

COMPARATIVE ANALYSIS OF SUSTAINABLE CASHMERE PROJECTS IN MONGOLIA



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Acronyms

ADB – Asian Development Bank

ALMGAC – Agency for Land, Management, Geodesy and Carthography

AVSF – Agronomists and Veterinarians Without Borders

GGAHP – Green Gold and Animal Health Project

MNF - Mongolian Noble Fibre

MOFALI – Ministry of Food, Agriculture and Light Industry, the Government of Mongolia

MWCA – Mongolian Wool and Cashmere Association

MWTA – Mongolian Wool and Textile Association

NAMAC- National Association of Mongolian Agricultural Cooperatives

NAMEM – National Agency Meteorology and Environmental Monitoring

PUG – Pasture User Group

SFA – Sustainable Fibre Alliance

STeP EcoLab - Sustainable Textile Production and EcoLabelling in Mongolia

UNDP - United Nations Development Programme

VABA – Veterinary and Animal Breeding Agency

WCS - Wildlife Conservation Society

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Disclaimers

The views expressed in this report are those of the authors and do not necessarily represent those of the institutions with which they are affiliated including UNDP and the Government of Mongolia. For questions about the methodologies applied to the study and information provided in this report, please contact Satoko Okamoto at satoko.okamoto@undp.org.

I. Executive summary

This study examined six development projects which produced sustainably harvested cashmere as project outputs. All projects have been implemented in Mongolia in recent years and funding organizations ranged from multilateral and bilateral development partners to private sector firms. Most projects host a twin objective of reversal of pasture degradation and enhancement of herder livelihoods. The project scope goes beyond cashmere production. Nonetheless, the cashmere component became a salient feature of the projects since cashmere income accounts for a significant portion of herder income and is key to their resilient livelihoods. The term 'sustainable cashmere' increasingly became to refer to the cashmere harvested and produced by herders who participated in these projects. As of December 2018, these projects have cumulatively worked with 145 herder organizations and 17 cashmere processing companies in Mongolia.1,2

The study applied a structured framework of analysis so that UNDP can compare project inputs and outputs in an objective manner and propose coordination opportunities. Qualitative and quantitative information was obtained primarily from interviews with project stakeholders in response to the lack of publicly available information about the production of sustainable cashmere.

The study found that the projects entail substantial similarities, but differences exist, reflecting on each organization's programmatic strengths. Among the key similarities are geographical areas of project intervention, issue areas featured for herder group capacity building trainings, and types of linkage support provided for herder organizations. Differences were found in the level of codification and documentation on codes of practice on sustainable cashmere production and views on traceability systems for the harvested sustainable cashmere.

The study suggests acceleration of inter-organizational coordination to reduce programmatic redundancies and leverage economies of scale. This requires rigorous donor coordination both at project design and implementation stages. Due to the study's limited scope, this report focuses on coordination opportunities at the implementation stage only, and suggests further research to identify opportunities for harmonized project planning and design.

The study found that there is inadequate understating of sustainable cashmere standards and lack of consensus on a code of practice. To address this challenge, structured discussion that will produce a common vision is needed before coordination. Similarly, further discussions are needed to address the weak tracing system for the harvested sustainable cashmere. The quality of data on herders and herder organizations is poor and the data management systems are fragmented and nascent, calling for continuous investment of public funding so that both data and data management systems will improve and consolidate over time. The study further suggests that it is also viable to collectively develop policy recommendations to support sustainable cashmere production and increase supplier leverage when negotiating with buyer firms.

One concrete suggestion this study elucidates is the establishment of a multi-stakeholder dialogue platform. Consisting of representatives from each project, line ministries, subject matter experts, and processing and buyer firms, a structured dialogue will allow all stakeholders to develop and agree on key issues that will facilitate the growth of a value chain for sustainable cashmere. The Government of Mongolia could serve as a convener of the dialogue to promote concerted actions and transform the sector towards Mongolia's sustainable and inclusive growth.

¹ The term "herder organization" is used as a general term in this report. There are different types of herder organizations in Mongolia including Pasture User Groups (PUGs) and cooperatives. The functions of each organization are different since they are established to serve differing purposes. PUGs are formed for improved pasture management and the National Federation of PUG serves as their umbrella organization. Cooperatives primarily serve for commercial purposes such as meat and dairy product processing and marketing. Other types of cooperatives exist including those providing access to finance. The number of members belonging to each organization also varies. This report does not differentiate these groups and categorically refer to them as a herder

² Some herder organizations were counted multiple times due to the overlaps of project target areas.

II. Introduction

1. Study background

In June 2018, UNDP Mongolia received funding to implement a project that aims at addressing the pasture degradation while encouraging inclusive business through greater engagement with the private sector. The funding objective was to catalyze growth and business development of UNDP Country Offices to diversify partnerships. It explored areas of visionary interest and innovation, looking at novel approaches that underpin UNDP's work.

One component of the project is to run a pilot to prove the concept of a business model on a value chain for cashmere production in an environmentally sustainable and socially inclusive manner. UNDP Mongolia envisaged that the lessons learned from the pilot would offer insights into the development of the sustainable cashmere value chain and those in other livestock sectors.

While the pilot intended to gauge the scalability potential of the sustainable cashmere value chain, a lack of consensus on the definition of sustainable cashmere across stakeholders made it difficult to assess its scalability potential. As of 2018, there was neither a consensus on what constitutes sustainable cashmere nor a widely used standard that defines cashmere produced in an environmentally sustainable and socially inclusive manner. While a few organizations attempted to introduce standards for wider use with limited impact, several other organizations implemented projects promoting sustainable ways in which livestock commodities, including cashmere, were produced. Each organization worked in silos and was unaware of the differences and similarities of these projects. Furthermore, the documentation of these projects and codes of practice was neither standardized nor readily available, resulting in buyer confusion. Although UNDP Mongolia intended to adopt one standard in the pilot, doing so assumes that that standard would be credible and acceptable in the future. Therefore, the pilot could not provide sufficient insights into the scalability potential from a credibility perspective.

To address this missing link on credibility, UNDP Mongolia initiated advocacy work to develop a common understanding of sustainable cashmere among buyers and suppliers. Only with enhanced clarity among these target groups on the concept and how sustainable cashmere will impact Mongolia's long-term inclusive growth, could a meaningful discussion take place.

2. Study objectives

In this context, UNDP Mongolia commissioned a study to conduct a comparative analysis of the six projects that produced sustainable cashmere as project outputs ("sustainable cashmere projects"). The six projects were implemented by differing types of organizations and their funding sources also varied. While three projects were implemented by non-governmental, non-profit organizations, three projects were directly implemented by development partners or their affiliated projects. The six projects are:

- 1. Supporting Agriculture Value Chain Project of ADB;
- 2. Sustainable Cashmere-Fibre Supply Chain in Mongolia Project and Sustainable Textile Production and EcoLabelling in Mongolia (STeP EcoLab) Project of AVSF;
- 3. Green Gold and Animal Health Project of SDC;
- 4. Sustainable Cashmere Project of SFA;
- 5. Piloting the Sustainable Cashmere Value Chain Business Model Project of UNDP; and
- 6. Sustainable Cashmere Project of WCS.4

The funding organizations ranged from development partners to private sector firms including a mining company and international apparel firms. This funder mix indicates a general trend in the international

³ For convenience, this report uses the term "sustainable cashmere projects". However, not all projects are focusing solely on the production of sustainable cashmere.

⁴ WCS's project name may change in the future so that it will capture the distinct characteristics of WCS's project.

development sector whereby private sector firms are paying increasing attention to be environmentally and socially conscious.

The proposed methodology was to develop a structured analytical framework and apply it when processing the information collected from secondary and primary research. The study results were envisaged to objectively compare these projects, delineate their strengths and weaknesses and offer suggestions for enhanced project efficiency and impact. Additionally, UNDP Mongolia intended to use this study to create an opportunity for dialogue among suppliers and buyers and advocate for the production and marketing of sustainable cashmere for the country's long-term inclusive growth.

Activities conducted to complete the study included:

- Development of an analytical framework for comparative analysis which allows for a systematic comparison of the key parameters of the projects;
- Review of existing documents on the six projects both in English and Mongolian;
- Development of key questions to be fielded to key stakeholders to fill the information gap;
- Systematic processing of the information obtained, using the analytical framework to draw conclusions;
- Production of a report, comparing the inputs, outputs and outcomes of each project and assessment of each project's strengths and weaknesses; and
- Development of recommendations for collective project efficiency by analyzing the opportunities for collaboration.

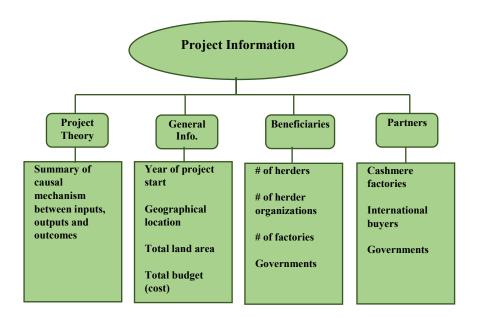
III. Methodology

1. Analytical framework

a. General project information

The analytical framework consists of three overarching project parameters. The first parameter is general project information (see Chart 1); the second parameter is project input (see Chart 2); and the third, project output (see Chart 3). Chart 1 illustrates four sub-parameters of the general project information comprising 1) theory of change; 2) geographical and budgetary information, including expected total land areas covered by the projects and budgets either or both annually or cumulatively; 3) total number of beneficiaries and other key beneficiary size; and 4) partnering organizations.

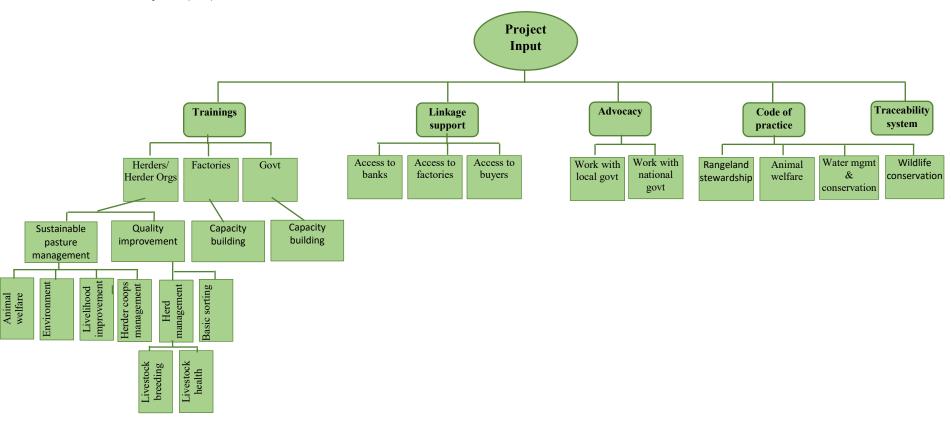
Chart 1 – General project information parameters



b. Project input

Chart 2 illustrates five sub-paraments of the second overarching parameter, project input. Combining all inputs, the project theory expects results from the outputs and outcomes. These inputs spanned trainings, linkage support, advocacy, code of practice and a traceability system. Within each input sub-parameter, several parameters were also identified. Details are explained in the following section.

Chart 2 – Project input parameters



1. Training

The projects provide capacity building trainings for three types of organizations. The primary recipients of training are herder organizations. Some projects also offer training for cashmere manufacturers and governments. All trainings are primarily designed to instruct the beneficiaries to produce and process sustainable cashmere.

Most herder trainings focus on two issue areas. One issue area is sustainable management of pastureland and the other, animal health improvement. These two issues are considered important independently on its own to enhance the resilience of herder livelihoods. However, the two issues are interlinked, and some project stakeholders discuss a causality between the two. The project theory posits that goats that are raised in an environmentally sustainable manner, including herd size reduction, will become healthier in the long term due to improved pasture conditions. However, in practice, sustainable pasture management has not necessarily resulted in herd reduction. Herders remain incentivized to increase their herd size due to factors external to the project scope including the current lending system and trade conditions.

In addition to herd management (breeding and animal health) that will independently result in healthier goats and improved cashmere quality, basic sorting by color, gender and age during combing is also considered to increase the value of raw cashmere. Some projects offer trainings for basic sorting that can be conducted by herders while others don't.

Within the training for sustainable pasture management, the projects often vary with the extent to which they focus on issue areas. The four typical issue areas are i) ecologically friendly grazing practice, ii) herder livelihood improvement, iii) herder cooperative management, and iv) animal welfare.

2. Linkage support

Linkage supports are often provided for the beneficiaries so that they can accelerate and sustain the sustainable cashmere transaction. Most projects offer some linkage support ranging from access to finance and buyers, to coordination opportunities with the government.

3. Advocacy

Most projects are engaged in advocacy work to increase the awareness of sustainable cashmere at national, regional and local levels. The study examined types of advocacy that each project engaged.

4. Code of practice

The codification and development of code of practice facilitates a clear understanding of the concept of sustainable cashmere among stakeholders. The study looked at the extent to which each project codified and compiled the code of practice for sustainable cashmere production and processing.

5. Traceability system

Most projects consider deploying mechanisms to enhance the traceability of sustainable cashmere. The study examined the projects' attempts to explore digital traceability systems and the type of information that each project envisages to capture.

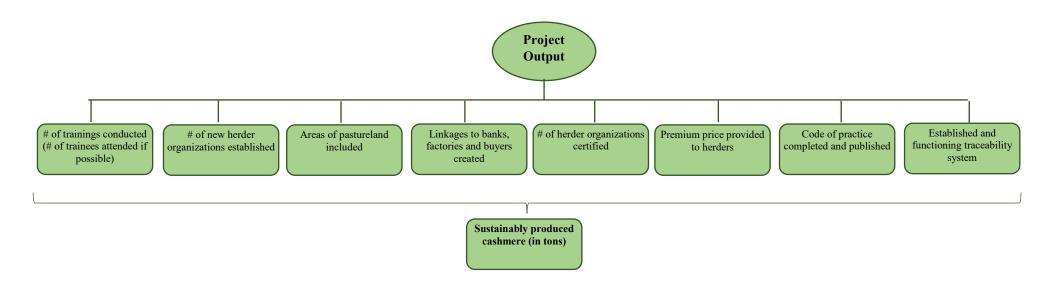
c. Project output

The third overarching parameter, project output, examined the following eight sub-paraments.

- Number of training conducted 1.
- Number of herder organizations established
- Areas of pastureland included
- Linkages to banks, factories and buyers established
- Number of herder organizations certified
- Premium price for herders provided
- Code of practice completed and published
- An established and functioning traceability system

Furthermore, using the geographical areas that the projects provided input, primarily herder organization trainings, the study estimated the total potential annual yield of sustainable cashmere. This is a hypothetical exercise since it assumes that any combination of inputs allows herders, herder organizations and factories to produce and sell cashmere as sustainable cashmere, regardless of it being sold as such.

Chart 3 – Project output parameters



d. Project outcome

This study did not investigate project outcomes since most projects began relatively recently and the key outcome that all projects envision is the reversal of pasture degradation among others. It is estimated that capturing the degradation reversal will span decades rather than several years.

It is no secret that Mongolia's pasture conditions are fast deteriorating. According to the national rangeland health monitoring conducted at 1500 sites across the country in 2016, 57% of sites monitored were found to be have been altered from the referenced communities.⁵ It reported, however, that these changes in grazing management could result in complete recovery or significant improvement within 10 or more years in the majority of the monitoring sites.⁶ While the report revealed the potential for project intervention, it also reported that more than 10% of these sites were irreversibly degraded and these sites increased by 3% between 2014 (7%) and 2016 (10.3%).⁷

The challenge of project outcome's timeline notwithstanding, most projects explore ways through which they can capture the environmental impacts. For example, GGAHP closely works with government agencies (NAMEM and ALMGAC) that manage a comprehensive information system spanning a gamut of pasture conditions at a national, regional and local level. Leveraging the data, GGAHP is monitoring and evaluating the impact of animal grazing on pasture on a regular basis. WCS has also put a considerable effort in developing means of measuring changes in rangeland condition, so that they can measure change in degraded rangeland in the long term. Further research is needed to measure the potential outcomes of these projects.

2. Primary and secondary research

The study examined project documents, project evaluations and existing literature in order to identify data to fulfill the foregoing parameters. Subsequently, the study identified information that was not obtained or remained unclear from the secondary research. Based on the information gaps, the study developed a questionnaire and collected the information from interviews.

The study involved 20 individual interviews. The interviewees ranged from project team members and organizational partners of these projects, to other key stakeholders. Twelve out of the 20 interviewees were project implementing staff members. The remainders included employees at cashmere processing companies and professional associations, officials at the line ministries, and staffers of affiliated governmental organizations. The study processed the findings, using an analytical framework.

IV. Findings

1. General project information

Project theories of five projects are similar

All projects primarily aim at sustainable management of pastureland and enhanced resilience of herder livelihoods. ADB's project is categorically different as it focuses on private enterprises' livestock commodity processing capacity.

Table 1: Comparison of project theories

Implementing Organization	Project Name	Go	pals	Objectives / Theory of Change
ADB	Supporting Agriculture	•	Increase agro-processing capacity	Envisaged outputs:

⁵ NAMEM and MEGDT 2018

⁶ ibid.

 $^{^{7}}$ NAMEM and MEGDT 2015, 2018

 $^{^{\}rm 8}$ For the list of interviewees and the questionnaire, please see Annex I and Annex II.

	Value Chain	 Increase primary agricultural production Increase value addition to agricultural resources 	 Value Chain Investment projects financed Production capacity of herders and farmers improved Enterprise's marketing and technical capacity improved Mongolian product brand(s) developed
AVSF	Sustainable Cashmere- Fibre Supply Chain in Mongolia ⁹	"Promoting the eco-friendly production of cashmere and adding value to cashmere products at soum level for more than 350 nomadic livestock-farming families in the province of Bayankhongor."10, 11	"Five livestock-farmer co-ops have been set up to help farmers get a better price for their cashmere. In return, the co-op members promise to limit the negative impact of their herds on the environment through work on animal genetics and healthcare (to optimize production per goat in terms of quantity and quality, and limit herd growth), plans for joint pasture use, protection or regeneration of land and watering holes, etc."12
GGAHP	Green Gold and Animal Health	Contribute to herder livelihood improvement through sustainable rangeland management, better marketing and conducive legal and policy environment.	 Sustainable rangeland management is ensured through pasture user groups (PUG) and rangeland use agreements (RUA) Herder household income is increased via collective market access and improved quality of livestock products due to improved veterinary services Conducive policy environment for effective animal health systems and sustainable rangeland are supported
SFA	Sustainable Cashmere	Ensure that measures that address grassland desertification are taken and sustained in the long term.	 Enhanced environmental resilience in cashmere producing regions Improved long-term prospects for cashmere-markets for producers and other supply chain actors Enhanced socio-economic resilience of producers in response to increased

⁹ Sustainable Textile Production and EcoLabelling in Mongolia (STeP EcoLab Mongolia) was launched in September 2018 by EU and AVSF serves an implementation organization. Since the interview with the AVSF project staff took place around the same time, this report was finalized with limited amount of information about STEP EcoLab. STEP EcoLab project aims to contribute to establishing a more sustainable textile supply chain within the industry and support current efforts of the Government of Mongolia in adding value and ensure sound pasture management practices in the country, specifically for cashmere, yak and camel fiber. During the time this report was finalized, AVSF's project focus shifted from the Sustainable Cashmere-Fiber Supply Chain in Mongolia project to the STeP EcoLab project. $^{\rm 10}$ Excerpts from AVSF website.

¹¹ A soum is the second level administrative subdivision, equivalent of a township, below aimags (provinces) in Mongolia. There are 21 aimags and 331 sums in the country. Each sum is further divided into baghs.

¹² Excerpts from AVSF website.

UNDP	Sustainable Cashmere Value Chain	Assess the viability and scalability of a business model for a sustainable cashmere value chain.	environmental and socio- economic risks Offer inside-out analysis Pilot a small-scale project in areas where UNDP worked in the past, in partnership with existing organizations
WCS	Sustainable Cashmere	Create a sustainable and wildlife- friendly cashmere value chain among producers in the Gobi Desert with a broader mission of establishing an exemplary model of a 'sustainable value chain' that can be emulated across the nation.	Improve rangeland quality for two specific purposes: 1) to reduce grazing pressure on wildlife habitats and 2) to ensure that rangeland ecosystems are managed sustainably so that the cashmere and other livestock sectors will weather the worsening pasture condition.

GGAHP covering the largest geographical areas

GGAHP implements projects in the largest geographical area, covering all soums across 18 aimags. WCS covers the smallest area and it is implementing its project in two soums of one aimag (Umnugovi). Total rangeland managed by these projects varied from approximately 200,000 hectares (WCS) to approximately 40,000,000 hectares (GGAHP).13

Table 2: Comparison of general project information 14

Implementing Organization	Funders / Donors	Project Name	Project Duration	Total area (ha)	Beneficiaries (as of 2018; cumulative)
ADB	ADB	Supporting Agriculture Value Chain	2017-20	33,418,931	17 Project Participating Entrepreneurs
AVSF	 European Union French Ministry of Agriculture, Agrifood and Forestry French Ministry of Foreign Affairs and Int'l Dev. French Fund for the Global Environment French Fund for Worldwide 	Sustainable Cashmere- Fibre Supply Chain in Mongolia ¹⁵	2014-2019 (project extension under consideration)	2,864,046	74 PUGs and cooperatives

¹³ The information about the total pastureland areas was obtained from the interviews with the project team. When the information was not obtained through an interview, the study calculated the total areas based on the State Land Monitoring Report. Note that project areas overlap, and therefore the aggregate land area of these projects will be different from the actual land size.

¹⁴ All information in this table, except for land size and except for the information for AVSF, was obtained from the interviews. Missing information (AVSF, ADB, and UNDP) was ascertained from the State Land Monitoring Report.

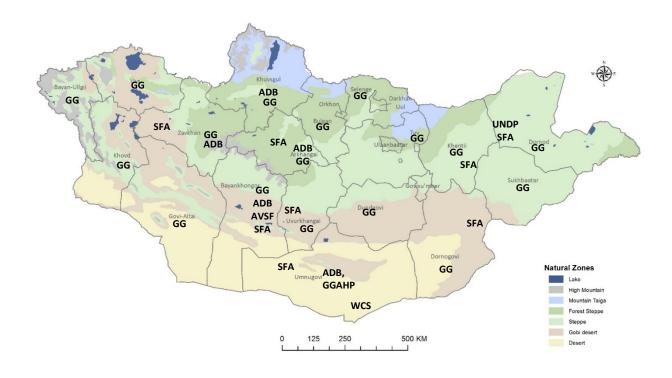
 $^{^{\}rm 15}$ Information about STeP EcoLab is not included.

	Environment (FFEM) HUMUS Foundation				
GGAHP	SDC	Green Gold and Animal Health	2017-20 ¹⁶	40, 000,000	110 PUGs ¹⁷
SFA	Member companies	Sustainable Cashmere	2015 onward	9,214,940	29 herder organizations
UNDP	UNDP	Sustainable Cashmere Value Chain	2018-19	1,232,256	5 cooperatives
WCS	Oyu TolgoiKering Group	Sustainable Cashmere	2015 onward	199,197	2 cooperatives

Significant overlaps in intervention areas

There are significant overlaps in geographic areas of project intervention. For example, four projects are implemented in Bayankhongor *aimag* while another four projects are implemented in Umnugovi *aimag*. Also, Arkhangai, Khentii and Dornod *aimag*s implement three projects and Uvukhangai, Khuvsgul and Zavkhan *aimag*s roll-out two others. Figure 1 illustrates the geographical overlap.

Figure 1. Geographic location of sustainable cashmere projects18



 $^{^{16} \; \}text{GGAHP consists of several phases. Phase 1 was implemented in 2005-2009; Phase 2 in 2010-2016; Phase 3 in 2017-2020.}$

 $^{^{\}rm 17}$ There were approximately 1,400 PUGs in Mongolia as of December 2018.

¹⁸ The marks in the map display approximate project locations. The ADB project covers 5 *aimags*; AVSF covers 5 *soums* in Bayankhongor *aimag*; GGAHP covers 18 *aimags* except Orkhon, Darkhan-uul and Govi sumber *aimags*; SFA covers 19 *soums* in 8 *aimags*; UNDP covers 2 *soums* in Dornod and 1 soum in Khentii *aimag*; and WCS covers 2 *soums* in Umnugovi *aimag*.

A mixture of timebound projects and non timebound projects

GGAHP and ADB projects are timebound and will run until 2020. UNDP's project is also timebound with its funding available for one year pilot. On the other hand, other projects (SFA, WCS and AVSF) are expected to be implemented provided funds are available.

Herder organizations are the primary beneficiaries

All projects except ADB, provide direct support for herder organizations. However, the intended beneficiary number and the type of herder organizations vary by project. As of December 2018, GGAHP supports 110 PUGs, whereas WCS supports two cooperatives; AVSF supports 74 PUGs and cooperatives. 19

ADB and AVSF support processing factories as direct project beneficiaries. AVSF supports over 20 domestic cashmere processing companies under STeP EcoLab project. STeP EcoLab project aims at improving the capacity of processors to carry out clean, sustainable production and branding. Similarly, ADB project's direct beneficiaries are 17 domestic processing factories. These factories are expected to provide support for their suppliers, primarily herder organizations, so that they can improve the quality of cashmere and practice sustainable pasture management.

Governments and processing factories are primary partners

Main project partners of these projects are local and national governments and domestic cashmere processing factories. Local governments are critical partners in ensuring the enforcement of pasture management activities. They approve pasture management plans, develop rules and regulations for pasture management plan implementation, and assign herder organization responsibilities required for pasture improvement actions. Although most local governments are good at developing pasture management plans and rules and regulations, which is often completed with support from the sustainable cashmere projects, they often suffer weak enforcement capacity.

Partnership with domestic factories is necessary for all projects. Due to the past and current policy disincentives given to raw cashmere exports , all cashmere projects generally partner with domestic cashmere processing factories. The projects typically link herder organizations to domestic processing washing and dehairing factories and eventually to national and international buyers. SFA, UNDP and WCS follow this approach, linking herders to the nascent value chain.

However, GGAHP, AVSF's SteP EcoLab and ADB operate in a larger scale and apply a different partnering strategy with local processing factories. They partner with professional organizations, namely Mongolian Wool and Cashmere Association (MWCA) and Mongolian Wool and Textile Association (MWTA), to have herder organizations work with processing factories. ²⁰ Leveraging the abundant information gathered about cashmere processing factories, the three projects plan to create a system for organized trades for raw cashmere. Lobbying domestic cashmere processing factories and connecting them to other stakeholders, these projects also attempt to facilitate a sustainable use of pastureland resources and professionalization of herder organizations.

Table 3: Comparison of project partners

Implementing org.	Government (local and national)	Processing factories	Others
ADB	MOFALI	Through MWCA	
AVSF	Dept of Food and Agriculture at a <i>imag</i>	■ Goyo	NAMACPUGs

¹⁹ Information about the number of herder organizations supported by the projects is obtained from the interviews with project managers and project team members.

²⁰ For example, MWCA has an experience in facilitating negotiations between its member factories and governments. It also organizes match-making events to identify processing factories that are willing to collaborate with herder organizations and buy cashmere.

GGAHP	MOFALI, ALMGAC, NAMEM, VABA	•	Through MWCA	:	MWCA PUGs
SFA	Dept of Food and Agriculture at a <i>imag</i>	•	Gobi	:	SFA member companies UNDP Bayan-Airag mining
WCS	Dept of Food and Agriculture at a <i>imag</i> and soum	•	Monital Cashmere Factory		Bankhar Dog Nutag Academy Vet Net Wildlife Friendly Enterprise Network Stanford University National Aeronautics and Space Administration (NASA) Natural Capital
UNDP	Agriculture Dept. at soum	•	Sor Cashmere	•	SFA GGAHP

2. Project input

a. Trainings

Training is an important component of all sustainable cashmere projects. Depending on the project focus, types of trainings vary. Table 4 shows the issue areas that each project covers in the training.

Table 4: Comparison of training input (Gray area indicates offered training programmes focusing on the specified issue areas)

Trainings	ADB	AVSF	GGAHP	SFA	UNDP	WCS
Cooperative governance						
Pastureland management						
Revolving fund						
Leadership						
Livestock breeding						
Livestock health						
Animal welfare						
Livelihood enhancement						
Env., water, species diversity mgmt.						
Org. capacity (ToT, Financial mgmt.)						
Young herder						
Harvesting support and sorting						
Mobile education						
Trainings for government staff						

ADB

ADB focuses on strengthening the capacity of cashmere processing factories. Trainings are conducted primarily for employees working in processing factories. In so doing, ADB believes that the new skills acquired by the factories will trickle down to herder organizations who serve as suppliers to the factories. Thereby, herder organizations are considered indirect beneficiaries.

However, factories remain unclear about how to sustainably engage with herder suppliers. In 2017, ADB received a request from its partner factories to provide herder training, indicating that the factories needed guidance in skills training for herders. Responding to the request, ADB conducted several herder trainings in Arkhangai, Khuvsgul and Zavkhan aimags and provided guidance to the factories to enable effective header engagement.

AVSF

Since the project started in 2014, AVSF has been providing trainings for cooperatives and cooperative unions at least three times a year. The trainings focus on alternative income generation, pasture management, animal welfare, herder cooperative governance and leadership.

One salient feature of the AVSF project is its focus on herder livelihoods. AVSF focuses its trainings on alternative income generation, which drove AVSF to organize trainings on how to establish a revolving fund. Also referred to as a risk fund, the revolving fund attempts to raise herder income by selling cashmere to European apparel companies. In addition, the project team organizes annual cashmere harvesting and sorting trainings. These trainings for cooperatives and their unions also span a variety of business skills including marketing, negotiation, pricing, contract management and traceability management. The scheme is referred to as "Participative Guarantee Scheme for Sustainable Cashmere Certification" in which cooperatives, cooperative unions, PUGs and local authorities are asked to participate. The project team is then confident that herder organizations can prepare quality cashmere that meets buyers' requirements.

Acknowledging the value of GGAHP and PUGs can offer in achieving its project objective, AVSF has been collaborating with them and organizing a more comprehensive pasture management training. Furthermore, AVSF closely collaborates with the National Association of Mongolian Agricultural Cooperatives (NAMAC) to train target herder organizations. It particularly values NAMAC's capacity for strengthening internal governance through promoting herder participations in various activities.

GGAHP

GGAHP is largest in project scale as it provides the greatest number of trainings among all projects to date. GGAHP organizes trainings not only for PUGs, but also for local and national government officials. It offers trainings more frequently and predominantly on pasture management and income generation.

GGAHP observed that peer learning is an efficient approach to herder training. Therefore, it has been preparing 30 herders as local trainers. It expects the herder trainers to eventually lead and conduct most trainings as the project progresses. Their current concern with this approach, however, is that it is more labor intensive than expected. It requires several stages of training spanning transferring basic knowledge to herders, having them practice the obtained knowledge in the field, monitoring their activities, assessing their knowledge periodically, teaching them skills to teach peer herders, and training them to become an independently functioning local trainer.

SFA

SFA provides trainings for herder organizations. Its focus is on having the herders prepare for assessor evaluations that examine compliance with its code of practice on rangeland management and animal welfare. Since its compliance criteria include cooperative governance, SFA also provides basic capacity building training on organizational governance. Additionally, it considers herder ownership of the project important and thereby, trainings are provided based on requests from herder organizations. It also offers additional training for young herders as a priority to nurture the next generation of herders for long-term impact.

On completing the training on capacity building on the two codes of practice and organizational governance, herders are evaluated by assessors. Fully leveraging its assessment matrix, its staff members

systematically evaluate herders and document results. After the assessment, herders are awarded gold, silver or bronze status.

UNDP

UNDP's project was initially envisaged to evaluate the commercial scalability and potential of a sustainable cashmere value chain. As such, it attempted to eschew programmatic redundancies and sought partnerships with existing initiatives to address market challenges. Since UNDP considered that inadequate traceability of sustainable cashmere, lack of consensus on its definition, and its quality deficiency as key challenges for commercial viability, it provided additional technical assistance to address these challenges in piloting the value chain model. It developed a blockchain-based traceability system and conducted trainings in partnership with PUGs, SFA and MWCA. Working with the existing market players including a local middle man, a local cashmere processing company (Sor Cashmere), and a buyer, it attempted to examine if all efforts made by development partners and associated organizations could convince buyers to pay a price premium and benefit herders.

The result of the pilot implementation demonstrated that the value chain was not yet ready for scale up on its own and would require further public funding to solidify an enabling environment. While the high defection rate of herders was among the anticipated market challenges and its solution (advanced payment) was arranged, the magnitude of the price gap offered by Chinese middlemen were unprecedented. Consequently, most of the contracted herders sold sustainable cashmere to these middlemen. The project revealed that in addition to addressing the inadequate traceability, unclear definition of sustainability and offer of incentives, bilateral trade negotiation between Mongolia and China may be essential.

WCS

Similar to other projects, WCS conducts trainings that feature pasture management, livelihood improvement, herder cooperative management, wildlife conservation, and environmental management. In addition to these trainings, WCS organizes a unique training called a Nomadic Nature Trunk, a travelling classroom in a cart designed to provide natural science and conservation education in target communities. WCS believes that this type of training provides a creative learning environment and engages communities in conservation activities. While WCS's target areas are small, the frequency of trainings organized by WCS to herder organizations is greater than other projects.

b. Linkage support

For the value chain to sustain, access to three types of organizations – financial organizations, intermediaries and buyers – are necessary. Only when herders maintain consistent, sustained engagement with these links can the value chain become inclusive and sustainable. The following sections explain how the projects provide such support for herder organizations.

Access to finance

Since herders and herder organizations usually lack cash, linkages to banks and financial institutions is crucial. The main obstacle that rural communities face is the lack of collateral to satisfy lending requirements. Most banks obtain livestock as collateral, but they require a certain livestock number and their interest rates are often high. It is argued that livestock-based collateral is among the factors contributing to the increase in livestock population. The study found that the projects attempt to facilitate access to finance not only for herders but also for the processors of raw materials. The projects, however, differ in the location of the value chain in facilitating access to finance.

SFA tries to link herder organizations with a commercial bank (Khan Bank). ²¹ The 16 herder organizations that received a bronze certificate by SFA so far are now eligible for further financial due diligence to avail a

²¹ Khan Bank is spelled *Xaah Bahk* in Mongolian.

loan product designed jointly by Khan Bank and SFA. The discussed interest rate is below the market rate of ~24% per year. As of February 2019, however, no herder organizations received the loan.

Acknowledging the inadequate financial capacity of herder organizations and limited supply and uptake of loans, GGAHP first attempts to build PUG's financial capacity. For this purpose, it created a self-managed fund (a revolving fund) for partnering PUGs with the aim of increasing their access to finance capacity and eventually linking them to formal banks. GGAHP assisted PUGs in developing the rules and regulations of the revolving fund and how to manage it independently. The revolving fund allows any PUG member to avail various sizes of loans with a set of interest rates. GGAHP expects that the revolving fund will contribute to building trust among members, accumulate financial credibility and allow them to access loans from formal banks in the future. GGAHP envisages that the commercial loans obtained from formal banks can be used for various purposes to increase group production productivity. For example, loans can be used for building storages for livestock commodities and buying tracks to transport them. GGAHP is currently establishing model PUGs that are trusted to manage the revolving fund in a limited geographical area (28 soums). GGAHP also began a project to provide soft loans in partnership with Khas Bank. ²² As of March 2019, GGAHP offered the loans to 100 herder families who made a contract under its Responsible Nomads scheme. ²³ AVSF also adopted the revolving fund mechanism and incorporated it into alternative income and livelihood enhancement training.

ADB and AVSF, in the meantime, attempt to link processing factories to commercial banks including the Khan Bank. The objective is for factories to modernize facilities, improve productivity, and produce quality products that meet the international market standard. Due to increasing prominence of green loans, sustainable sourcing is also becoming a consideration for lending institutions. Furthermore, these two projects consider that it is the processing companies that play a critical role in developing and sustaining the value chain for sustainable cashmere. After all, it is the factories that determine the buying price, ideally a higher price than the market, which in turn will be driven by customers facing buyers' appetite to pay a price premium for sustainable cashmere.

UNDP pilot project is implemented in coordination with several organizations that already work in the intervention areas including SFA and PUGs. It will continue to monitor whether these on-going access-to-finance initiatives bear fruit.

Access to buyers

All projects except for ADB have linked herder organizations to apparel firms facing end-customers. While ADB plans to link processing factories to apparel firms, it is still at its planning stage. The remaining five projects' buyer linkages approach is determined by the cashmere yield and buyer appetite. The transactions and negotiations take place at the project organization level and it is difficult to ascertain the buyer-supplier dynamics. There is an increasing global demand for sustainably produced cashmere, but buyers continue to be concerned with inadequate traceability, quality deficiency and the lack of clear definition of sustainable cashmere.²⁴

Table 5: Comparison of access to linkage input

Projects	Banks	Processing factories	Buyers
ADB	For processing factories to access green loans to modernize facilities & improve productivity	Yes (project beneficiary)	No

²² Khas Bank is spelled *Xac Bahk* in Mongolian.

²³ The annual interest rate (APR) of this loan is 12.7% (GGAHP). Herder loans are most commonly provided by Khan Bank, which has the greatest penetration in the Mongolian market. These loans typically have an APR of 21-24% and are generally divided into two repayments per year. Very poor household typically do not borrow from banks, but instead accumulate debts in the form of shop credit. (Mongolian International Capital Corporation and EBRD, 2019)

²⁴ For example, see a Wall Street Journal article "From H&M to Gucci, Fashion Rethinks Cashmere, Citing Environmental Harm" on 13 May 2019.

AVSF	Assisted in risk fund creation	Yes (when buyers want to process within Mongolia)	Yes
GGAHP	Assisted in revolving fund creation	Yes	Yes
SFA	16 herder coops that received a bronze certificate by SFA can apply for a Khan Bank loan	Yes (only as intermediaries to international buyers)	Yes
UNDP	No	Yes	Yes
WCS	No	Yes (only as intermediaries to international buyers)	Yes

c. Advocacy

The Mongolian government implemented a series of policies to increase the value-adding capacity of the sector since the 1990s. The results of these policies, however, have been mixed at best. As of 2017, washed cashmere export accounted for 56% (5,410 tons) of the total cashmere yield (9,400 tons), indicating that the government continues to struggle in creating a sizable processing industry in the country. ²⁵ The policies on value addition, however, resulted in inconsistent focus on quality improvement. Despite that policymakers are aware of deteriorating cashmere fiber quality, measures taken to improve the quality have been developed and implemented haphazardly. The discussions on environmental and social impact of cashmere production emerged only recently.

Between 1994 and 1996 the government banned the export of raw cashmere to drive the growth of processing industry. While the ban stirred the growth of washing and dehairing industry, the distortionary policy resulted in a disregard for quality. ²⁶ Due to the monopsony that resulted upon banning the export, Mongolian processors stopped offering price premiums for quality, paying only for quantity. ²⁷ In 1997 the ban was replaced by an export tariff on raw cashmere. However, the disregard to quality continued and the subsequent rampant smuggling to China exacerbated the market emphasis on quantity. Subsidized by the Chinese government, the Chinese traders who prioritized quantity outperformed Mongolian processers in farm gate pricing. It is no coincident that during this time, the global demand for cashmere surged and the number of livestock in Mongolia nearly tripled between 2000 and 2017. ²⁸ Inadequate herd management including cross breeding and lack of systematic culling became a common practice while herders focused on herd size increase.

In 2018 the Government of Mongolia approved the National Cashmere Programme 2018-2021. ²⁹ The main goal of this programme is to increase the volume of further processed cashmere including the final products. While the primary objective of the programme is to improve the domestic manufacturing capacity and increase export, quality improvement of raw material and improved goat breeding are among its objectives. It also directionally aims to increase the production and export of environmentally friendly products as a part of enhancing the competitiveness of cashmere products in the international market. However, the measures to be taken for quality improvement are yet again among many other items.

In this context, AVSF, SFA, GGAHP and ADB have been actively advocating for sustainable cashmere with the national and regional governments. As a result, the governments are becoming more aware of sustainable cashmere and incorporating the concept into policies and programmes. For example, Khentii aimag government approved a resolution to include SFA's young herder training as a compulsory

²⁵ The UB Post 2018 citing data on National Statistical Office (NSO) of Mongolia

 $^{^{26}}$ The World Bank 2003

²⁷ Ibid.

 $^{^{28}}$ 10 million goats in 2000 and 27 million goats in 2017, National Statistical Office (NSO) of Mongolia

 $^{^{29}}$ For details of the Mongolia National Cashmere Programme 2021, please see appendix.

programme for high school students. Similarly, GGAHP facilitated the establishment of Pasture Use Agreement between *soum* governments and PUGs.

GGAHP and ADB have also actively been advocating for an enabling environment by harmonizing laws and regulations and building an eco-system for the sustainable cashmere market. For example, GGAHP supported MOFALI in adoption and enforcement of Animal Health Law. ADB together with MOFALI organized a series of round table discussions and seminars in operationalizing the Mongolian Noble Fibre (MNF) standard. MNF does not explicitly consider the sustainability concept and instead focuses on quality based on provenance. A series of discussions have already taken place in which development partners and NGOs advocated for the inclusion of the sustainability concept into the MNF standard and the National Cashmere Programme 2018-2021.

Table 6: Comparison of advocacy input

	imparison or advocacy impor
Projects	With national and local governments
ADB	National: With MoFALI, organized discussions / seminars to operationalize the Mongolian Noble Fibre (MNF) standard
FAVSF	National: Coordination with ALMGAC and NAMEM Local: Established Local Certification Committee of Sustainable Cashmere including officials from the Bayankhongor Aimag Food and Agriculture Dept.
GGAHP	National: Supported MoFALI in adoption / enforcement of Animal Health Law Local: Facilitated the establishment of Pasture Use Agreement between soum governments and PUGs
SFA	Local: Khentii <i>aimag</i> government approved the resolution to include SFA's young herder training as a compulsory program for high school student
UNDP	Local: Assisted in making Pasture Use Contract between soum government and herder cooperatives during a previous UNDP project.
WCS	Local: Assisted in making Pasture Use Contract between s <i>oum</i> governments and herder cooperatives

d. Code of practice

There is a growing need for a clear definition of sustainable cashmere among suppliers and buyers. As discussed in the foregoing section, there is no widely used code of practice that specifies sustainable cashmere.

Since 2010, ADB began developing a concept of Mongolian Noble Fibre (MNF) based on provenance, and its trademark was registered with the Mongolian Intellectual Property Organization (MIPO) and the World Intellectual Property Organization (WIPO) in 2013.³⁰ The trademark can be granted for dehaired cashmere, cashmere yarn and cashmere knitwear products. SFA also documented clear guidelines for rangeland management and animal welfare and made them available on its website.³¹

³⁰ For the MNF trademark record, see: https://trademark.justia.com/791/37/mongolian-noble-79137606.html
For more detailed MNF trademark specifications, see ADB's report Annex 3: https://www.adb.org/sites/default/files/project-document/216361/39229-022-tacr-01.pdf

³¹ For SFA's code of practice, see:
https://static1.squarespace.com/static/594f93472994caad23d01ada/t/5a0213850852292492353a68/1510085510004/SFA%2BRangeland%2BStewardship%2BCode%2Bof%2BPractice%2B03 10 2017.pdf

The difference between the two standards are the issue areas and value chain locations that their sustainability standards govern. While MNF focuses on provenance (100% made in Mongolia), quality (fibre diameter and length, hair and oil content, etc.) and clean production, SFA focuses on sustainability concerning pasture management and animal welfare. Thus, the groups to which each standard caters are different. At present, SFA's standard is primarily designed for herders and herder organizations, while MNF certification is for value-adding processers including factories and other intermediaries across the value chain.

Other projects also claim to have produced documents serving as code of practice, but they are yet to be made available to the public.

Table 7: Comparison of sustainable cashmere standardization input

Projects	With national and local governments
ADB	 Supported the MNF certification registration with an international IP office The certification can be granted to dehaired cashmere, cashmere yarn and cashmere knitwear products
AVSF	 Claims to have produced documents serving as a code of practice, but it is yet to be made available to the public
GGAHP	 Claims to have produced documents serving as a code of practice for the Responsible Nomads standard, but it is yet to be made available to the public
SFA	 Made its code of practice available to the public, its member companies and trained herders
UNDP	 Collaborated with SFA for its pilot project
	 Focuses on facilitation and does not intend to develop a code of practice
WCS	 Collaborates with SFA and other organizations Play a leading role in establishing the Wildlife Friendly Sustainable Cashmere Guideline

e. Product traceability system

A system to trace cashmere plays an important role in creating market linkages between herders and buyers. All projects agree that record keeping is poor among herder households and moderate among herder organizations. It will take time to have nomadic households consistently record information. The attitude to traceability systems was split into those who support technology deployment and those who prioritize data quality.

AVSF considers that improved herder household record keeping is the greatest challenge. Adopting a technology to trace it, is yet another challenge. AVSF believes that it is necessary to enhance internal and external information control systems, including technical assistance for cooperatives and buyers who benefit from neutral certification committees. Therefore, it organized a series of trainings for herder organizations so that they can keep track of various activities. It regularly collects information about the location of cashmere collection, goat age and their health status including vaccination and ectoparasite treatment histories. It also collects information about all activities that are implemented to improve the pasture condition, including rotation records.

ADB also considers that developing a traceability system suitable for Mongolia requires a significant amount of time, effort and funding. It considers that before applying any tool to trace cashmere production,

preparation is important. Key among preparation steps is improvement of record keeping capacity both at herder household and cooperative levels.

Most projects, however, consider potential deployment of technology solutions to trace cashmere. Several projects, including AVSF, believe in the necessity of coordination among the projects due to a network effect of technology, the value that an additional user can bring to other users. GGAHP is most advanced in setting up a digital system to trace its sustainable cashmere ("Responsible Nomads"). One salient feature of GGAHP's traceability system rests with its incorporation of existing pasture monitoring and evaluation information systems (most importantly ALMGAC and NAMEM) into its working system. GGAHP has also been collaborating with the Veterinary and Animal Breeding Agency (VABA) of Mongolia to integrate the existing livestock health and breeding information at the household level. According to GGAHP, as of March 2019, it has become possible to digitally capture the information about pasture condition and animal health status at the household level in 28 soums and connect them to processors and buyers. While the inconsistency of government database remains a challenge, GGAHP is optimistic that the integrated system will allow all stakeholders to ascertain the impact of sourcing cashmere on the environment, herder livelihoods and animal welfare on a specific soum.

While WCS also acknowledges the importance of a traceability system, it is still at the discussion stage with its collaborators. It considers that establishing a traceability system should be a joint approach among all stakeholders. Therefore, WCS has been discussing the introduction and application of a traceability system with AVSF, SFA and other partnering organizations such as Natural Capital Project, Fiber Institute, and *Bankhar* Guardian Dog project.

UNDP is developing a blockchain-enabled traceability system, applying an agile method. UNDP considers that system integration is critical and attempts to keep the pilot system simple and versatile.

Table 8: Comparison of traceability system input

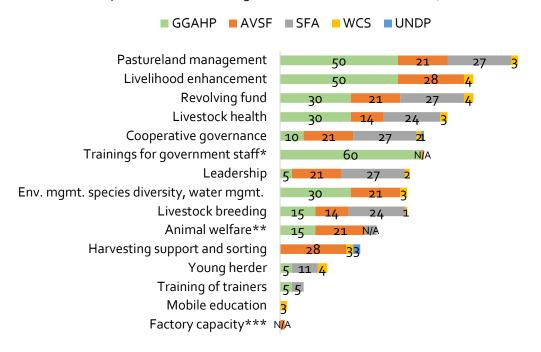
Projects	Opinions and implementations
ADB	Provides support in improving information/record keeping of herder organizations which supplying cashmere to the factories
AVSF	Opines that the improvement of herder household-level record keeping is the greatest challenge. It also believes in the importance of adopting a solution that will leverage the economies of scale of technology and operate on a global scale.
GGAHP	Most advanced in setting up a digital system to trace its sustainable cashmere ("Responsible Nomads")
SFA	No answer
UNDP	Pilots a blockchain-enabled traceability system, applying the agile method
WCS	Opines that the traceability system should be a joint approach of organizations

3. Project output

a. Trainings

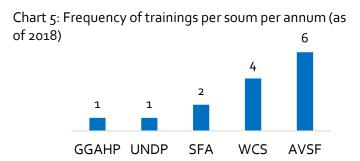
The cumulative numbers by type of trainings conducted for herder organizations are shown in Chart 4. As discussed in the foregoing section, GGAHP conducted the largest number of training followed by AVSF. The most common issue areas covered by the trainings are pasture management, livelihood enhancement, revolving fund and livestock health *in the order of frequency*, indicating core issue areas for sustainable cashmere training across the projects.

Chart 4: Number of trainings featuring specific issue areas provided for herder organizations (cumulative as of Q4 2018)



The frequency of trainings organized per *soum* is shown in Chart 5.³³ AVSF and WCS conducted training more frequently in one *soum* than other projects. The comparisons of the numbers between the cumulative and per-annum-per-*soum* reveal differing approaches to capacity building.

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b. Premium price

Most projects ask herder organizations to follow certain guidelines on pasture management so that herders can differentiate the cashmere and ultimately, increase their income. Incentives including price premium promised by partnering factories and/or buyers is among the key drivers of project participation for herders. While anecdotally consumer-facing buyers could pay up to 20% premium of the market price, premiums that can be offered vary depending on buyer preferences, the number of intermediaries and the volume. Payments are typically made either during or after the transaction with partnering factories.

The current market dynamics prioritize quantity over quality and all projects consider that it will take time to change this market dynamics. One factor contributing to this disregard to quality among herders is middlemen who often sell bulk cashmere to manufacturers in China. For decades the government of China

³² *Training for government staff is provided by AVSF and the number is unknown. **Training for animal welfare is provided by SFA and WCS but the numbers are unknown. ***Factory capacity training is provided by AVSF but the number is unknown.

³³ The frequency is calculated by the total cumulative number of training divided by the year of project operation and by the number of soums in which the project has been executed.

has subsidized its cashmere processing industry with low interest rate loans.³⁴ As a result, Mongolian processing firms often find themselves at a disadvantage in financing and production scale to the Chinese equivalents. Since Chinese firms are willing to pay more to their middlemen and herders, and often prioritize quantity over quality, herders adjust to the buyer preference over time. Consequently, while the projects ask herders to prepare cashmere according to the guidelines on sustainability and often quality, including the requirement for sorting by color and goat age during combing, many projects found that herder organizations still sell remaining cashmere to middlemen and/or factories whichever offers the higher price. Obviously, alternative buyers consider neither sustainability nor provenance-based quality.

Since all attempts to provide price premium are nascent and have been carried out at a limited scale, trusts among herder organizations, projects and buyers are precarious at best. Furthermore, high price fluctuations during the harvesting season and the highly competitive market makes herder organizations to be cautious about any pre-season arrangement. It remains a challenge to harvest quality sustainable cashmere that will convince buyers to pay a premium *consistently* without financial support from development partners and their partnering civil society organizations. At the most rudimentary level, herder organizations need a storage to keep collected cashmere properly and safely, which most herder organizations are lacking.

c. Volume of sustainable cashmere

To calculate the hypothetical market size that the projects produce, this study makes a bold assumption. It considers that sustainable cashmere is cashmere that is harvested from goats raised by herders who received some training on sustainable cashmere. In other words, herders who received training from the five projects can presumably produce sustainable cashmere.

The total potential market size for sustainable cashmere ranges from 8,123 tons (the minimum volume—the total volume produced by the project that covers the largest geographical area, assuming all other projects overlap) to 9,400 tons (the maximum volume —the total expected annual yield of cashmere in 2018 based on the total number of goats)³⁵. Chart 6 illustrates the annual volume of sustainable cashmere that is theoretically produced by each project, disregarding geographical overlaps. The calculation is based on the average cashmere yield per goat (300g) and the number of goats that are registered in each project intervention area; the volume figures precludes ADB since its project does not directly support herders. Note that project target areas overlap, therefore this is an over estimation.

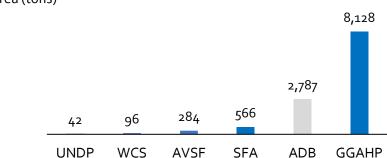


Chart 6:Total cashmere that can be produced from project area (tons)

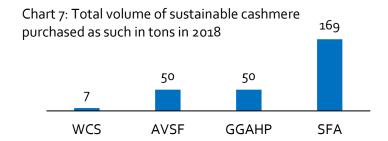
Since the potential market size considers the supplier-side capacity *only* and disregards buyer willingness to acknowledge and/or purchase, the actual volume of sustainable cashmere that was *sold as such* is shown below for comparison (Chart 7). 36

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³⁴ USAID 2005.

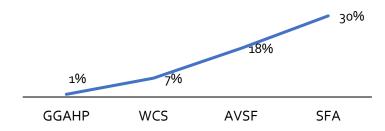
³⁵ The UB Post, quoting statistics from the National Statistical Office of Mongolia 2018.

³⁶ UNDP project was not implemented during the 2018 cashmere harvesting season. Therefore, the data is omitted form Chart 7 and Chart 8.



The study further calculated the percentage of sustainable cashmere *sold as such* in relation to the total production capacity (Chart 8). SFA sold 30% of the potential sustainable cashmere to buyers as such, while GGAHP managed to sell 1% of the potential volume in 2018. This finding reveals the projects' different focus. While the results of the foregoing input training analysis revealed that GGAHP's input is broadest in issue areas and largest in geographical scale, the ratios of actual transaction volume to potential yield indicates SFA has the largest supplier-buyer matching capacity.

Chart 8: % of Sustainable cashmere purchased as such, relative to the total potential supplier capacity (2018)



V. Conclusions

This study primarily examined the inputs and outputs of six sustainable cashmere projects, applying an analytical framework. The input analysis revealed that there is a significant overlap in project target areas. This indicates that project beneficiaries and partner organizations overlap. UNDP's pilot project preparation also confirmed the presence of multiple projects and it decided to work with existing organizations. Local governments typically respond to multiple requests for coordination, leading to resource stretch. The most crowded *aimags* were located in the central and south area (Baynkhongor and Umnugvi *aimags*) where four sustainable cashmere projects are executed.

The study also identified significant similarities in project input. Most importantly, direct beneficiaries of the five projects (AVSF, GGAHP, SFA, UNDP and WCS) are herder organizations and all projects offer capacity building training for them with varying degree of emphasis on each sustainability issue area. Three core issue areas of the trainings are sustainable pasture management, livelihood enhancement including revolving fund development, and livestock health. All projects try to link herder organizations to the market by providing them with support for business skill improvement. Each project, however, offers training on certain issue areas more deeply and broadly than others, depending on project mission and priority. One anomaly is ADB which focuses on capacity building of cashmere processing factories. It is worth noting that AVSF works with both herder organizations and factories for capacity building, reflecting on its emphasis on capacity building across the value chain.

Key strengths of each project's herder training input are as follows:

- ADB primarily focuses on factory capacity building and expects these factories to engage with herder organizations. However, on discovering that factories are not effectively engaging with herders, it organized capacity building trainings for selected herder organizations and is currently exploring the linkages between trainings for factories and herder organizations.
- GGAHP offers training on pasture management and livelihood improvement more frequently than
 training on other issue areas. It has conducted the largest number of trainings to date and has
 become the leader in the space. GGAHP also closely work with ALMGAC and NAMEM to ensure
 that the environmental impact of the project is monitored and evaluated over time.
- AVSF also provides multi-faceted trainings for herder cooperatives and herder unions. It has substantial capacity to organize trainings on pasture management, animal welfare, sorting to meet buyer demand, negotiation skills, among others. AVSF is the only organization that focuses both on herder organizations and factories and connecting them to the market.
- SFA's trainings focus on the inculcation of its code of practice that features governance, pasture management, animal welfare and implementation. One salient feature of SFA training is its follow-up and evaluation system. Upon completion of the training, it assesses herder knowledge and compliance with its codes of practice. Subsequently, SFA awards herder organizations a certification that signifies differing levels of compliance status.
- In addition to offering training programmes similar to other projects, WCS places greater focus on wildlife conservation. Furthermore, it offers a travelling classroom in a box called a Nomadic Nature Trunk. In the Trunk, it provides natural science and conservation education. It also focuses on developing a system for monitoring and evaluating the project's environmental impact in partnership with leading global institutions.

Various linkage supports are key inputs, one of which is access to finance. Each project adopts a different strategy. While SFA created a new loan product in partnership with a commercial bank to increase loan supply, GGAHP tries to create a demand for commercial loans by building PUGs' capacity. Such demand is created by establishing a revolving fund. GGAHP also began a project to provide soft loans in partnership with Khas Bank. AVSF and ADB attempts to apply their green financing schemes to processing factories and provides support for factories to process and source cashmere in an environmentally friendly manner.

Buyer linkage support is among key linkage inputs for all projects. All projects attempt to connect direct project beneficiaries (herder organizations or factories) to buyers. ADB is planning to link the processing factories to apparel firms. Incentives are an important part of the linkage development. However, all are at the initial stage and approaches vary depending on the cashmere yield and buyer interests. The small percentages of the actual market transaction to the potential market of sustainable cashmere testifies the nascent linkages to buyers.

Advocacy has also been conducted by four projects. AVSF, SFA, GGAHP and ADB have been advocating for sustainability of cashmere harvesting and educating national and regional governments about the long-term impact of the current practices. As a result, governments are becoming more aware of the importance of sustainable cashmere and incorporating recommended practices into policies and programmes. However, these projects don't necessary coordinate, although opportunities for coordination exist.

Code of practice is a complex issue. As of today, there is no widely used code of practice that specifies unified sourcing conditions or manufacturing processes of sustainable cashmere. All projects claim that they developed a set of standards or codes of practice. Among them, SFA and ADB published a document on code of practice and made them available to the public. SFA trains herder organizations based on it. ADB supported the Mongolian Noble Fibre certification which is granted to dehaired cashmere, cashmere yarn and cashmere knitwear products. While SFA certification is for the upstream organizations (i.e. raw cashmere suppliers, herder organizations) and focuses on sustainability of cashmere harvesting rather than quality, MNF is for downstream processers and focuses on quality based on provenance. It is open to discussion if the best strategy is to combine the two (or more) or manage them separately in the value chain.

Lastly, a system to trace cashmere is important to gain buyer trust. All projects agree on the importance of record keeping at the herder and herder organization levels. ADB, AVSF, SFA and WCS consider that data deficiency needs to be overcome before deploying a traceability system. Therefore, they focus on improving the information collection capacity at the herder household level before applying any tool to trace cashmere. In the meantime, GGHAP and UNDP are experimenting a traceability system that leverages digital technologies.

Those similarities and differences should help sustainable cashmere stakeholders to objectively assess strengths and weaknesses of each project. For the project teams, the information should allow for identifying the spaces for coordination and collaborations with other projects.

VI. Recommendations

The study suggests opportunities for coordination and collaboration at multiple levels in multiple stages of the project life cycle. Most importantly, the projects may consider coordinating at early stages of their life cycle including resource mobilization and project design. The scope of work for this report, however, is implementation stages and therefore, the recommendations in this report focuses on addressing opportunities at the implementation stage only.

First, the projects can jointly organize herder capacity trainings. Based on each project's competency on different issue areas, a project could focus on its strongest issue area. The projects can also regularly meet to discuss best practices in planning and carrying out herder organization trainings. The joint training could start in the *aimags* where multiple projects operate. Identified issue areas of competencies are as follows:

- ADB
 - Capacity building for processing factories to improve cashmere quality and clean processing
- AVSF
 - Herder organization capacity building, including strengthening the internal governance, greater member participation and business skills
 - Factory and herder organization capacity building for cashmere quality improvement and their interlinkages
- GGAHP
 - o Pasture management training
 - o Herder income generation
 - o Revolving fund development
- SFA
 - Accreditation for sustainable cashmere based on clearly documented code of practice on rangeland management and animal welfare
 - o Capacity building for young herders
- WCS
 - Wildlife and biodiversity friendly production of cashmere

Second, the projects can coordinate and collaborate in scaling up and broadening and deepening partnerships. The competencies described below are suggested areas of strengths and may be useful when the projects discuss coordination and collaboration opportunities beyond joint training. All these projects' programmatic strengths combined, they may achieve greater efficiency both independently and collectively.

- ADB
 - Leveraging its experience of working closely with processing factories, it can provide other projects with insights into expectation gaps between herder organizations and factories. In so doing, the projects can enhance herder capacity to act as a reliable supplier and factory capacity to run businesses more inclusively.

AVSF

It adopts a holistic approach by linking stakeholders across the value chain and within the
ecosystem. Other projects can learn from AVSF's harmonized approach to engaging with
stakeholders and linking its training designed for differing types of stakeholders.

GGAHP

- It enjoys strong reputation and credibility as a sector leader. Its project footprint covers almost all areas of Mongolia and other projects can learn from its deep experience in achieving broadest outreach and continuous efforts to innovate.
- Its pasture monitoring and evaluation capacity linked to NAMEM and ALMGAC provides a national level evaluation of the project outcomes.

SFA

 It maintains strong capacity to mobilize private sector firm support and facilitate transaction with buyers. While its code of practice is just an example, other projects may build on its clear set of guidelines and add chapters on specific issue areas of organizational competency.

WCS

 It maintains strong capacity to forge partnerships with international organizations in exploring various ways through which long-term ecological impact can be monitored.
 Other organizations may leverage WCS's capacity to develop systems and tools to measure long-term project impacts on pasture conditions.

Third, the projects can build a mechanism so that herder organizations can gain a collective leverage to demand price premium from commercial buyers. Whether the currently deployed incentive mechanism, i.e. premium payment on sustainability conditionality and/or impact credit, can sustain in the market without subsidies remains unclear and need further discussions.

While the reduction of herd size is *implicitly* discussed by all projects, few projects explicitly link the reduction of goat size to project outcomes.³⁷ While some *soum* governors are supportive of herd size reduction, others are not. Project staff and the supportive governors could discuss concrete ways through which the projects can disrupt volume-oriented production and reverse pasture degradation. The Mongolian Chamber of Commerce and other industry groups that monitor domestic and international pricing may also provide insights into the right pricing mechanism to ensure consistent engagement between herders and buyers.

Another area of collaboration is collective advocacy. The projects can jointly work with policymakers so that they can include the sustainability agendas in government programmes and policies. Insights obtained from project implementation will guide policymakers in creating a convincing narrative connecting sustainable cashmere and the country's sustainable and inclusive economic growth. The discussion on the introduction of pasture user fees or a quota (permit) system will continue for the foreseeable future and their pros and cons need to be seriously assessed. At minimum, it is important that the projects communicate in one voice to ensure the integration of the sustainability agenda into short- and mid-term government programmes such as the National Cashmere Programme2018- 2021.

The fourth area of cooperation is development of a data system for sustainable cashmere. Tracing cashmere products in a nomadic herding system is complex and requires considerable efforts and investments. While GGAHP is developing a multi-commodity traceability system that links suppliers and buyers, UNDP implemented a small-scale pilot testing. The integration of these systems to other data bases is yet to be fully accomplished and requires a significant amount of resources. While these pilot projects

³⁷ The AVSF project encourages herder cooperatives and unions to reduce the herd size *explicitly* and some cooperatives are making efforts to reduce the goat herd size.

could serve as case studies, other projects could start sharing the challenges faced in data lapses during implementation.

Lastly, it is important for the projects to continue to discuss what constitutes sustainable cashmere and develop a common understanding of different sustainability parameters. This study revealed that there is a lack of clarity and disagreement on this issue among the projects. If remained unaddressed while each project scales up, the fragmentated, un-transparent value chain will continue to hamper the value chain's scalability potential. One suggestion is to establish a mechanism to facilitate such discussions. Consisting of representatives from all sustainable cashmere projects, officials from line ministries, experts from industry associations, academia, and private sector processors and buyers, the mechanism will support a structured dialogue through which decisions are made based on clear rules of engagement. UNDP plans to facilities such discussions in partnership with all stakeholders and in support of the Government of Mongolia.

Table 9. Summary of findings, conclusions and recommendations

Findings	Inferences / Conclusions	Recommendations
Significant geographical overlaps	 Overlaps in beneficiaries Uneven distribution of training provision for herders (some herder organizations receive more training than others) Local government coordination burden 	 Jointly implement capacity building training for herder organizations Hold periodic meetings among the projects to share best practices Establish coordinated communication channels in liaising with the local governments (aimag, soum and bagh levels)
All herder trainings entail most issue areas Each project offers certain issue area trainings more deeply and broadly	 Overlaps in training programme issue areas Some trainings in each issue area are deeper and broader than others 	 Conduct structured discussions among all projects to agree on the issue areas that each project is most competent Carry out a pilot joint training based on the agreed-on issue areas of project competency
Most provide buyer linkage support	 Approaches vary All are in the initial stage 	 Jointly explore ways to disrupt the market to accelerate shifting away from a quantity-focused market to a quality-focused alternative Jointly advocate the government policy that accelerates supplier-buyer linkages that will result in consistent sourcing that focuses on ecological sustainability and supplier inclusion Leverage economies of scale and collectively negotiate with buyers
Some work on advocacy (AVSF, SFA, GGAHP and ADB)	 No substantial coordination among the projects 	 Hold periodic discussions and harmonize policy recommendations to be produced by these organizations
SFA's code of practice on rangeland stewardship and animal welfare and Mongolian Noble Fibre's	 There is no widely used code of practice that specifies conditions/requirements of sustainable cashmere 	 Provide feedback to publicly available code of practice and quality standard (e.g. SFA and MNF)

quality standards were published		 If other codes of practices are available, make them available for the public for discussion among all stakeholders Discuss if a consensus on the conditions/requirements for SC is necessary If a consensus is unnecessary, discuss mechanisms to promote information transparency to reduce buyer confusion
All projects agree on the importance of record keeping at the herder and cooperative levels	 Land information captured by ALMGAC and NAMEM is most comprehensive to monitor rangeland health over time in the long run ADB, SFA and WCS consider that challenges of data deficiency need to be overcome before deploying a traceability system AVSF's record keeping system was reported to be a success. The system consists of certification reports; internal and external control systems; and follow-up processes up to the buyers GGHAP and UNDP are experimenting a traceability system that leverages digital technologies GGHAP's traceability system tied to ALMGAC and NAMEM data is in its advanced stage and already used by several corporate buyers on pilot basis 	 Develop a common vision for a traceability system (e.g. what information to be collected; who should manage the system once established for wider use; and for what purposes) Connect the data to the impact, leveraging ALMGAC and NAMEM data system Share best practices and lessons learned from the projects focusing on record keeping Leverage the traceability systems being produced by GGAHP and UNDP

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VII. Annexes

Annex 1 - List of interviewees

N	Name	Position	Organization	
1	Enkh-Amgalan Ts.	Project Manager	Green Gold and Animal Health Project (GGAHP)	
2	Sarangoo U.	Manager	AVSF, STeP EcoLab project	
3	Oyungerel D.	Executive Director	AVSF, Sustainable Cashmere Union	
4	Enkhjargal T.	Project Manager	Agriculture and Rural Development, ADB	
5	Khshigjargal Ts.	Fiber Specialist	Agriculture and Rural Development, ADB	
6	Batkhishig B.	Country Director	Sustainable Fibre Alliance (SFA)	
7	Altansul Ts.	Adviser	SFA	
8	Azjargal J.	Officer	SFA	
9	Enkhtuvshin Sh.	Country Director	Wildlife Conservation Society (WCS)	
10	Onon B.	Project Coordinator	WCS	
11	Altantsetseg G.	Executive Director	Mongolian Wool and Cashmere Association (MWCA)	
12	Yondonsambuu G.	Chairman	MWCA	
13	Amar	Engineer	MWCA	
14	Erdenetuya M.	General Director	Sor Cashmere	
15	Battsengel D.	Production Director	Sor Cashmere	
16	Ganbat B.	Chairman	Mongolian Wool Textile Association (MWTA)	
17	Enkhsaikhan D.	Manager	MWTA	
18	Bolormaa B.	Fiber Specialist	Light Industry Policy Implementation, Ministry of Food, Agriculture and Light Industry (MOFALI)	
19	Myagmarsuren J.	Director of Strategy Dept	Mongolian Commodity Exchange	
20	Altantsetseg R.	Head	Malchdiin Khamtiin Khuch Cooperative, Bat-Ulziit soum, Uvurkhangai aimag	

Annex 2 - Questionnaire

Introduction

Hello. My name is (withdrawn). I am a national consultant for the UNDP Sustainable Cashmere Project. I am working on the comparative analysis of sustainable cashmere projects in Mongolia. UNDP started a project called "Sustainable cashmere value chain business model in the eastern region of Mongolia" and one component of this project is to conduct a comparative analysis of sustainable cashmere projects. The findings from this analysis/study will be critical to engage in advocacy work to develop a common understanding of sustainable cashmere production in Mongolia among all stakeholders. We will share the results from this study with you and other stakeholders during our meeting scheduled in 2019. There is no right or wrong answer. In this interview, I will ask your project general information, project input, output and outcome. If required, we will keep information confidential. Our interview/discussion takes an hour to complete. If you have any question during the interview/discussion, please feel free to ask.

- 1. Project Overview
- 1.1. Can you please share your project goal and objectives?
 - 1. What is your project goal?
 - 2. What is (are) your project objective(s)?
- 1.2. Can you give us some general information about your project?

1. Project duration:
Project start:
Project end:
2. Geographic location of the project:
Aimag
Soums
3. Total land area covered:
(ha)
4. Total goat number of your collaborating herders (all livestock by species-if possible, if not then just goat #):
Goat; Sheep; Cattle/Yak; Horse; Camel
5. Total budget of the project (USD or MNT)

- 6. Who are your project beneficiaries? (how many of them?)
 - Type of beneficiary
 - Number of beneficiaries
 - Herder groups
 - Herder households involved
 - Cashmere processing factories
 - Government organizations
- 7. Who are your local project partners? (Explain the differences between beneficiary and partner to the interviewer especially when you are asking about cashmere processing factories)
 - Type of partners

- Name of the partner
- Local cashmere processing factories
- Buyers (including both local and international)
- Government organizations

2. Project Input

- 2.1. What kind of and how many trainings has your project organized to herders and herder organizations, government and local factory staff?
- 2.1.1. Number of trainings organized to herders/herder organizations toward sustainable pasture management:

Name of the trainings		# of trainings	# of participants (approx.)	When conducted (if possible)
1.Animal welfare	1.1. General animal welfare, e.g. warm protected place to stay			
	1.2. Other			
	2.1. Pasture management			
2. Environmental	2.2. Wildlife conservation			
management	2.3. Water management			
	2.4. Ecosystem diversity etc.			
	2.5. Other			
3. Livelihood	3.1. Alternative income			
improvement	generation			
	3.2. Other			
	4.1. Internal governance			
4. Herder group	4.2. Leadership development			
management	4.3. Young herders			
	4.4. Revolving fund, community fund			
	4.5. Other			

2.1.2. Number of trainings organized to herders/herder organizations: Herd management:

Name of the trainings	# of trainings organized	# of participants (approx.)	When conducted (if possible)
Breeding improvement			

Other	

2.1.3. Name and number of trainings organized to local/national government staff:

Training name	# of trainings organized	# of participants (if possible)	When conducted (if possible)

2.1.4. Name and number of trainings organized to cashmere factories:

Training name	# of trainings organized	# of participants (if possible)	When conducted (if possible)

2.2. What kind of linkage support have you organized for your beneficiaries?

Linkage type	Please mark √ in the sheet	# of beneficiaries received (if possible)
Access to bank		
Access to buyers		
Access to factories		
Access to government support/program		
Others		

- 2.3. What kind of advocacy have you organized with government organizations?
 - Type of advocacy work
 - Organizations collaborated with (local or national government or other)
- 2.4. Has your project team developed a code of practice?

□ Yes □ No

If yes what type of code of practice has your project team developed?

Со	de of practice	Please mark √
1.	Rangeland stewardship	
2.	Animal welfare (health and breeding) and stress-free cashmere harvesting	

3.	Sustainable water management	
4.	Wildlife conservation (wildlife friendly production)	
5.	Others	

2.5. Has your project team developed cashmere product traceability?

☐ Yes

□No

☐ We are planning to do

☐ We are collaborating with organizations (name)

3. Project Output

Output		Number
1.	Number of new herder organizations established	
2.	Access to linkage obtained	
3.	Premium price obtained (by additional MNT in approx.)	
4.	# of herder organizations received sustainable cashmere certificate	
5.	# of codes of practices completed (published/printed) and in use	
6.	Amount of sustainable produced cashmere (tons)	

4. Project Outcome

What are your project outcomes?

Areas/Components	Expected outcomes
Rangeland condition	E.g. areas of land /ha/ rested or rotated, pasture carrying capacity, etc.
Livestock quality	
Cashmere quality	
Herder groups	
Others	

Annex 3 - National Cashmere Programme 2018-2021

The Cashmere Programme (2018-2021)

1. General Information

1.1. Legal Basis for Programme Development

According to 2.1.3 of the "Sustainable Development Concept of Mongolia-2030", Phase I of Industrial Development (2016-2020) said, "The total manufacturing output will be 15 percent and upgrade the agricultural commodity exchange network, develop 60% of complete processing of raw materials such as hides, skins, wool and cashmere to develop productive clusters of export-oriented processing technologies based on advanced technology." The Government's Action Plan 2016-2020 "Implementing a flexible long-term investment and financial policy in light industry, light and small and medium enterprises and cooperatives." The cashmere programme was re-developed on 2.1.10 of the Economic Restoration Programme approved by the State *Ikh Hural* Resolution 71.

1.2. Situation and Challenges

Following the implementation of the Cashmere Programme approved in 2000-2004, the Government of Mongolia adopted the cashmere programme in 2000-2004. As a result, the production and export of finished cashmere products increased rapidly and contributed significantly to the economic and social development of the time.

According to the National Statistical Office of Mongolia in the year 2017, 12 percent of the total stock of cashmere is comprised of 2.3 percent of the manufacturing industry, 7 percent of the manufacturing and 55 percent of light industry. In 2017, 5409.7 tons of washed cashmere, 571.4 tons of combed cashmere and 915.6 thousand pieces of knitwear were manufactured. Ninety percent of the total raw material reserve was processed by primary processing, 10% of the finished goods such as textiles were produced and exported domestically. Given the loss of animal health and livestock gene pool policy, herders are concerned about the decrease in the quality of raw materials and the loss of livestock from the livestock herd, rather than the quality of livestock, as well as the findings from international research institutes and scientists in this field. The herders are increasing their number of goats and maximizing quantity of raw materials from one goat. The cashmere fibers micron become larger and this is the main reason for the quality of the products and the reduction of production efficiency.

During the raw material preparation season or in the months of March and April of the whole year, cashmere traders are in short supply of raw material purchases, while foreign traders go to our country to buy good quality raw materials with cash, pay very little taxes and export raw materials without export tax. Over 80 percent is still exported without any cost and washed. As a result, domestic factories use raw material depletion and use only 40-60 percent of its installed capacity, which can affect employees' salaries, and the number of students in the industry is likely to decrease year by year. Today, there are more than 3,000 engineers and technical specialists in the cashmere industry, but in the last five years the average number of engineers is 40-50.

The Cashmere Programme was developed to support the above-mentioned issues. In addition, to develop cashmere production techniques and technology, to increase the type and production of final products and support exports.

- 2. The goals and objectives of the programme
- 2.1. The objective of this programme is to increase the level of full processing capacity of cashmere to 60 percent, to increase production and export of environmentally friendly products and to increase the competitiveness of cashmere products internationally.
- 2.2. The objectives of the programme are as follows:
- 2.2.1. Create favorable legal, investment, tax environment for the production and export of finished goods;
- 2.2.2. Improve goat breeds and raw materials and improve quality of cashmere;

- 2.2.3. Stepping on the whole processing level of cashmere, increasing production and export of finished products;
- 2.2.4. Introduce eco-friendly advanced techniques and technologies into production, develop product-friendly and competitive products focused on target markets;
- 2.2.5. To increase productivity through training and human resources based on demand and human resources.
- 3. Programme implementation phase
- 3.1. The programme will be implemented in four stages:
- 3.1.1. First phase: To increase production and export by 40% of total raw material in 2018-2019, to improve legislation on cashmere production and trade, and to provide financial support to enterprises, promotion of clusters, brand awareness, improved quality of raw materials and preparation.
- 3.1.2. Phase 2: In 2020-2021, 60% of total raw material will be sourced from domestic production needs and fully developed and will improve the productivity of export-oriented processing based on leading and advanced technology.
- 4. Measures to be taken

The following measures shall be taken in the scope of the programme:

- 4.1. Within the scope of the programme 2.2.1:
- 4.1.1. Develop an investment fund to finance the working capital to increase the production and export of finished cashmere products and create a legal environment for establishing a permanent source of up to MNT 500 billion;
- 4.1.2. Drafting a law on amendments to the Law on Licensing of Business Entities for the control of primary cashmere processing by the state and private sector;
- 4.1.3. Development of a draft amendment to the Value-Added Tax Law on cooperatives for each stage of preparation and processing of cashmere;
- 4.1.4. Develop comprehensive marketing and marketing measures, and take comprehensive measures to facilitate and facilitate foreign trade;
- 4.1.5. To study and support the import of production equipment, tools, chemicals and other auxiliary materials by tax policy;
- 4.1.6. To study and resolve tariff and non-tariff restrictions on the reduction of washed cashmere exports;
- 4.1.7. Take measures to provide long-term loan support for working capital and concessional terms of at least 3 years, depending on the level of processing and cost of processing;
- 4.1.8. Study and resolve issue-based incentives for herders who classify cashmere and submit to the factory a quality incentive.
- 4.2. Within the scope of the programme 2.2.2:
- 4.2.1. To develop and implement proposals and projects on the determination of optimal herd composition to prevent from pasture depletion, goat breeds, strains, distribution and cashmere properties
- 4.2.2. To test and prepare the system for the preparation and classification of cashmere;
- 4.2.3. Organize hierarchical training on herders and herder organizations in cooperation with business entities and non-governmental organizations;
- 4.2.4. Take measures to increase the involvement of herders and producers in the trading of raw materials in the agricultural sector;
- 4.2.5. Implement projects and programmes involving herders on pasture protection, rehabilitation, reforestation, irrigation and hay fodder to sustain raw materials preparation;

- 4.2.6. Introduce advanced techniques and technologies to eliminate dandruff and other impurities without damaging cashmere fibers during the development of raw materials and livestock products.
- 4.3. Within the scope of the programme 2.2.3:
- 4.3.1. Establish spinning plant with private investment and increase its capacity;
- 4.3.2. The small and medium enterprises of knitwear, small and medium enterprises will be registered in the cluster organization and will be responsible for conducting sales of yarn, auxiliary materials, uniform design and sales activities in the field of professional communication;
- 4.3.3. Introduce research and innovation to industry for the development of new product and consumer products that meet the requirements of human health, environment, quality and safety standards;
- 4.3.4. Contracting cashmere, quality, standards, technology training, trade fair, technology transfer and other services by professional association, and evaluating results annually to report to producers and herders.
- 4.4. Within the scope of the programme 2.2.4:
- 4.4.1 Establish a database of cashmere consumer demand trends and systematically support international and domestic market surveys;
- 4.4.2. To develop and market the Mongolian Noble Fibre brand based on the color and advantage of Mongolian cashmere;
- 4.4.3. Introduce new and advanced technology to produce and increase the production of organic products that meet the international quality and safety standards;
- 4.4.4. To participate in and organize the target fairs and business forums for the promotion of cashmere products on international markets;
- 4.4.5. Strengthen the testing laboratories of the Light Industry Research and Development Institute and strengthen the research laboratories and take steps to bring them to the level of international level testing;
- 4.4.6. Support the development of textile industry through parks and clusters by registering production and trade of cashmere value chain.
- 4.4.7. Renew the required technology by certifying cashmere industry every 3 years.
- 4.5. Within the scope of the programme 2.2.5:
- 4.5.1. To implement the needs of skilled staff of the sector for 4 years and implement a short and long-term curriculum for demand;
- 4.5.2. To study and resolve problems in the field of engineering technology and equipment manufacturing;
- 4.5.3. Implementing the state and private sector trainings on advanced training of foreign and national universities and colleges;
- 4.5.4. To study international techniques and technologies in the form of exchange of experts with similar industries in the field;
- 4.5.5 Create a database of skilled workers and improve the public-private partnership; and
- 4.5.6. Strengthen the public awareness of the peculiarities and achievements of the cashmere industry and the progress of the programme and its implementation.
- 5. Programme impact and indicators: The following results will be achieved through the implementation of the programme:

- 5.1. During the life of the programme, the tax and financial support of the final product producer will result in a complete processing of raw materials to 60 percent.
- 5.2. Spinning of spinning wire 3-3.5 times.
- 5.3 Improved conditions for soft loans and investment support for the cashmere sector have improved.
- 5.4. The Mongolian Noble Fibre quality environmentally friendly and competent products were certified and introduced to the domestic and foreign markets.
- 5.5. An internationally recognized Institute of Testing and Research.
- 5.6. The type of professional association services has increased.
- 5.7. By implementing the programme, more than 5,000 jobs were created in the cashmere sector and more than 3,600 new jobs were created and production and exports of finished products increased by 5.7 times.
- 5.8. The implementation of the programme will be evaluated by the following criteria. (Baseline statistics for 2017 will be considered basically).

No.	Specification	Unit of measurement	Base level (2017)	Target Level (2021)
1.	Export of washed cashmere	Tons	5409.7	2632
2.	Exports of fine cashmere	Tons	571.4	1579
3.	Manufacture of knitted products	Thousand	915.6	2200
4.	Number of jobs (permanent)	Person	5582	9110

Note: Estimating target exports of washed cashmere is based on the level of raw material preparation for 2017 by 20100 tons and 40% of raw material, or 3760 tons of cashmere, 70%.

- 6. Programme management and organization
- 6.1. The state central administrative body in charge of agriculture and light industry shall be responsible for organizing, coordinating and monitoring the implementation of the programme at the national level.
- 7. Source of funding to implement the programme:
- 7.1. Foreign and domestic investment;
- 7.2. State and local budgets;
- 7.3. Foreign loans and grants;
- 7.4. External and internal government securities;
- 7.5. Other sources.
- 8. Programme monitoring and evaluation
- 8.1. The state central administrative body in charge of agriculture and light industry shall monitor and evaluate the implementation of the national programme in accordance with Article 10.7 of the Law on Development Policy Planning.
- 8.2. Monitoring and Evaluation will be conducted in accordance with paragraph 7.5 of the General Procedure for the Implementation of Policy Papers and General Procedures for Monitoring and Evaluation of Administrative Procedures adopted by the Government of Mongolia in 2017. The process and outcome

shall be dealt with in agriculture and light industry The State Administrative Central Organization shall present to the Government.

8.3. Based on the ongoing and final conclusions and recommendations of the monitoring and evaluation programme, the central government agencies and the Governor's Office of Aimag and Capital City will intensify, amend, and take necessary measures.