improved operations/activities of cooperatives (new equipment, storages and facilities for running their operations, acquired skills and experience, secondary cooperatives are fully established, cooperatives are trusted among members and citizens);
8. improved competitiveness.

The respondents were also asked, which activities they did not agree with or from which activities they could not realize benefits during their cooperation with GGC4. The answers are shown in detail in the following table:

**Table 3: Activities respondents did not agree with or which provided less benefits**

№	ACTIVITIES	TOTAL		QUANTITY AND PERCENTAGE OF ALL RESPONDING			
				Companies		Cooperatives	
		Qu.	%	Qu.	%	Qu.	%
1	There was no activity without benefit	9	28.1	1	12.5	8	33.3
2	Capacity not fully strengthened	6	18.7	0	0.0	6	25.0
3	Less sales of livestock	4	12.5	0	0.0	4	16.7
4	Number of training insufficient	4	12.5	0	0.0	4	16.7
5	Project duration is short	3	9.4	1	12.53	2	8.3
6	Project scope is limited	2	6.3	1	12.5	1	4.2
7	Investments in facilities of cooperatives is difficult	2	6.3	0	0.0	2	8.3
8	Interference with internal activities	1	3.1	1	12.5	0	0.0
9	Difficult procedures	1	3.1	1	12.5	0	0.0
10	Support to manufacturers is weak	1	3.1	1	12.5	0	0.0
11	Herders initiative is weak	1	3.1	0	0.0	1	4.2
12	Pasture management not improved	1	3.1	0	0.0	1	4.2
13	No additional buyers of raw material	1	3.1	0	0.0	1	4.2

The table above shows that the responding companies had very few comments on activities which were less successful for them.

25% of the cooperatives considered the activities for capacity strengthening as not sufficient. Particularly they mentioned that their capacity is still weak and they are not fully experienced to continue their activities after the completion of the project.

In general, it can be concluded that the partners were highly satisfied with the activities of GGC4 and only very few respondents pointed at activities with less benefit for them.

In question 6 respondents had the opportunity to make recommendations for activities to develop the value chains for yak down and baby camel wool in future. This was an open question and respondents were free to provide answers of their choice.

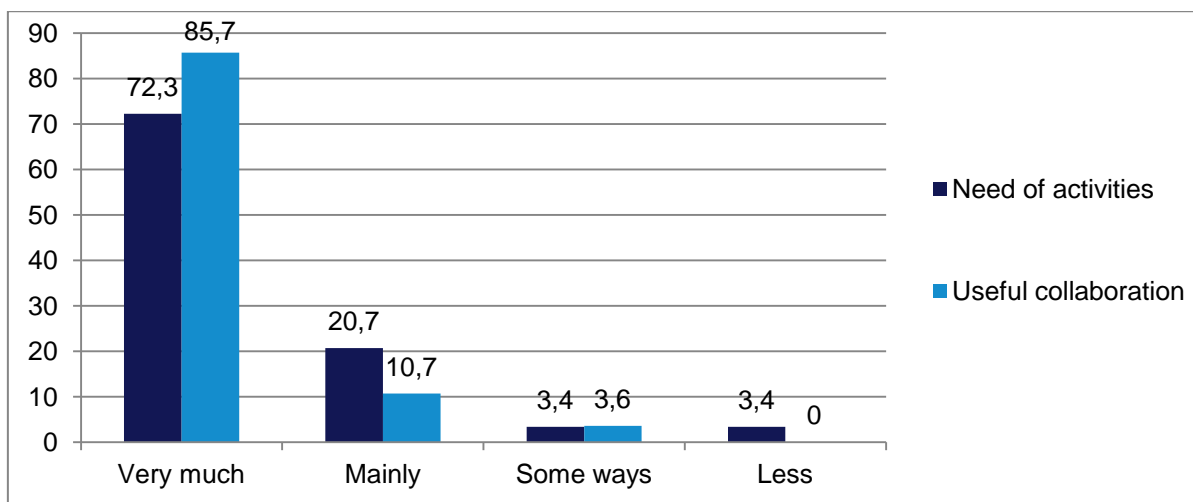
**Table 4: Stakeholders' recommendations for future project activities**

No	PROPOSALS	TOTAL		QUANTITY AND PERCENTAGE OF ALL RESPONDING .....			
				Companies		Cooperatives	
		No	%	No	%	No	%
1	To intensify trainings	10	31.3	4	50.0	6	25.0
2	To develop cooperation	8	25.0	1	12.5	7	29.2
3	To focus on overseas market	7	21.9	3	37.5	4	16.7
4	To support cooperatives	6	18.8	3	37.5	3	12.5
5	To continue the project	5	15.6	2	25.0	3	12.5
6	To increase value of products	4	12.5	0	0.0	4	16.7
7	To improve preparation of raw material	4	12.5	2	25.0	2	8.3
8	To reduce import of fake products	3	9.4	0	0.0	3	12.5
9	Other	3	9.4	2	25.0	1	4.2
10	To ensure equal participation	2	6.3	0	0.0	2	8.3
11	Support to producers	1	3.1	1	12.5	0	0.0

From the above table, proposals mainly mentioned were as follows: to provide training for professional technologists and designers, to increase trainings for herders and cooperatives on the preparation of raw materials; to strengthen cooperatives to ensure that they are able to operate without project support; to increase activities for introducing products to the markets in overseas; to develop collaboration of herders, cooperatives and companies, to increase trainings in order to make herders understand more about value of the raw materials and their preparation.

In order to summarize their opinions the respondents were asked to provide their assessment of the relevance of project activities and of their cooperation with the project team as a whole? The results are shown in the following graph:

Figure 9: Relevance of project activities & efficiency of collaboration with GGC4 team (%)



72.3% of all respondents consider that the project activities were very relevant and 20.7% say that they were mainly relevant. With regard to the collaboration with the GGC4 project team 85.7% consider that it was very efficient, and 10.7% say that it was mainly efficient

The following responses were raised when respondents were asked for comments and recommendations on the issues which were not mentioned in the evaluation (Q8):

**From companies:**

- To focus more on producing organic products;
- To concentrate on activities that are tangible and can be seen;
- To ensure that the project team members remain and continue to work;
- To request support of the government for exporting products;

**From cooperatives:**

- To carry out activities for better livestock health;
- To ensure that the state organizations are involved in the project activities;
- To take feedback and comments from stakeholders on regular basis;
- To ensure that the project team members remain and continue to work.

### 4.3 Conclusions

8 companies and 24 cooperatives which worked together with GGC4, participated in this feedback exercise. The following conclusions can be drawn by the remarks made by respondents.

1. For companies, the main purposes to cooperate with GGC4 were to have good quality of raw material supplies, to send their products to international markets, and to have direct contact with herders and cooperatives without intermediaries (changes). For cooperatives the main purposes were to have knowledge on how to prepare raw materials and to supply raw materials directly to processing companies.
2. From the evaluation on the benefit and advantages received from GGC4 it is evident that these main demands of cooperatives and companies were fulfilled.
3. Regarding activities which were not enough or were less useful companies named the insufficient trainings while cooperatives mentioned the lack of capacity development of cooperatives. It is proposed that further activities carried out by the project should intensify training and strengthening of cooperatives.

4. The opinion of respondents on the overall assessment of GGC4 project can be summarized by stating that 93% of the respondents considered the project activities as very much or as mainly relevant, while 96.4% of respondents considered the communication with the GGC4 project team as very much or as mainly efficient.
5. With regard to other issues that were not included in the assessment, companies and cooperatives proposed to keep the project team in place for continued work. Besides that comments were provided regarding general pasture land management, increasing livestock health and support from government organizations.



## Annex I

### “Green Gold” Component 4:

Facilitate Market Access by Linking Yak Herders to Processing Companies – Mongolia 2013-2016

#### **Final assessment of GGC4 project activities by stakeholders**

We would like to know your true opinion about our project activities and about our cooperation during the years 2013 to 2016. Please answer the following questions by crossing the appropriate answer or by providing brief information. This will help us to improve further activities of the project. Thank you very much for your help.

#### **1. Respondent**

Name:	
Contact:	
Place:	
Organization:	
Position:	

#### **2. Involvement**

What is the connection of your organization with the value chain for yak down and camel hair?  
What is the role of your organization in the value chain?

#### **3. Needs**

What were the main needs of your organization at the beginning of work of GG component 4 in 2014?

#### **4. Advantages**

What are the main advantages of your organization from the work of GG component 4 from 2014 to 2016? How did your organization benefit from it?

#### **5. Issues**

What are the main issues which your organization did not like in the work of GG component 4 from 2014-2016? What are requests which are not yet fulfilled?

#### **6. Recommendations**

What are your main recommendations for the future development of the value chain by the GG project?

#### **7. Summary**

Please provide your assessment of the project activities and of your cooperation with the project team? (Indicate appropriate response)

Project activities were very useful.	Project activities were mostly useful.	Project activities were partly useful.	Project activities were little useful
Cooperation with project team was very efficient.	Cooperation with project team was mostly efficient.	Cooperation with project team was partly efficient.	Cooperation with project team was little efficient.

#### **8. Any other remarks**

What are other remarks which you would like to make for this evaluation?