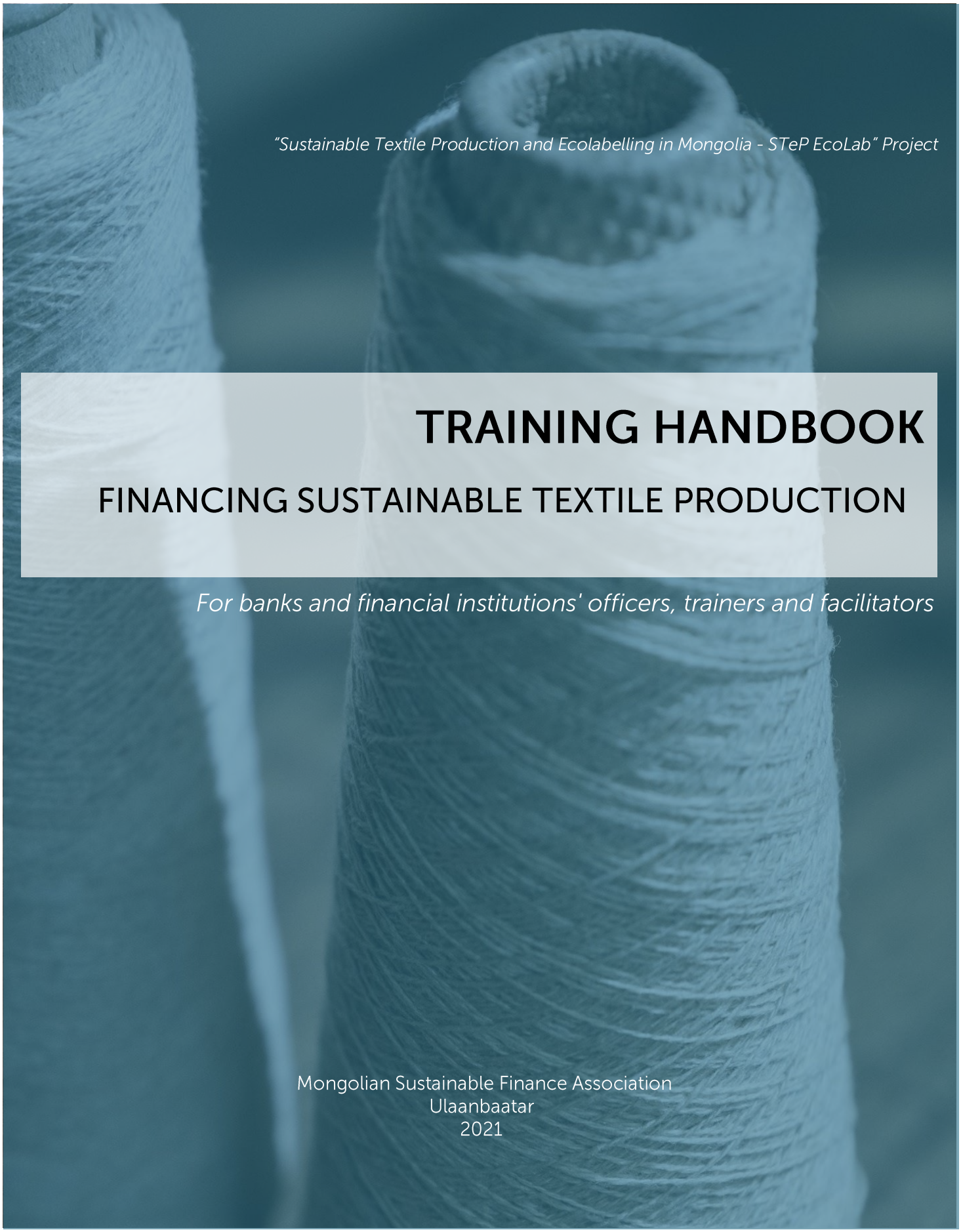

"Sustainable Textile Production and Ecolabelling in Mongolia - STeP EcoLab" Project

TRAINING HANDBOOK

FINANCING SUSTAINABLE TEXTILE PRODUCTION

For banks and financial institutions' officers, trainers and facilitators

Mongolian Sustainable Finance Association
Ulaanbaatar
2021

CONTENTS

LIST OF GRAPHS, FIGURES, AND TABLES

ABBREVIATIONS

AVSF	Agronomes et Vétérinaires Sans Frontières
EE	Energy Efficiency
ESG	Environmental, Social and Governance
ESIA	Environmental and social impact assessment
MOFALI	Ministry of Food, Agriculture, and Light Industry
MSFA	Mongolian Sustainable Finance Association
MWCA	Mongolian Wool and Cashmere Association
NDC	Nationally Determined Contribution under the Paris Agreement
NFPUG	National Federation of Pasture Users Group
SDGs	Sustainable Development Goals
SME	Small and Medium Enterprises
STeP EcoLab	The Sustainable Textile Production and Ecolabelling in Mongolia Project
VCP	Voluntary Codes of Practices

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About the Project

The Sustainable Textile Production and Ecolabelling in Mongolia (STeP EcoLab) Project is being implemented by Agronomes et Vétérinaires Sans Frontières (AVSF Mongolia) in partnership with the Collaborating Centre for Sustainable Consumption and Production (CSCP, Germany), Mongolian Wool and Cashmere Association (MWCA), Environment and Security Center of Mongolia (ESCM, Mongolia), National Federation of Pasture Users Group (NFPUG), Mongolian Sustainable Finance Association (MSFA) and the Mongolian Bankers Association (MBA). Within four years, STeP EcoLab, funded by the European Union under SWITCH-Asia II Programme, aims to support the Mongolian wool and cashmere industries to implement sustainable practices in their production lines.

The project aims to support the supply chain and the textile industry in adopting more sustainable sourcing and production practices, and simultaneously improve the branding for sustainable products, optimise cost-saving measures, reach out to climate and green finance, and diversify the portfolio of customers. STeP EcoLab will strive to leverage key drivers of sustainable consumption and production in Mongolia by consolidating sustainable and certified raw material sourcing options meeting market expectations; developing a conducive environment for textile processing SMEs to switch to sustainable production practices; and raising customer and consumer awareness of Mongolian sustainable textile-related initiatives.

Scope and objective of the training handbook

The training modules are developed to equipfinancial institutions (FIs)' employees with theoretical and practical knowledge on sustainable textile production and its green financing.

The training is tailored towards sustainable finance/green banking specialists, trainers of relationship managers, relationship managers/ loan specialists, business, and product development specialists and corporate or small and medium enterprise (SMEs) banking specialists. As a result of the training, the participants will have gained specific insight into the Mongolian textile industry and will be able to apply sectoral knowledge and sustainable production concepts to identify and evaluate green projects, and develop green loan products.

The general objectives of the training is to advance the knowledge and skills of employees of FIs in the following modules:

- Conduct environmental, social and governance (ESG) risk assessment for textile sector clients and projects
- Identify green textile machinery and equipment
- Recognize international and domestic sustainable textile certifications
- Develop loan products according to the textile sector-specific green loan criteria

MODULE 1.

SUSTAINABLE TEXTILE SECTOR AND FINANCE

Overview

The agricultural sector accounts for approximately 10% of Mongolia's total exports, of which 65% are textile exports. While most sectors declined in 2020 due to the effects of the COVID-19 pandemic, the agricultural sector grew by 14%. The textile sector is therefore considered one of the main export sectors of our country, as it is characterized by relatively low volatility, stable growth, and is one of the inexhaustible resources on the ground.

However, there is a risk of adverse environmental and climatic changes due to overgrazing and ecological imbalances. This module introduces methods to assess and mitigate potential risks, align with sustainable cashmere objectives and targets in global and national development policies, and provides practical knowledge on how to integrate sustainability concepts in textile industrial processes, value chains, as well as financing opportunities for sustainable textile production.

Furthermore, this module introduces the relevant stakeholders that FIs need to know to develop textile green loan products, to accurately evaluate the demand for green finance, the risks that may arise, and future opportunities in the sector.

Featured topics:

- Current situation of Mongolia's textile industry
- What is sustainable textile production?
- Problems in the cashmere supply chain
- Initiatives to establish sustainability practices in the cashmere value chain
- Financial needs and opportunities
- Stakeholders and funding opportunities

1.1 Sectoral overview

The modern development of Mongolia's light industry has been developing since the establishment of the felt and felt products factory in 1934. In 1981, the Gobi company, a state-funded Japanese company, was established with the help of the United Nations and began processing Mongolian cashmere. Since their privatization in the 1990s, the private sector textile industry has developed rapidly. Today, almost half of the 670 enterprises operating in the light industry sector are in the textile sector.

The majority of Mongolian textile industry is comprised of wool and cashmere processing. Currently[1], there are about 300 large, medium, and smaller-scale textile companies in the sector, namely 15 are fully integrated manufacturers, 23 are primary processors, 59 are spinning and knitting SMEs, and over 150 are family-scale micro-enterprises (MWCA, 2020).

Globally, Mongolia is the second largest raw cashmere supplier after China. The Government of Mongolia has been paying attention to the development of the cashmere industry since 2000, considering that it has a significant impact as an economically valuable commodity after copper and gold. In 2018, the **National Cashmere Program** was renewed to increase the level of cashmere processing to 60 percent, increase environmentally friendly production and exports, and create sustainable development in the sector.[2]

Key sector policies related to textile sector development, sustainable development, and climate change action include:

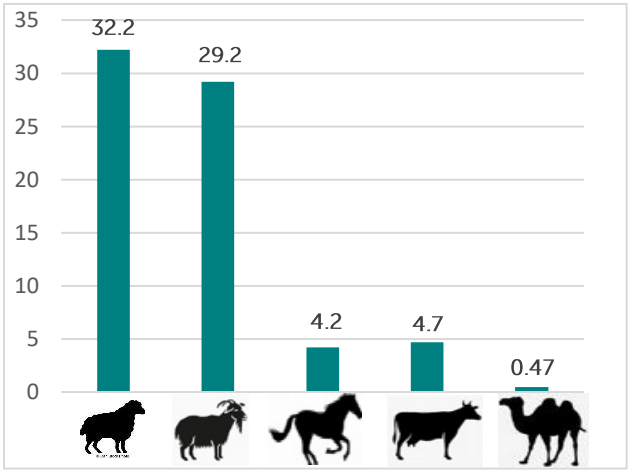
- Nationally Determined Contribution (NDC) under the Paris Agreement (2016-2030), 2016
- Vision 2050/Mongolia's sustainable development vision, Action Plan (2016-2030), 2016
- UN Sustainable Development Goals (SDGs)
- Mongolian Green Development Policy (2014-2030), 2014
- National Livestock Program: Phase II (2016-2021), 2016
- Cashmere Program (2018-2021), 2018
- State Policy on Energy (2015-2030), 2015
- National Energy Efficiency Action Programme (2018-2022), 2017
- National Sustainable Finance Roadmap of Mongolia, 2018
- National Program on Reduction of Air and Environmental Pollution, 2017
- National Water Programme (2010-2015, 2016-2021)

The wool and cashmere sector is a sub-sector of the textile sector and is closely linked to the Mongolian economy, ecology and society, combined with the Mongolian way of life and traditional nomadic lifestyle of livestock management.

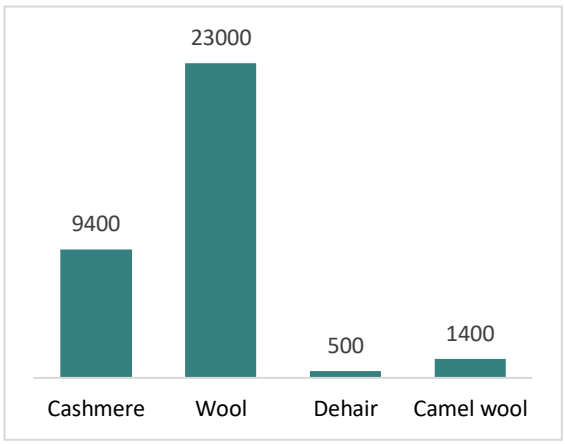
[1] http://www.mongoltextile.mn/web/nav/79

[2] Cashmere Program (2018-2021). https://mofa.gov.mn/exp/ckfinder/userfiles/files/tosol27.pdf

Graph 1: Livestock population (in millions)



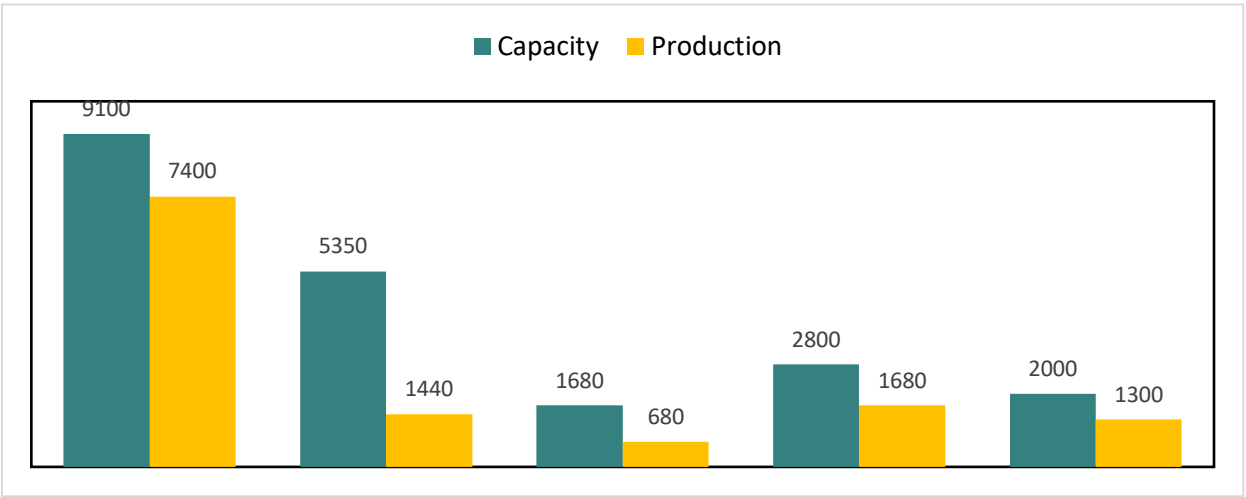
Graph 2: Production of raw materials, 2019 (tons)



Source 1. National Statistics Office of Mongolia

Our country's raw material production totals35,000 tons of wool and animal fiber. Of which, 9,400 tons is cashmere production.

Graph 3. Installed capacity and production (tons), 2018



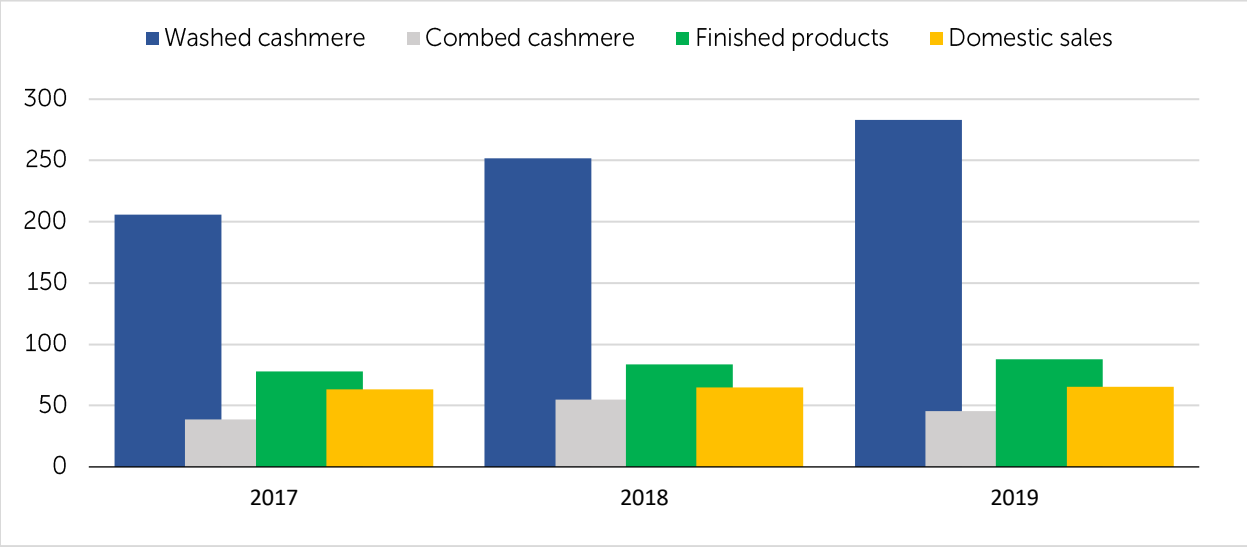
Source 2. MOFALI

Factories suitable for investment:

- Those with installed capacity of 25-83%; the reason they're not producing at full capacity is due to their export of washed cashmere.
- The installed capacity of the spinning mill is 2.8 times less than that of knitting. To spin all the cashmere, an additional 2550 tons of spinning capacity needs to be installed.

- Only 1/7 of the total raw material, except sheep wool, can be processed at the current installed weaving capacity.

Graph 4. Mongolian cashmere sales revenue (million USD)



Source 3. MOFALI

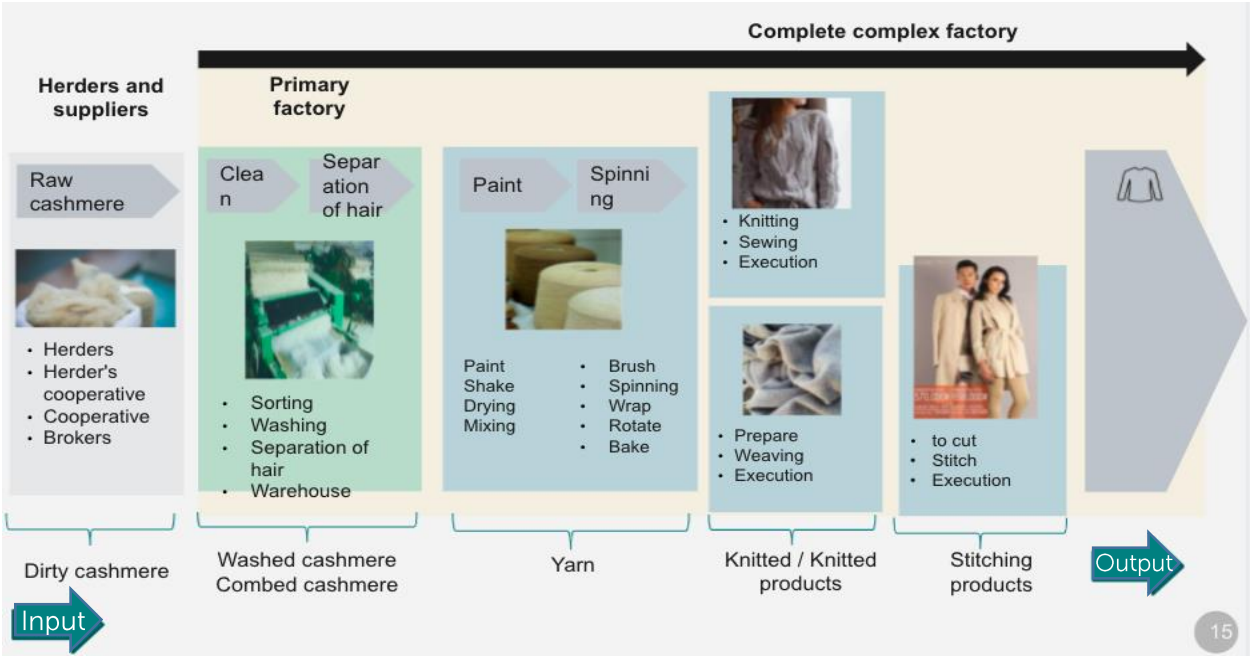
Mongolian cashmere revenue has been increasing year by year, however exports of finished products and domestic sales have not grown significantly in the last three years (see *Graph 1*) (MOFALI, 2019).

- **Mongolia** produces 40% of the world's cashmere and is the **second-largest producer** of cashmere in the world after China (24 thousand tons worldwide)
- In Mongolia, 80% of the total raw materials that are not able to absorb value and produce finished products are semi-processed and exported
- Total cashmere sales were US$ 482 million (2019), of which **washed cashmere accounted for 60%**
- If 50% of the exported washed cashmere is exported after it's processed into sweaters, export revenue could increase between US$ 472 million to US$ 954 million

Cashmere is a rare natural raw material and is known worldwide for its light, soft and heat-retaining properties and is in high demand. Wool and cashmere are natural fibers of animal origin, which may make the relationship between the product and the measure of sustainability clearer to consumers than other product categories, and thus create the emotional connection associated with it.

Figure 1. Wool and cashmere supply chain

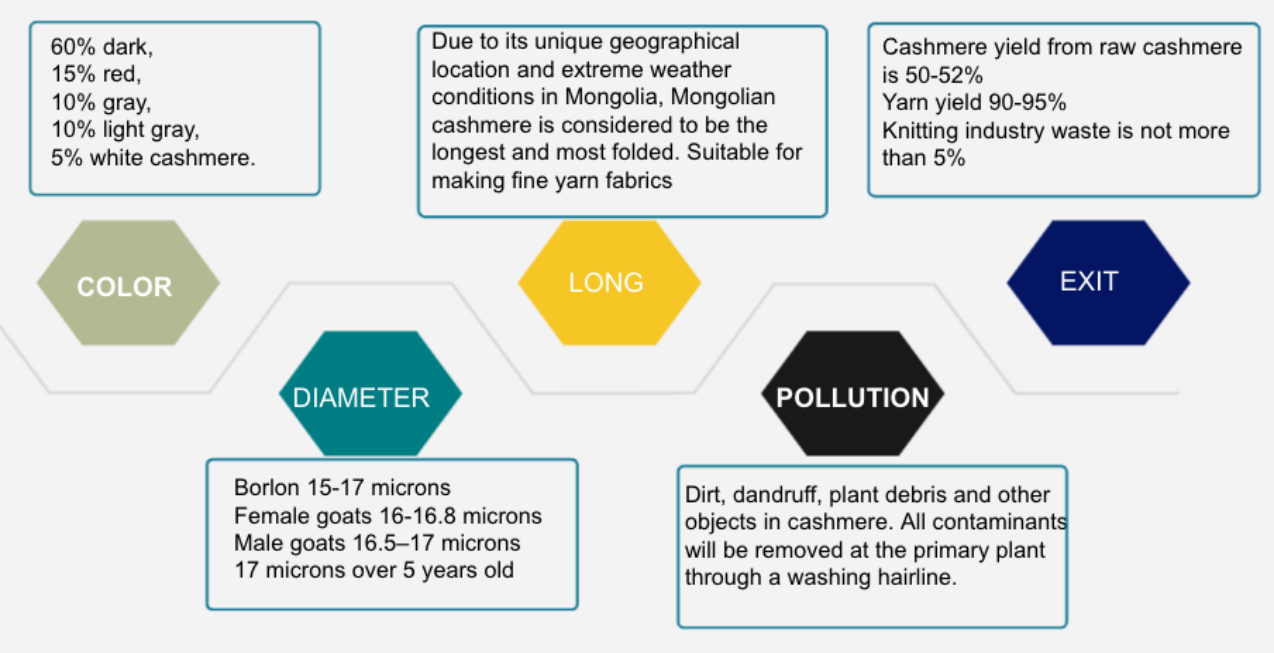
Figure 2.Cashmere value chain



There are four players: herders, herder cooperatives, processing plants, transportation logistics, and brands or shops. (**Figure 2**).

A simple button-down T-shirt undergoes 27 different technological steps to become a final product. .

Figure 3. Characteristics of Mongolian cashmere



- The following features make the Mongolian cashmere more attractive to foreign producers: Suitable for making fine yarn and fabric because of its length
- There are many types of cashmere depending on natural and climate characteristics of different geographic regions within Mongolia.

1.2 What is sustainable textile production?

The textile industry emitted 1.2 billion CO_2 in 2015 which is 21 times more than the emission of air and water transport globally. In addition, 20% of the world's wastewater comes from the textile industry. Annually, 0.5 million tons of synthetic fibers are dumped into the sea, and 2,000 tons of toxic chemical dyes penetrate the soil in the European Union, while only 1% of all clothing is recycled.

Since the traditional textile industry is a huge environmental polluter, the main way to support environmentally friendly and socially responsible textile production is to introduce all kinds of incentives, fines and taxes to reduce environmental damage through government policy and regulations. On the other hand, financial requirements can have the same compliance effects in lieu of policy enforcement, and green investment and technology support are essential to promote sustainable textile production and reduce greenhouse gas emissions.

Sustainable textile production **enables the following opportunities for producers**

- Upgrade company's operations without compromising product quality
- Current requirements for manufacturers are to produce products that are consumer and environmentally friendly and to sustain the company operations.
- Support the achievement of many of climate change commitments and sustainable development goals (SDGs)

Therefore, the textile industry and businesses need to implement a sustainability strategy and practices to:

- *Reduce supply chain risk*
- *Increase the business reputation among brands and consumers*
- *Enter new markets*
- *Reduce cost efficiency*
- *Furthermore, it is possible to benefit from advantages such as managing future risks that are not covered by current laws and regulations.*

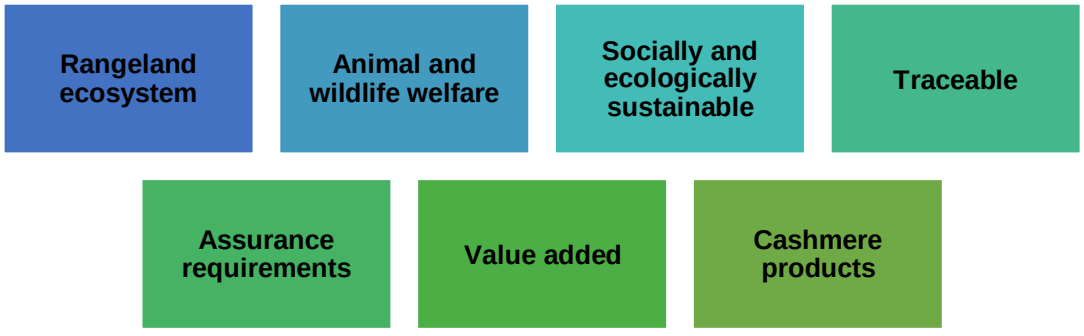
Definition of Mongolian sustainable cashmere product:

"Mongolian sustainable cashmere products are value added products sourced from the pastoral herding communities who support rangeland ecosystem health and animal welfare and wildlife habitat, and processed in line with the social and environmental assurance requirements."

– Sustainability technical working group, Mongolian Sustainable Cashmere Platform, UNDP in Mongolia (2020)

Principles mentioned in the definition:

Figure 4. Principles of Mongolian sustainable cashmere



1.3 Sustainability issues in the cashmere supply chain

Global warming

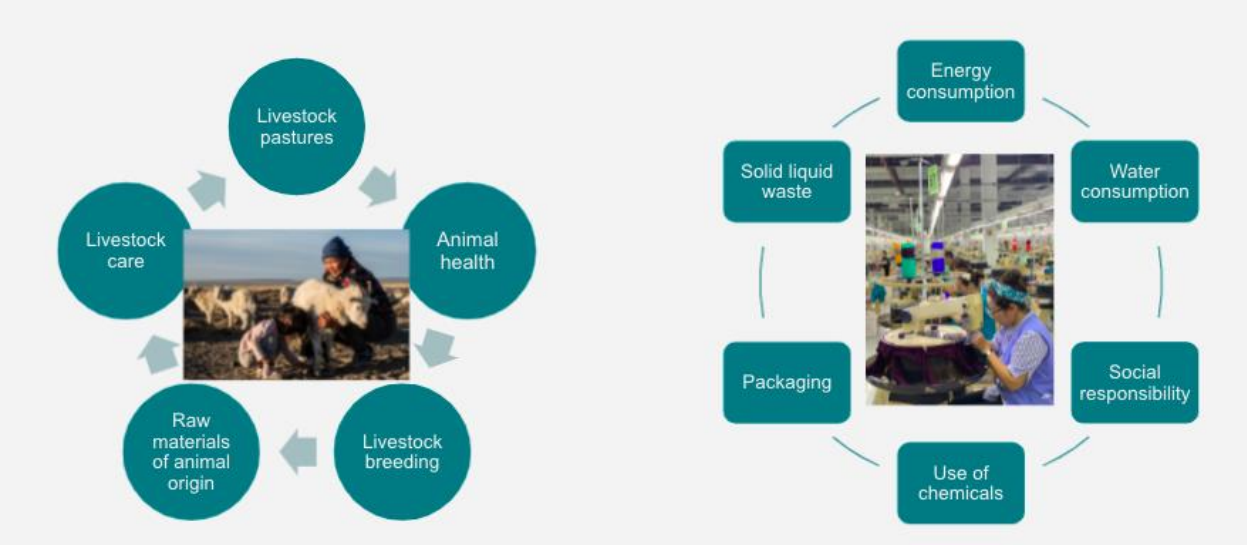
Climate change is causing global warming, desertification, wildfires, water shortages, and declining agricultural output, and is causing immeasurable damage and impact in every corner of the globe (IPCC, 2019). This is due to the rapid economic, social and industrial development created by humankind in the last century, and is likely to cause significant damage to the ecosystem that is the basis of our future development and existence.

A clear example of this is **pasture/rangeland degradation**, where about 70 percent of pastureland is degraded (GoM, 2016). Environmental issues are exacerbated by human activities associated with increased production. As the raw materials for wool and cashmere products come from livestock, the agricultural sector is highly dependent on the textile sector in Mongolia. Systemic changes are needed to sustain pastureland and support local SMEs in the textile sector. SMEs engaged in wool and cashmere processing face some challenges in supporting environmentally friendly production and adding value to their products.

Social and environmental issues in the textile industry

The main challenges for SMEs in the cashmere and wool sector are the companies' **lack of technical and financial capacity** , lack of national standards for sustainability, lack of certification, and a weak legal framework to support sustainable producers. Furthermore, **high consumption of disposable plastic packaging, a lack of quality control infrastructure to determine chemical residues in final products, outdated methods of industrial wastewater treatment and sludge removal, and a lack of advanced water and energy efficient technologies** have led to **unsustainable production in the textile industry**. Thus, the need for green loans and green financing is essential for the introduction of sustainable production in the textile sector.

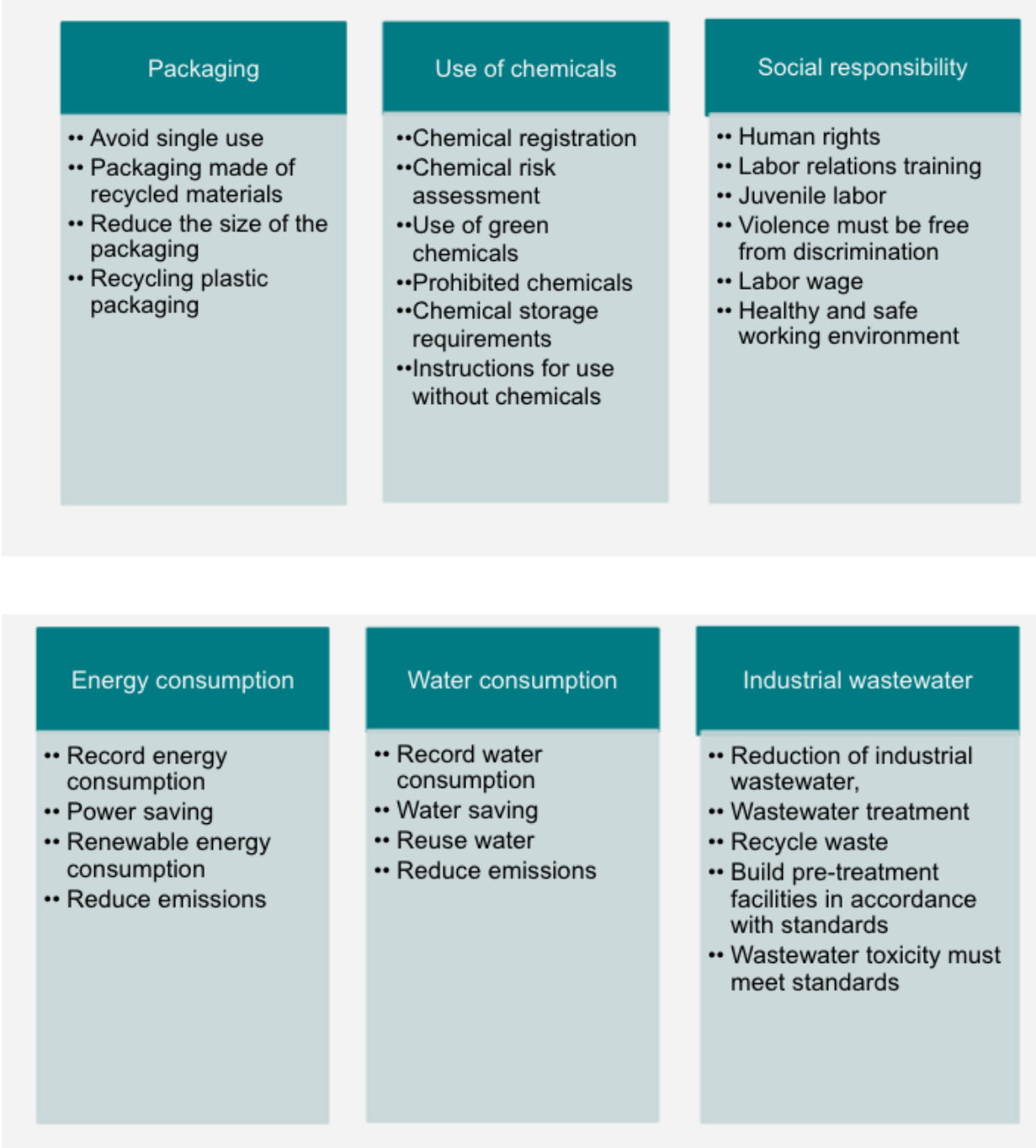
Figure 5. Sustainability criteria for wool and cashmere supply chain



MNS 6891:2020
Responsible Nomads – Codes of practices

Sustainable textile production - Voluntary Codes of practices

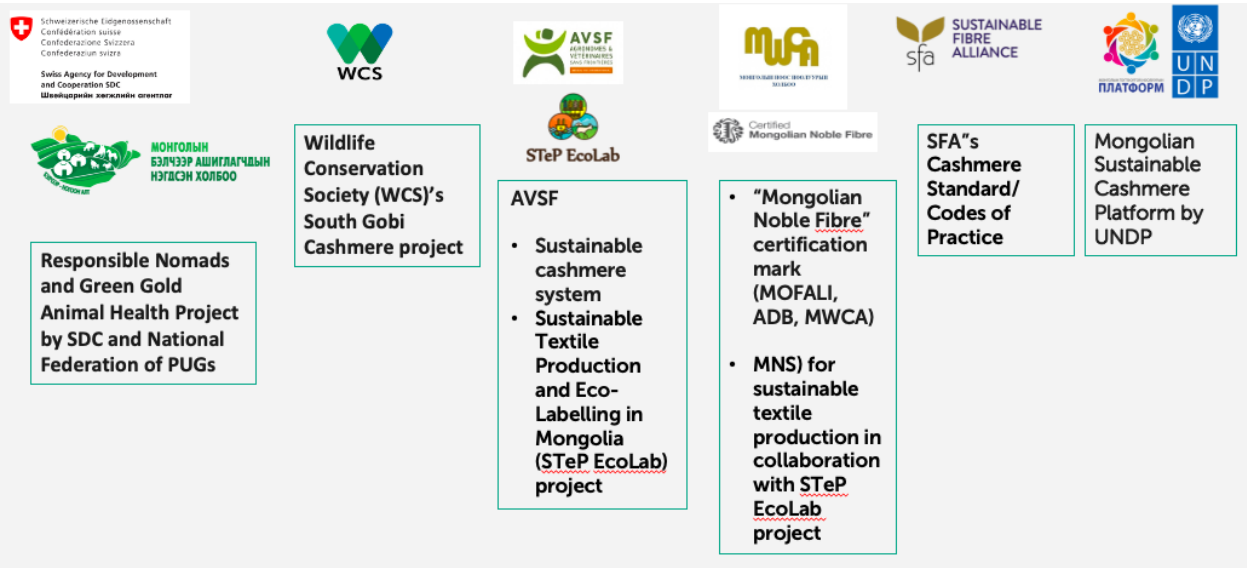
Figure 6. Criteria of Voluntary Codes of Practices for sustainable textile production



1.4 Initiatives to introduce sustainability practices in the cashmere value chain

Several initiatives, projects, and programs have been implemented to embed sustainability into the Mongolian cashmere sector and value chain (**Figure 7**).

Figure 7. Sustainable cashmere iniatives in Mongolia



"Sustainable Textile Production and Eco-Labels - STeP EcoLab" project (2018-2022)

Objective: The project aims to create environmentally sustainable production and consumption in the textile sector of Mongolia.

Activities: To increase green loan supply to the textile sector, under the STeP EcoLab project, MSFA has carried out the following activities.

- *Green finance market demand of small and medium textile enterprises in Mongolia*
- *Sustainable Finance Guidelines for the Textile Industry (for banks and FIs)*
- *Textile sector environmental, social, and governance (ESG) risk assessment (for banks and FIs)*
- *Textile sector-specific green loan criteria guide*
- *Training handbook on financing sustainable textile production*

Activities planned in 2021:

- *Technical assistance and consulting services to connect the wool and cashmere industry to potential green funding sources*
- *Development of roadmap of domestic and foreign investors who can provide green funding for sustainable wool and cashmere factories*
- *Training for textile companies on green projects and business plan*

1.5 Financial needs and opportunities

In addition to the above, there is a lack of financial support for SMEs in the wool and cashmere sector. The study on "Green finance market demand of textile SMEs in Mongolia" estimates that the potential green financing for Mongolian textile producers is estimated at MNT 75 million. To achieve the national cashmere target of increasing the output of textile products by 2,200,000 units by 2021, the total green market demand equals to MNT 576 billion. Therefore, the financial role of local banks is important in supporting a more sustainable economic transition by financing sustainable textile projects.

The main challenge to the competitiveness of Mongolian wool and cashmere SMEs is access to finance, which covers the following four areas:

1) *Insufficient loan proposals that do not meet the financial needs of SMEs*
2) *High collateral requirements*
3) *Complex administrative process*
4) *Limited understanding of finance*

Module 1. Teamwork and discussion #1

Topic: Identifying environmental, social, and economic hotspots in the cashmere supply chain

Duration:

15 min (10 min team discussion, 5 presentation)

Instructions:

- Introduction of team members
- List the environmental, social, and economic issues in the textile or cashmere supply chain within a given type of production (e,g herder groups, primary processing, integrated companies).
- Identify hotspots or rank the high impacts
- Appoint a presenter
- Present a teamwork for 1-2 minutes

Team 1, 2: Herders and suppliers

Team 3,4: Primary processing plants

Team 5, 6: Integrated companies

Environmental issues	Social issues	Economic issues
…	…	…

Please rank three issues which have the highest hotspots for the production stage.

1. _____
2. _____
3. _____

Module 2. Teamwork and discussion #2

Topic: Creating long-term financing opportunities for stakeholders

Question: What will stakeholders (representing the allocated party) need to do in order to attract sustainable green finance in the long-term?

Duration

20 min (15 min team discussion, 5 min presentation)

Instructions:

- Discuss the role of the designated stakeholders in the textile sector
- Discuss what actions a given stakeholder can take to attract sustainable green funding in the long run. (Task 2 Write on a shared document)
- Appoint a presenter
- Present a teamwork for 1-2 minutes

Stakeholder representation of teams

Team 1: The Central Bank of Mongolia (Financial Regulators)

Team 2: Commercial banks

Team 3: Mongolian Sustainable Finance Association

Team 4: Government agencies and ministries

Team 5: International FIs and development organizations

Team 6: Other FIs (insurance and loan guarantee fund)

MODULE 2.

TEXTILE SECTOR ENVIRONMENTAL, SOCIAL AND GOVERNANCE RISK MANAGEMENT

Overview

Assessing environmental, social and governance (ESG) risks of the textile sector would promote environmentally and socially friendly production by increasing value-added products using green technology, which in turn will increase the cost of export products and reduce the negative impact on the environment and society.

In this module, we will learn the significance of ESG assessment in the different stages of production and get familiar with national and international textile sector standards. Moreover, this module provides practical tools such as Responsible nomads raw material traceability system and ESG risk assessment tool for FIs.

Featured topics:

- Environment and social impact assessment of the textile processing production compared to the international textile standards.
- Sustainable finance guidance for the textile sector
- Textile sector ESG risk assessment tool
- International sustainable textile certificate and green label
- Mongolian sustainable certification for the wool and cashmere sector

2.1 International sustainable textile certificate and green label

In the following, the most prestigious international and domestic textile production certificate, and volunteer codes of practices (VCP) are elaborated.

Name	Sustainability Criteria: Environm.	Sustainability Criteria: Social	Website
Blauer Engel - Textiles	✓	✓	https://www.blauer-engel.de/en
Bluedesign	✓		www.bluesign.com
Fair Wear Foundation		✓	www.fairwear.org
Global Organic Standard (GOTS)	✓	✓	https://www.global-standard.org
Naturtextil iVN certified BEST	✓	✓	www.naturtextil.de
OEKO-TEX Made in Green	✓	✓	www.oeko-tex.com
SA8000		✓	www.sa-intl.org/
Cradle to Cradle	✓		www.c2ccertified.org/
World Fair Trade Organization		✓	wfto.com

Benefits:

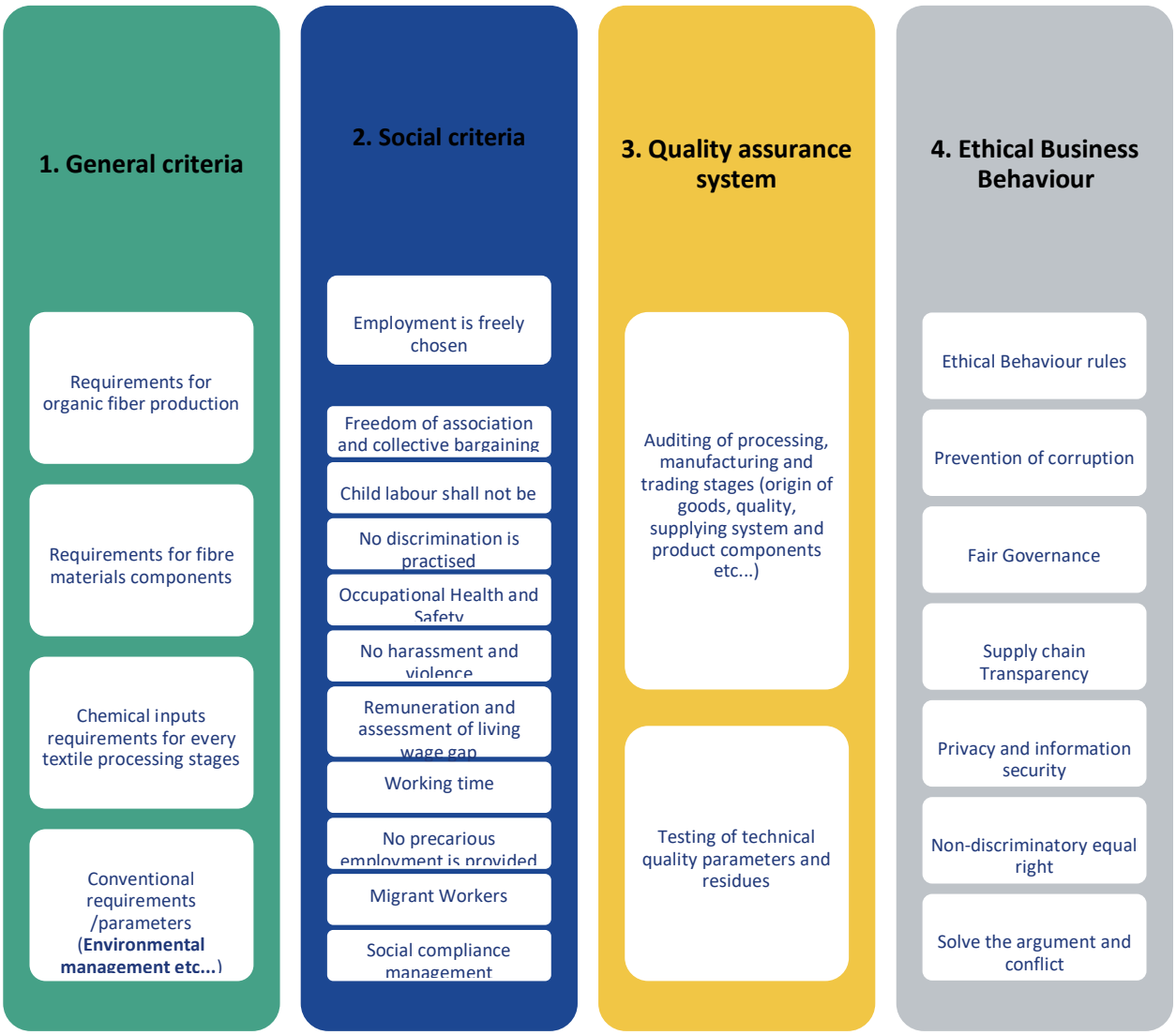
- ✓ Implement efficient operations to reduce the negative impacts on environment, society and economy
- ✓ Reduce potential risks that would occur
- ✓ Increase the reputation among brands and public
- ✓ Increase the opportunity to attract investors and new consumers who support the sustainable business
- ✓ Increase the share of the market and sustain product value
- ✓ Lead/pioner the market as a sustainability producer

The most well-known sustainability certifications in the textile sector

Global organic textile standard

Global organic textile standard (GOTS)[3] aims to define requirements to ensure organic status of textiles, starting from harvesting of raw materials, through labeling environmentally and socially responsible manufacturing in order to provide a credible assurance to the end consumer.

Figure 8. Criteria of GOTS



Source 4. GOTS

The standard covers processing, manufacturing, packing, labeling, trading and distribution of all textile production sourcing at least 70 % from organic fibers. The environmental and social issues are assessed according to the following four indicators by the GOTS standards.

STeP certification by OEKO-TEX

STeP certification by OEKO-TEX® is an independent certification system for brands, retailers, and manufacturers from the textile and leather industry.[3] OEKO-TEX® is an independent certification system for brands, retailers and manufacturers from the textile and leather industry. Certification is suitable for production facilities at all processing stages who want to communicate their environmental measures externally in a credible and transparent way.

STeP enables an integrated view of production conditions from sustainable perspectives. Independent OEKO-TEX® institutes carry out analysis and scoring in the following six modules:

MNS ISO 14001: 2020 Environmental Management System

This requirement and usage guidance[4] establishes the environmental management system requirements for the purpose of improving the environmental performance of each organization. Using the standard, the organization will contribute to the environmental sustainability principles.

Nordic ecolabel

[3] https://www.oeko-tex.com/en/apply-here/step-by-oeko-tex

[4] https://estandard.gov.mn/standard/v/4141

The Nordic Swan Ecolabel aims to reduce the environmental impact from production and consumption of goods – and make it easy for consumers and professional buyers to choose environmentally friendly goods and services.

The Nordic Swan Ecolabel was established in 1989 by the Nordic Council of Ministers as a voluntary eco labelling scheme for the nordic countries of Denmark, Finland, Iceland, Norway and Sweden. It is possible to obtain a certification with the Nordic Swan Ecolabel within 59 different product groups which accounts more than 200 different product types, one of which is the textile sector. Nordic Swan Ecolabelling criteria for textiles were first adopted in 2011, and has been revised thrice (version 3 was adopted March 2018).

A Nordic Swan Ecolabelled textile service:

- ✓ Is energy efficient and has a low climate impact
- ✓ Consumes limited amounts of water and uses the planet's resources sparingly
- ✓ Uses chemicals complying with stringent environmental and health requirements. For example, detergents not containing fragrances or DADMAC.
- ✓ Reduces the environmental impact of transport involved in distribution.
- ✓ Buys large quantities of textiles which either are ecolabelled or comply with the Oeko-Tex 100 standard.

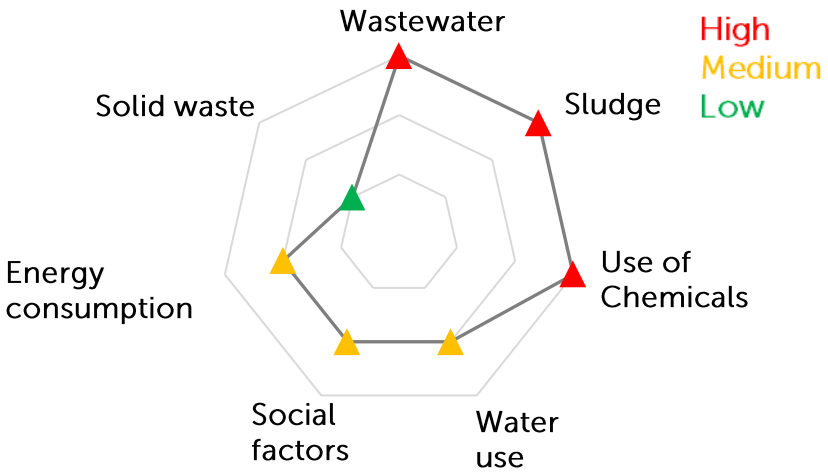
2.2 Environmental and social impact of the Mongolian wool and cashmere processing sector

What is the level of compliance with the legal and E&S requirement for Mongolian textile SMEs?

In order to assess the current situation of the E&S and sustainability issues of the Mongolian wool and cashmere sector, an environmental and social impact assessment (ESIA) was conducted under the STeP EcoLab Mongolia project, in partnership with the Collaborating Centre for Sustainable Consumption and Production (CSCP). The study covered 20 large and SMEs in the wool and cashmere sector.

The assessment report is focused on six themes: water use, use of chemicals, wastewater, solid waste and sludge, energy and social factors. The assessment framework is aligned with sustainability criteria set in two internationally recognized textile standards, namely GOTS and Made in Green (MIG) by OEKO-TEX.

Figure 9. Environmental and social hotspots of the Mongolian wool and cashmere processing companies



Water usage

The assessment revealed that the water consumption values at Mongolian cashmere and wool producers are on average 1.6 times higher than water consumption values for wool textile production reported in other sources when measured in m^3 per kg of textile output.

The most water efficient companies are primary processors engaged in washing and scouring.

In comparison to the other textile types, like polyester and cotton, the worldwide consumption of wool fibres is rather negligible (1% of all fibre used for spinning in 2015, see). Accordingly, the total environmental impact of wool is smaller, compared to the other common textiles. However, the ever-increasing demand for sustainably produced consumer goods urges the Mongolian cashmere industry to implement the best practices in water saving and usage – a novel trend welcomed by many participating companies.

Existing challenges and hotspots (Medium)

- Lack of proper measuring, recording and thus, control of water consumption.
- Low economic incentive to transition to environmentally friendly behavior

One of the objectives of the STeP EcoLab Mongolia project is to achieve a 5% reduction in water consumption across the textile sector.

Use of Chemicals

Overall, the majority of chemicals used in textile production in Mongolia are compliant with GOTS and MiG by OEKO-TEX sustainability criteria. However, two of the commonly used individual dyes, Lanaset and Lanasol, fall under pre-metalized and azo dye classes prohibited by GOTS.

Certain compliance tests need to be carried out if a company or enterprise decides to apply for sustainability standards and ecolabelling. There could be a problem with toxicity and biodegradability threshold analysis because currently the national testing laboratories have limited capacity or capability to perform certain types of highly specialized tests.

Most assessed companies have adequate records of chemicals use, with missing safety data sheets. The same is true for machine oils and lubricating chemicals. Company regulations on storage, transfer and handling of hazardous chemicals are not sufficient. There is a need for improvement and more detailed documentation.

Existing Hot Spots (High)

- Poor documentation of chemical use.
- Commonly used chemicals (Lanaset and Lanasol) fall under azo dye category

Wastewater

Mongolian cashmere and wool producers face serious issues in sustainability compliance if current trends in wastewater treatment, reuse and recycling are carried forward and common practices are not improved substantively.

Current wastewater treatment practices are largely outdated or almost non-existent, at least within the scope of the companies covered by current assessment and project. Our assessment confirms that textile companies contribute towards overburdening of the Central Waste Water Treatment Plant, as none of the production effluent is pre-treated at the site prior to disposal to the main sewage network. Wastewater from primary processors is very high in turbidity, while COD and pH values can be above permitted ranges.

The Law on Water Pollution Fees, which will come into effect soon, is expected to improve the situation. Producers are well aware of it and related issues. Therefore, they are willing to invest/co-invest in wastewater treatment plants to curb the environmental impact of their production.

Existing Hot Spots (High)

- Lack of/ poor documentation of wastewater discharge (Companies, except for the primary processing companies, do not face close monitoring and can discharge wastewater into the main sewage system without treatment, metering, or inspection of documentation.)
- Lack of/ outdated wastewater treatment practices

Solid waste and sludge disposal

State of compliance in solid waste management is generally good within the sector, while the sludge disposal issue is not well addressed, similar to the wastewater treatment problem.

Solid waste management at the assessed factories is generally similar, with most companies contracting waste transportation companies that collect solid waste on a weekly basis and deliver it to landfill sites. No incineration or landfilling of waste occurs at the production sites.

Existing Hot Spots (low – solid waste; high- sludge disposal)

- Lack of/poor documentation of waste management
- Sludge effluent is often not treated and discharged into the main sewage system

Energy use

Naturally, industrial activities in Mongolia are considered energy intensive, particularly due to the cold climate. Additionally, low energy tariff regulated by the government contribute to use of energy in excess. The current survey provides proof to this claim. The collected data on energy consumption per kg product is mostly in the range of international benchmarks. The assessment also revealed that various energy saving measures have been implemented in the visited companies.

Smaller companies appeared to be more efficient due to easier control of expenditures for utilities. Large companies possess more opportunities in terms of energy saving.

The general trend is very positive. All the large, medium or small companies visited are interested in reducing energy consumption and either already have implemented or are planning to implement energy saving measures. However, benefits of the implemented energy saving measures are often not evaluated. Even the baseline energy consumption of production units at the current time is not estimated, due to a lack of methodology to monitor and manage energy consumption.

There is no tradition of estimating the carbon footprint of production. None of the visited companies obtained ISO 14000 series of standards. The companies need to develop a set of environmental policies and procedures with targeted reduction in energy consumption.

Existing Hot Spots (Medium)

- Poor monitoring and documentation
- Required to heat unnecessarily large, poorly divided spaces
- No stream recuperation: additional loss of energy and water

Social criteria

Overall, the hotspots within the social criteria in the textile industry are non-compliant in working hours, sufficient pay and OHS criteria designed by the OEKO-TEX and GOTS standards. Although larger enterprises record overtime work in line with the national Law on labour, there weren't enough means to record overtime in smaller enterprises. Enhanced overtime rate monitoring systems should be installed in enterprises working night shifts and irregular hours. In some cases, few employees didn't have information on whether they were paid overtime

fees. Information and legal knowledge for employees are required to establish a conflict-free communication between employees and staff.

Existing Hot Spots (Medium)

- Inadequate documentation and rule implementation against discrimination and child labour in smaller companies
- Over-time work is not recorded
- Poor OHS management,
- Lack of necessary financial and human resources.

2.3 MNS 2021 Standard for Sustainable Textile Production

The project of Standard for Sustainable Textile Production[5]

"МОНГОЛЫН ХААН ШИРХЭГТ" ТОХИРЛЫН ГЭРЧИЛГЭЭ

Гэрчилгээний дугаар:
Олгосон огноо:
Хүчинтэй огноо:

БАТАЛГААЖУУЛАЛТЫН БАЙГУУЛЛАГА:

Монголын Ноос Ноолуурын Холбоо (MNS ISO IEC 17065: 2013)

Лицэз эзэмшигч: xxxxx
Хаяг: xxxxx

Утас: xxxxx
Техникийн шаардлага: Сүлжмэл цамц бүтээгдэхүүн нь "Монголын Хаан Ширэгт" тохирлын тэмдэгийн S2 техникийн тодорхойлолты хангасан.
S2 техникийн тодорхойлолт нь дараах хэрэгт хамаарна:
- Монгол Улсын стандарт "MNS6809:2019 Ямааны ноолуур, тэмээний ноос, сарлагын хөөрөн нэхмэл, сүлжмэл бүтээгдэхүүн"
- Ноолуур боловсруулах болон бүтээгдэхүүн үйлдвэрлэлийн туршид тогтвортой ноолуур үйлдвэрлэлийн үзүүлэлтүүд
- Монголын гарал үүсэлтэй 100%ноолууран түүхий эдээр үйлдвэрлэгдэн

Mongolian Noble Fibre®

Хавсгал Кашимер XXX-ийн үйлдвэрлэлд буй "Самнасан ноолуур" бүтээгдэхүүн нь "Монголын Хаан Ширэгт - MNF S2" техникийн тодорхойлолтын шаардлагыг хангасан болохыг батлагаажуулж олгов.

Монголын Ноос Ноолуурын Холбоо

Гүйцэтгэх захирал Д.Алтанцэцэг

The Mongolian Noble Fibre (MNF) sustainability certificationaims to establish the main principles, requirements and criteria, and accordingly evaluate and certify sustainable textile production. This enables Mongolian wool and cashmere products to be distinguished from conventional production and be recognized in the global market for its sustainability. . By following this standard, Mongolian wool and cashmere producers imply that they are prepared to take all necessary actions to improve their E&S performance.

The following standards were referenced in the MNF, and their latest official sources shall be used in case of any revisions and amendments:

- MNS 1-1:2006,Mongolian national standardization system. Part 1: Procedures for the technical work
- MNS 1-2:2006, Mongolian national standardization system. Part 2 Rules for the structure and drafting of standards.
- MNS ISO/IEC 17065:2013, Conformity assessment. Requirements for bodies certifying products, processes and services.
- MNS ISO/IEC 17067:2014, Conformity assessment. Fundamentals of product certification and guidelines for product certification schemes

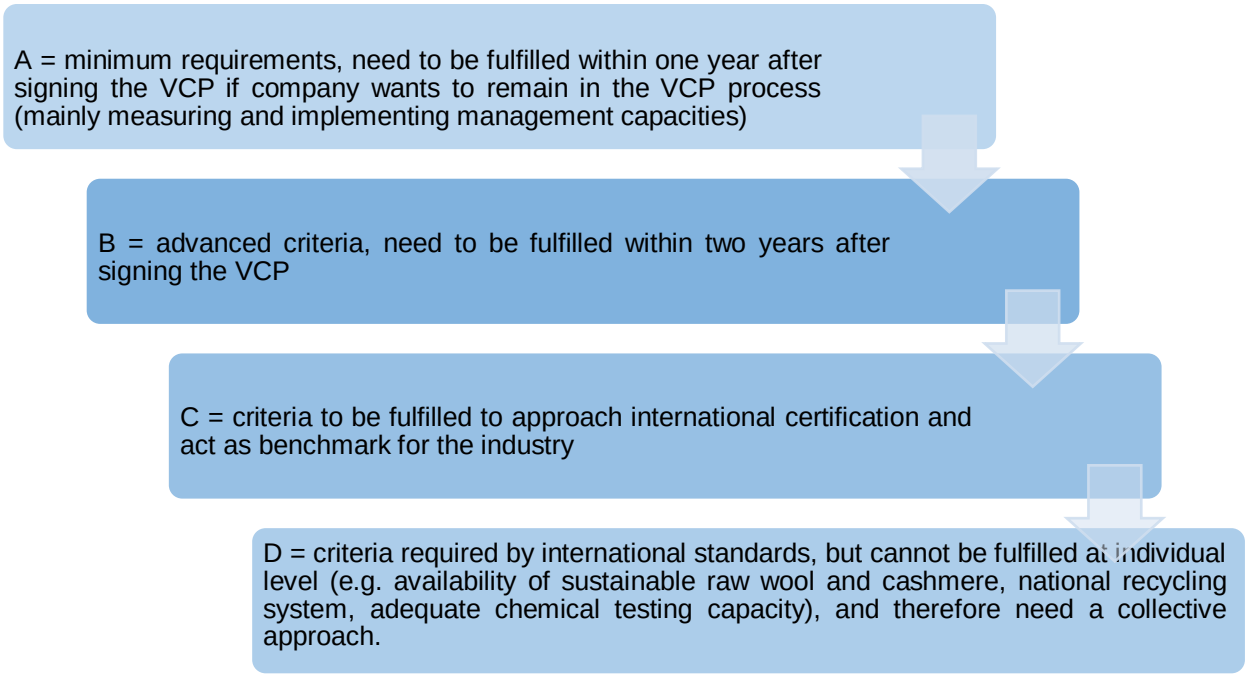
[5] https://estandard.gov.mn/medee/v/185

- MNS ISO/IEC 17021-1:2016, Conformity Assessment-Requirements for organizations that conduct audits and certification bodies-Part 1
- ISO 19011:2016 Guidelines for auditing management systems
- MNS ISO 14001: 2016, Environmental management system. General guidance on principles, system and supporting techniques.
- MNS 6390-2013, The primary treated effluent of wool and cashmere factory into the sewerage of central treatment plant. Technical requirements.
- MNS 4288-1995, General requirements for selecting a site for wastewater treatment plants and treatment technologies and effectiveness.
- MNS 6561-2015, Environment. Water quality. Waste water to supply to the sewerage system. General requirements
- MNS 6809:2019, Woven and knitwear finished products made of cashmere, camel and yak hair.
- MNS 3683:2015, Textile, Goat dehaired hair. Technical requirements.
- MNS 4950:2015, Textile, Camel dehaired hair. Technical requirements,
- MNS 5563:2005, general requirements for wool and cashmere production,
- GLOBAL ORGANIC TEXTILE STANDARD (GOTS),
- STEP by OEKO TEX.

Verification body-Certification body under MWCA

Environment	Social	Animal welfare
☐ Environmental policy	☐ Child labor	☐ Certificate of sustainable cashmere which has criteria
☐ CO2 footprint measures	☐ Discrimination	
☐ Water use	☐ Insult, violiation	
☐ Wastewater treatment	☐ Wage	
☐ Energy use (electricity, heat, steam)	☐ Health, labour protection	
☐ Use of chemicals		
☐ Solid waste		
☐ Packaging		

A-D requirements are required to be completed in the long run for the MNF verification.



Criteria required by international standards: Even though the VCP is an ambitious approach to the sustainable production of textile goods and is oriented toward leading sustainability standards, certification under the named standards requires compliance with further and more elaborate criteria than listed in the VCP.

2.4 MNS Responsible Nomads Raw Material Traceability System

The Responsible Nomads Codes of Practice (CoP) and Raw Material Traceability System (RMTS) have been developed since 2017 by the Mongolian National Federation of Pasture User Groups (NFPUG) with support from the Green Gold Animal Health Project of the Swiss Agency for Development and Cooperation (SDC).[6] The CoP and RMTS are designed to create awareness and appreciation among domestic and international customers of best practices in nomadic livestock herding, and to incentivize herders to maintain sustainable rangeland and herd management practices to live in harmony with wildlife and the environment. The CoP was developed for more than a decade in collaboration with thousands of nomadic herders living in different parts of Mongolia, local specialists and researchers, based on the context of how nomadic herding and best practices have evolved. Local and international researchers also participated in the Green Gold Project to rehabilitate degraded rangelands (Montsame, 2020).

The CoP is officially registered as a Mongolian national standard (**MNS 6891:2020**)[7], and refers to introduction of animal health, animal welfare protection, appropriate management of the environment, rangeland, and feed, as well as adoption of good practices in animal breeding, feeding, care and herding to develop sustainable livestock production.

[6] http://en.greenmongolia.mn/responsible-herders

[7] https://estandard.gov.mn/standard/v/6714

RMTS is an IT based verification mechanism which traces the product (cashmere, meat, etc.) in its every production process, from the raw material at the herder to the time it's delivered in the hands of the customer, and provides CoP certification.

As of 2020, with the support of the SDC and NFPUG, more than 1,575 pasture user groups (PUGs) in 18 aimags (provinces) have established rangeland use agreements that are signed by the local governor and herders (SDC, 2020).

Figure 10. Scope of RMTS Certificate

Source 5. Green Gold Animal Health Project

Indicators and evaluation criteria of Responsible Nomads

1. Responsibility of herders

Evaluation criteria	Source of verification:

a. Pasture User Group Membership b. Established Rangeland Use Agreement c. Cooperative Membership	Registered in the Land management database at the Agency of Land Affairs Geodesy and Cartography and Mongolian National Federation of PUGs

2. Maintaining and improving rangeland health

Evaluation criteria	Source of verification:
a. Healthy rangelands b. Grazing impact monitoring	National Rangeland health database functions at the National Agency of Meteorology and Environmental Monitoring covers 1550 plots.

3. Animal health services

Evaluation criteria	Source of verification:
a. Access to veterinary services b. Animal health c. Food safety and drug residual control	The General Authority of Veterinary Services /GAVS/ Mongolian Animal Health Information System /MAHIS/ at the GAVS

4. Animal welfare

Evaluation criteria	Source of verification:
✓ Availability of four seasonal rangelands Story platforms: Hand-made PUG Grazing map and plans ✓ Access to water sources ✓ Proper winter shelter/bedding (story platform) ✓ Preparation of winter forage/hay reserve (story platform: tables) ✓ Annual mortality rate of new-born livestock is less than 10%	Animal welfare database at the Mongolian NFPUG

5. Environmental stewardship

Evaluation criteria	Source of verification:

✓ Wildlife coexistence (story platform) ✓ Rare species (story platform)	Habitat of wildlife species and rare plant species marked in the seasonal rangelands of PUGs available at the Mongolian NFPUG.

6. Traceability

In order to improve quality monitoring, transparency and accessibility for customers, Green Gold Animal Health Project in cooperation with the Digital Medic., Co., LTD has developed an e-traceability system and smart phone application for Responsible Nomads Code of Practice and the standard.

Figure 11. Responsible Nomads Traceability phone application

2.5 Sustainable finance guideline for textile sector

The definition of environmental and social (E&S) risks can be understood as potential impacts and risks to the environment and local communities by a FI's client or transactional activities. E&S risks in Mongolian textile sector are categories as follow

High risk activities include activities that may cause large, various, irreversible adverse effects and risks to the environment and society. Issues can include:

- Increased livestock population due to poor pasture management and overgrazing.
- Due to the lack of/poor wastewater treatment system, there is increasing environmental pollution, soil and surface water pollution causing negative effects on human and animal health.

Medium risk activities include activities that have small, reversible risk/adverse impacts on the environment and society. For example,

- Unnecessary or potential energy costs are incurred due to poor carbon footprint assessment and methodology.
- Lack of control over water use (direct use of groundwater) can lead to depletion of water resources.
- Occupational health and safety (OHS) enforcement is poor due to lack of financial and human resources.

Environmental and Social Management System and Due diligence

Environmental and Social Management System (ESMS) of the FI explains client's procedures for identifying, assessing and managing environmental and social risk of transactions, defines the decision-making process, describes the roles and capacity of staff in doing so and states the monitoring and reporting requirements. It provides guidance on how to screen, categorize transactions based on their E&S risks, conduct E&S due diligence, and monitor the client's E&S performance.

Mongolian Sustainable Finance Principles should play a leading role in shaping the methodology E&S risk assessment for Mongolian textile sector companies.

Mongolian Sustainable Finance Principles

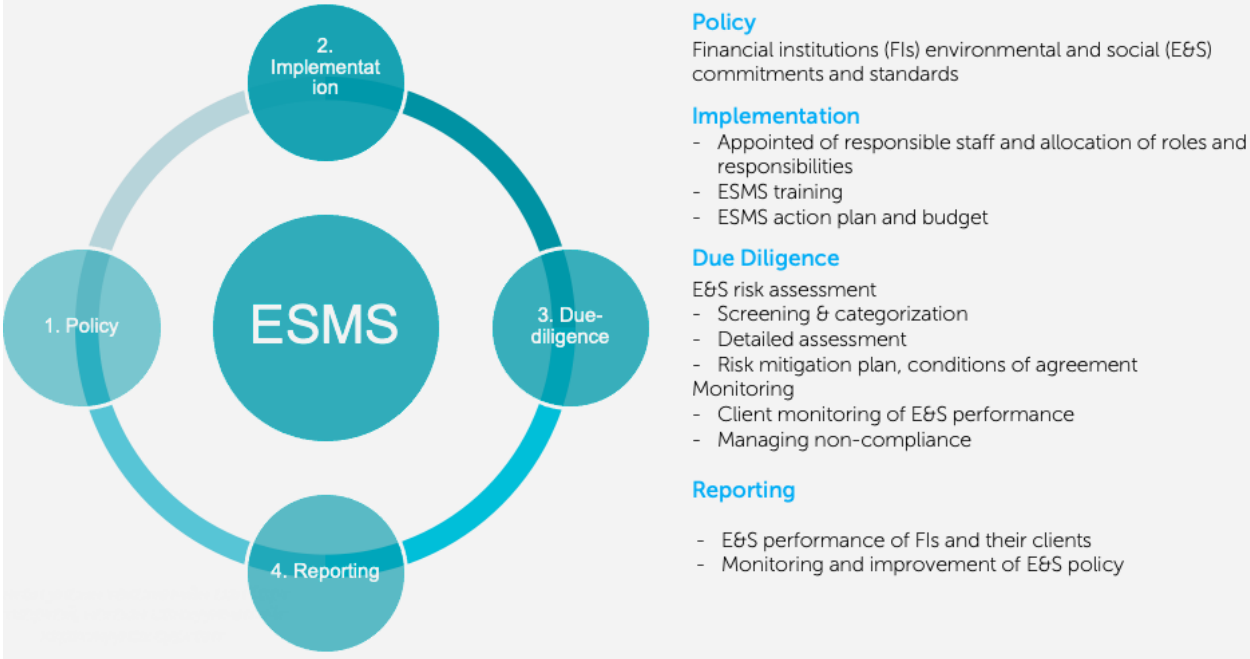
1. Protect the natural environment
2. Protect people and communities
3. Protect cultural heritage
4. Promote the growth of the "green economy"
5. Promote financial inclusion
6. Promote ethical finance and corporate governance
7. Promote transparency and accountability
8. Practice what we preach

Child's work in herding and beyond is a historically practiced cultural aspect. This special condition needs to be carefully monitored and regulated to avoid age- and gender-related exploitation risks. "A distinction should be made between the hazards of actually working with livestock and hazards that are inherent to children living in the rural environment."[11] Therefore, robust survey on forced child labor in herding should be conducted with well-defined objectives to inform on the methodology.

According to MSFA guideline, ESMS has four main components:

- E&S policy
- E&S risk assessment and Due Diligence[13]
- Implementation and operation of ESMS[12]
- Ongoing monitoring and reporting

Figure 12. Environmental and Social Management System

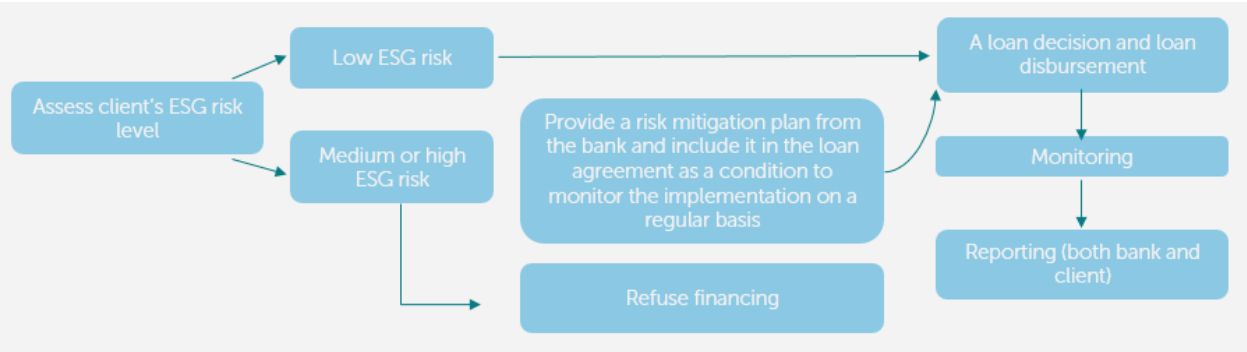


One of the key components of sustainable finance is environmental, social, and governance (ESG) risk management. Today, all commercial banks in Mongolia conduct ESG risk assessments for all types of business loans over MNT 50 million or with terms of more than 12 months.

2.6 Textile Sector ESG Risk Assessment

Assessing the ESG risk of textile sector projects and companies needs specific questions which incorporate sectoral context. Therefore, with the support of the STeP EcoLab project, the **Textile Sector ESG Risk Assessment Tool** was developed by the Mongolian Sustainable Finance Association (MSFA) (see Figure 13).

Figure 13. Textile sector ESG risk assessment process

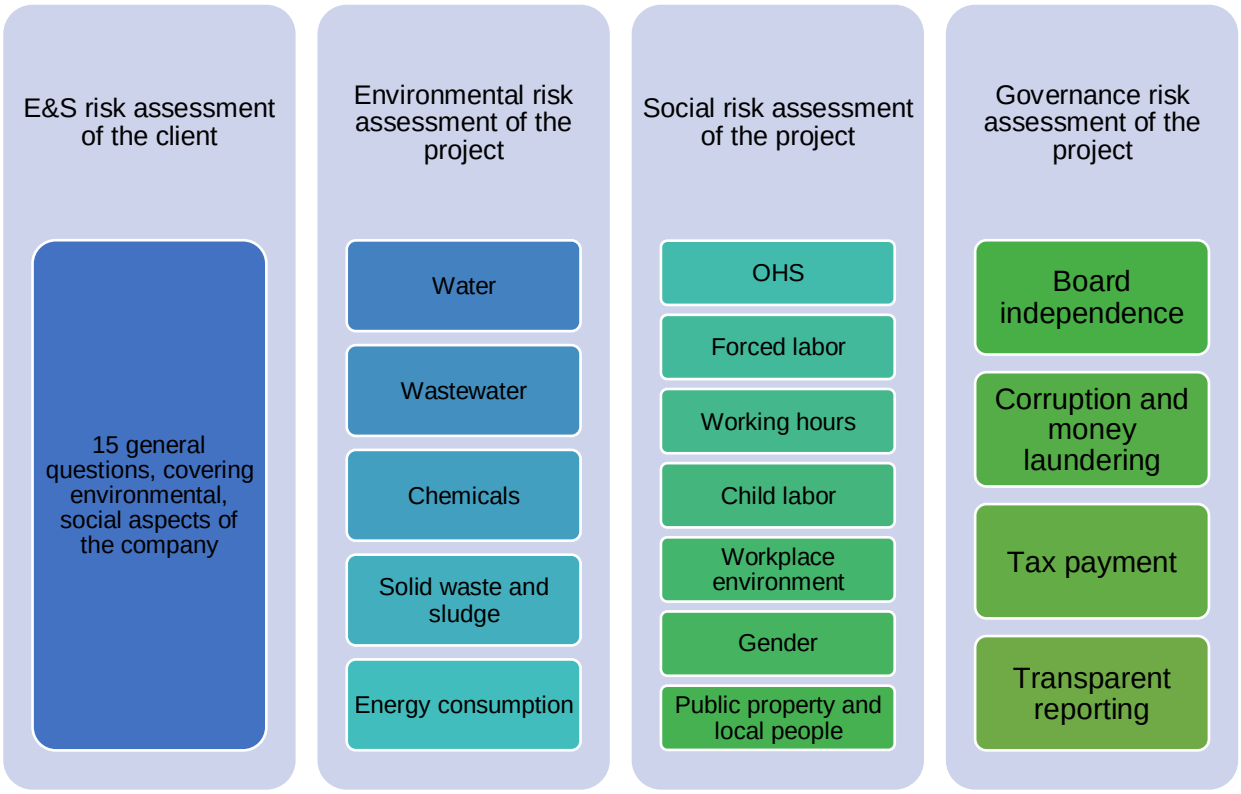


The tool uses simple "yes" or "no" questions to help determine an ESG risk rating: low, medium, or high. The overall scoring of the assessment determines whether the project needs a more detailed ESG risk assessment.

The first step in the ESG assessment is to verify that the client or project area is **not included** in the following lists:

1. List of excluded activities[8]
2. List of sensitive activities (due diligence required)

Figure 14. Scope and and criteria of textile sector ESG risk assessment tool



Source 6. MSFA under the STeP EcoLab project (2020)

Based on the assessment, if the project or client considers the loan to be of medium or high ESG risk, an ESG risk mitigation plan and measures will be approved by the FI in consultation with the client, and noted in the minutes of the loan committee meeting or in the loan agreement. Alternatively, the bank may provide additional conditions to finance a high ESG risk customer or refuse to provide financing. The implementation of these conditional measures and plans are monitored consequently with loan repayments, and in the event of non-compliance, lending is suspended until conformed.

[8] http://toc.mn/post/26

Module 2. Teamwork and discussion #3

Topic: To assess ESG risk of textile sector client and propose risk mitigation plan

Duration

40 min (20 min teamwork, 10 min presentation)

Instructions:
Based on the information in the case study, identify the client's environmental, social, and governance (ESG) risks and develop a risk mitigation action plan. Prepare answers to the following questions.

- Is the information provided sufficient to assess the client's ESG risk? If not, what additional information is needed? *(Cheat note: In the comments section of the EIA risk assessment, you can read how to mark the questions that need to be considered and the questions related to sustainable production.)*
- Based on the information provided, discuss in your team whether the client's ESG risk is low, medium, or high. *(Cheat note: Note that the answers in green in column F of the ESG risk assessment tool are positive answers)*
- If the client's ESG risk is medium or high, discuss the risk mitigation action plan as a team. *(Cheat note: Use the information in column L of the ESG risk assessment tool excel file)*
- Appoint a presenter
- Introduce 3 minutes

Team 1, 4 - Environmental risk

Team 2, 5 - Social risk

Team 3, 6 - Governance risk

Case study:
"Wool Cashmere" LLC complex factory has been operating since 2000 and has applied for a loan of 2 billion MNT from a bank for a new construction and expansion project. The Bank's Relationship Manager conducted the initial loan survey and conducted a one-on-one oral interview to determine whether the company was eligible for a loan.

- An Internet search revealed that two years ago, the factory managers were involved in a corruption case and that police had conducted several inspections, and pages with court seals were posted on social media.
- The factory is a family business, with the wife of the plant's chairman acting as the plant's CEO, and her eldest son serving as the plant's chief financial officer.

- During an interview with the factory owner, he complained that he was reluctant to hire women, that work was delayed due to childbearing, and that it took a long time to find a replacement.
- A review of factory social security reports shows that male and female employees in the same position receive different salaries.
- Looking at the composition of the trade union, it was determined that 2 out of 5 members are siblings of the owner of the factory.
- The plant has 56 employees and a non-staff council on occupational safety and health.
- The plant does not have records of OHS training and safety instructions given to relevant personnel.
- The factory building was built and commissioned in 1999, and since then the structure and plumbing have deteriorated. Due to the high heat loss of the building, the factory pays about 3 million MNT per month for electricity and heating.
- The plant has been named a Designated Entity under the Mongolian Energy Conservation Law and is required by law to save a certain amount of energy each year. The plant has installed LED lighting on office floors to reduce electricity bills.
- The factory has 4 knitting machines, which were previously used in China. During the interview, the owner of the plant mentioned that they want to replace them with modern, energy-efficient machines.
- The plant reuses hot water and steam.
- The plant is located close to the Tuul River and there is no record of sludge disposal.
- The factory uses chlorine-based bleach to color textiles, while phthalates and PVC are used for printing.
- The factory has a warehouse for storing chemicals and auxiliary materials.
- Industrial wastewater is supplied to the treatment plant.

MODULE 3.

TEXTILE SECTOR GREEN LOAN AND PROJECTS

Overview

This module outlines the demand and sources of funding in the textile sector. In particular, it explains the textile sector-specific green loan criteria guide developed by MSFA under the STeP EcoLab project. The green loan criteria document defines the basic criteria, verification methods and categories that FIs are recommended to apply to issue green loans and evaluate green projects in the Mongolian textile sector.

Moreover, this module introduces certificates, labels, and manufacturers on how to verify green loan criteria.

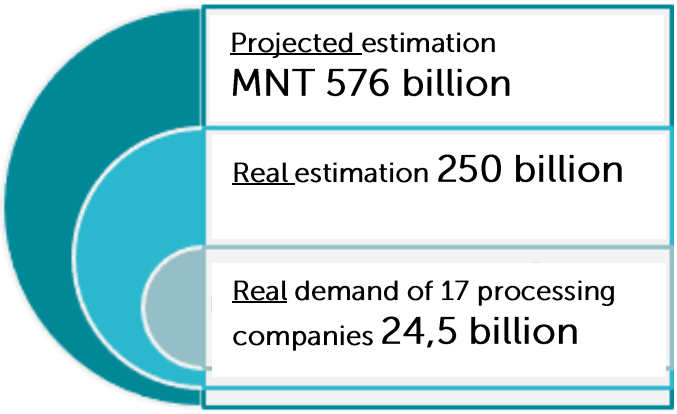
Featured topics:

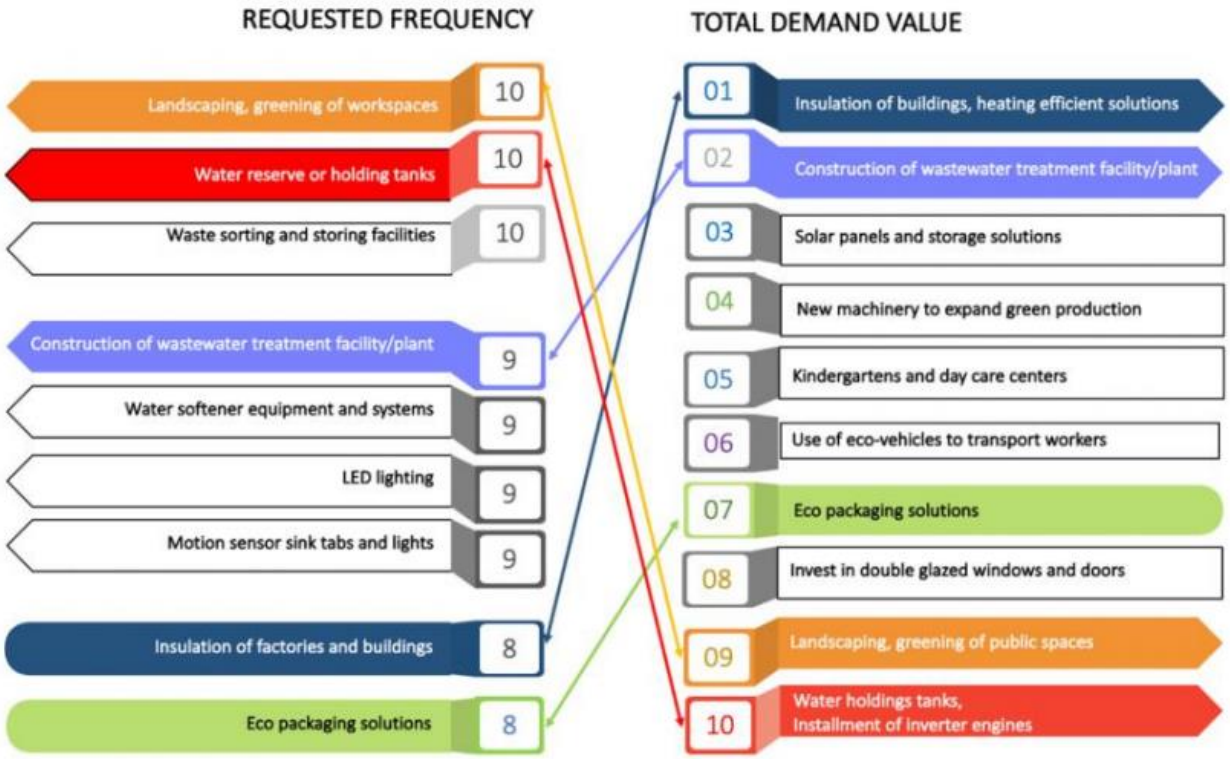
- Current state of the green finance market in the Mongolian textile sector
- Textile sector-specific green loan criteria and verification methods
- Sustainable and green technologies and manufacturers
- Examples of installation of wastewater treatment plant

3.1 Green finance market of the textile sector

To determine green financing, market demand, and investment capacity, the STeP EcoLab project surveyed financing demand in the textile sector in 2019. The green financial demand of SMEs in the textile sector is estimated to reach MNT 250 billion in real terms and MNT 576 billion in target (Figure 15) (MSFA & Gerege Partners, 2019).

Figure 15. Green finance demand in the textile sector





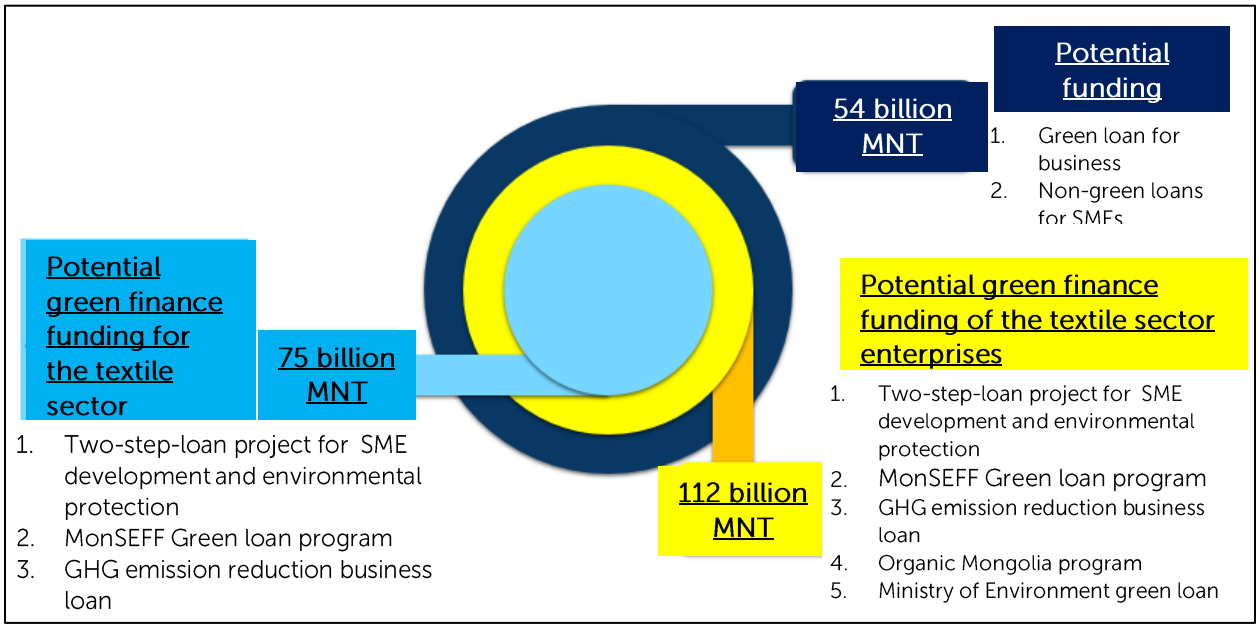
Source 7. Green Finance Market Demand of Textile SMEs in Mongolia, MSFA & Gerege Partners (2019).

If we classify the demand of the surveyed enterprises by purpose,

- 44% for solutions to reduce heat loss in industrial buildings,
- 18% for the introduction of electricity and energy saving equipment and technology,
- 17% for wastewater treatment plants,
- 21% is needed for other needs to make production and services green and sustainable.

In terms of supply, however, the total potential source of green loan products available to textile mills is MNT 75 billion. Therefore, in order to balance supply and demand, it is necessary to increase green resources in the textile sector.

Figure 16. Sources of green funding



To close the gap, on the one hand, **FIs**:

- Create a source of green financing
- Develop green loan products that reflect the specifics of the textile industry
- Build capacity for ESG risk assessment in textile client projects
- Build the capacity to assess whether a textile customer project is green

On the other hand, **textile factories**:

- Aim to be sustainable and environmentally friendly
- Reduce the production ESG risk
- Develop a project proposal that meets the requirements of the FI's green loan.

3.2 Textile sector-specific green loan criteria and verification

Objective: The green loan criteria is a document that defines the basic criteria, verification methods and categories that financial institutions (FIs) are recommended to apply to issue green loans and evaluate green projects in the Mongolian textile sector[9].

Defining the criteria for green loan issuance helps not only FIs but also project developers and producers, as it provides a common understanding for green projects in the textile sector, enabling green project identification, development, and financing, as well as its monitoring, verification, and reporting. Notably, the green loan criteria are specifically tailored to the textile sector in Mongolia. We also believe the criteria will prompt FIs to increase their green loan portfolios and mitigate sectoral environmental, social, and governance (ESG) risks, ultimately contributing to the sustainable and green development of Mongolia.

In principle, green loans are meant to provide financing within the framework of transparency and the avoidance of greenwashing.[10] The framework for green loans, or Green Loan Principles, provide a clear and transparent set of principles that enable investments in green projects that facilitate and support environmentally sustainable activities. The Green Loan Principles were developed by the Loan Market Association to define the four principles namely, 1) Use of proceeds, 2) Process of project evaluation and selection, 3) Management of proceeds, and 4) Reporting.

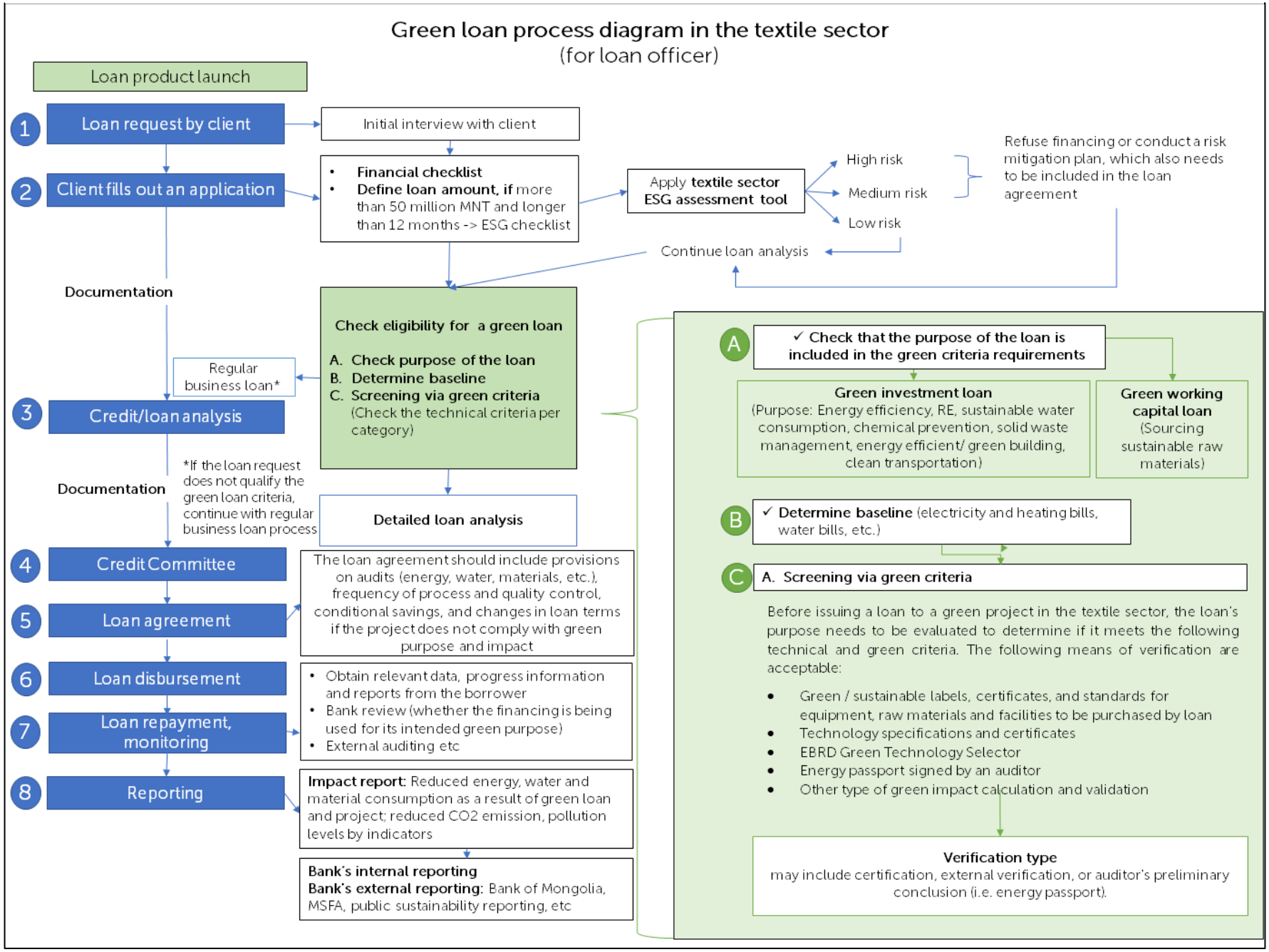
Textile sector Green loan process

The criteria document was developed in line with international and national sustainable finance principles, as well as key documents such as the National Sustainable Finance Roadmap and Mongolian Green Taxonomy. This document shall be used during an FI's initial loan screening and detailed loan analysis, as illustrated in Figure 17. After receiving the loan request, an initial interview will be conducted, application form will be completed, and the green loan criteria will be used to determine whether the project is eligible for green loan.

[9] http://www.toc.mn/post/125

[10] Greenwashing is marketing that portrays an organization's products, activities, or policies as producing positive environmental outcomes when this is not the case. (UK's Financial Conduct Authority)

Figure 17. Textile sector Green loan process diagram



A. Check whether the loan purpose is green

The textile sector green loans within this criteria framework are aimed at reducing greenhouse gas emissions, saving energy and water consumption, creating material efficiency, and supporting environmentally friendly and sustainable solutions. We explore two potential types of textile sector green loans: (i) green investment loans and (ii) green working capital loans.

Green investment loans are intended to finance textile producers who are planning to promote sustainable production by investing in resource-efficient technologies, textile machinery and equipment, or materials produced with low energy and water consumption (see Table 1).

Table 1. Textile sector green investment loan by general category and purpose

General category	Example green loan purpose
Energy efficiency (EE)	• Purchase of energy efficient equipment • Insulation of existing/old factory building
Renewable energy (RE)	• Installation of small-scale RE solutions • Installation or construction of large RE technologies
Sustainable water consumption	• Purchase and installation of water efficient machines and equipment • Purchase of wastewater treatment facilities and equipment
Chemical prevention	• Purchase of chemicals that meet green requirements • Construction of a chemical warehouse, laboratories and stations
Solid waste management	• Purchase of smart waste bins, collection, and recyclable packaging (3Rs – reduce, reuse, recycle, circular economy etc)
Energy efficient, green buildings	• Construction of an energy efficient factory building • Construction of a green building
Clean transport	• Replace traditional petroleum fuel vehicles with electric or hybrid vehicles

The green working capital loan is intended to finance the procurement of sustainable raw cashmere by textile processing companies. For example:

Table 2. Textile sector green working capital loan by purpose

General category	Example green loan purpose
Sourcing sustainable raw materials/cashmere 	• Purchase of raw cashmere with sustainable certification where pasture management and animal welfare requirements are addressed • Development of a raw material and product traceability system

B. Determine the baseline

According to the Green Loan Principles, measuring baseline data through quantitative and qualitative indicators builds conditions to measure, verify, and report the green impact of a loan. Generally, the baseline is determined based on product measurement and assessment provided by state authorities, as well as national and international standards. In the absence of baseline data, a review of the client's performance indicators for the past 1-3 years (energy consumption, water consumption, industrial wastewater amount and toxicity, etc.), external assessment, and audit results is also recommended.

C. Screen and verify whether green criteria are met

Before issuing a loan for a green textile sector project, the loan purpose needs to be evaluated and verified to determine if it meets the relevant technical and green criteria.

The following resources and documents may be used for verification:

- Green / sustainable labels, certificates, and standards for equipment, raw materials and facilities to be purchased with loan financing
- Technology specifications and certificates
- European Bank for Reconstruction and Development (EBRD) Green Technology Selector
- Energy passport and report from a verified auditor
- Other type of green impact calculation and validation method

The relevant criteria for each category of green loan are explained in the "Textile sector-specific Green loan criteria guide[11], Chapter 2.

D. Green loan monitoring and reporting

Progress monitoring

The bank's progress monitoring may include the following three types of monitoring, which should be reviewed at least once a year:

[11] http://www.toc.mn/post/125

- Obtain relevant quantitative and qualitative data, progress information, and reports from the borrower
- Bank review and on-site inspections (verify If the loan is being used for its intended green purpose[s])
- External audit, evaluation, control and certification

It is recommended that FI and the Textile Technical Committee (consisting of specialized energy, water, chemical and equipment auditors in the textile sector) shall evaluate the progress of the project. The tank shall develop a project checklist in accordance with the principles of impact reporting, project results and the ESG risk mitigation plan and monitor the progress. Due to the seasonal nature of the textile processing industry, external and internal factors (pandemics, engineering leave, etc.), production is often disrupted, so use of the resulting equipment should be estimated according to instructions of the sectoral engineers.

Impact reporting

FIs and borrowers shall receive an annual environmental and green impact assessment in the form of a report for each type of green loan use. The FI loan officer measures the environmental and social impacts of eligible green projects, assessing and reporting on the overall impact indicators or key performance indicators for each category of green project in the report. The example indicators are presented in the "Textile sector-specific Green loan criteria guide", Chapter 4.

The impact indicators will be complemented by documentation on how the use of proceeds contribute to the international and domestic policies on green development and climate change.

FIs' internal and external reporting

In accordance with Mongolian Sustainable Finance Principle 7, the principle of "Promoting Transparency and Accountability", FIs shall report the results of impact assessments to internal and external stakeholders.

- Internal reporting may include board/management team reports, a bank's annual report, sustainability reports, etc.
- External reporting includes monthly green loan statistics reported to the Bank of Mongolia, bi-annual sustainable finance implementation reports submitted to the MSFA, reports to investors and foreign partners, and so on.

3.3 Verification method: ACIMIT green label and machinery certification

ACIMIT Green label, RINA Sustainable textile project

Textile industry, as well as Textile industry, as well as other sectors, is increasingly on the lookout for innovative technologies that simultaneously respond to the following needs:

- Greater flexibility in production processes
- Greater production efficiency
- Reduced energy consumption and lower environmental impacts
- Lower production costs

Italian textile machinery manufacturers play a fundamental role in promoting new and innovative green technology trends.

Italian textile machinery manufacturers, in a variety of textile industry sectors (from spinning to knitting, from weaving to finishing) have shown their capacity to provide innovative technology solutions that move towards eliminating hazardous substances from production processes, in favour of greater savings in water and energy costs.

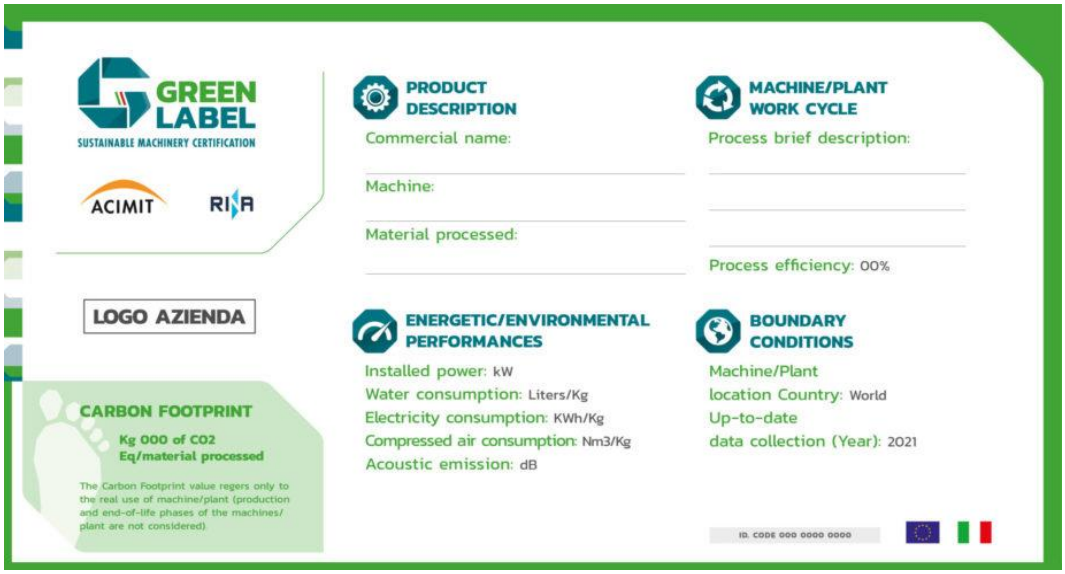
In 2010 ACIMIT, the Association of Italian Textile Machinery Manufacturers, launched the "Sustainable Technologies" project. In 2012 ACIMIT presented the certified version of this tool.

The international certification body RINA[12]has validated the process of issuing the ACIMIT green label and the measurements it contains.

The ACIMIT green label is a document that **aims** to identify the energy and environmental performances of textile machinery and make them easily recognizable and comprehensible, using a process designated by the manufacturer as an evaluation parameter.

[12] www.rina.org

Figure 18. ACIMIT green label and its certified suppliers



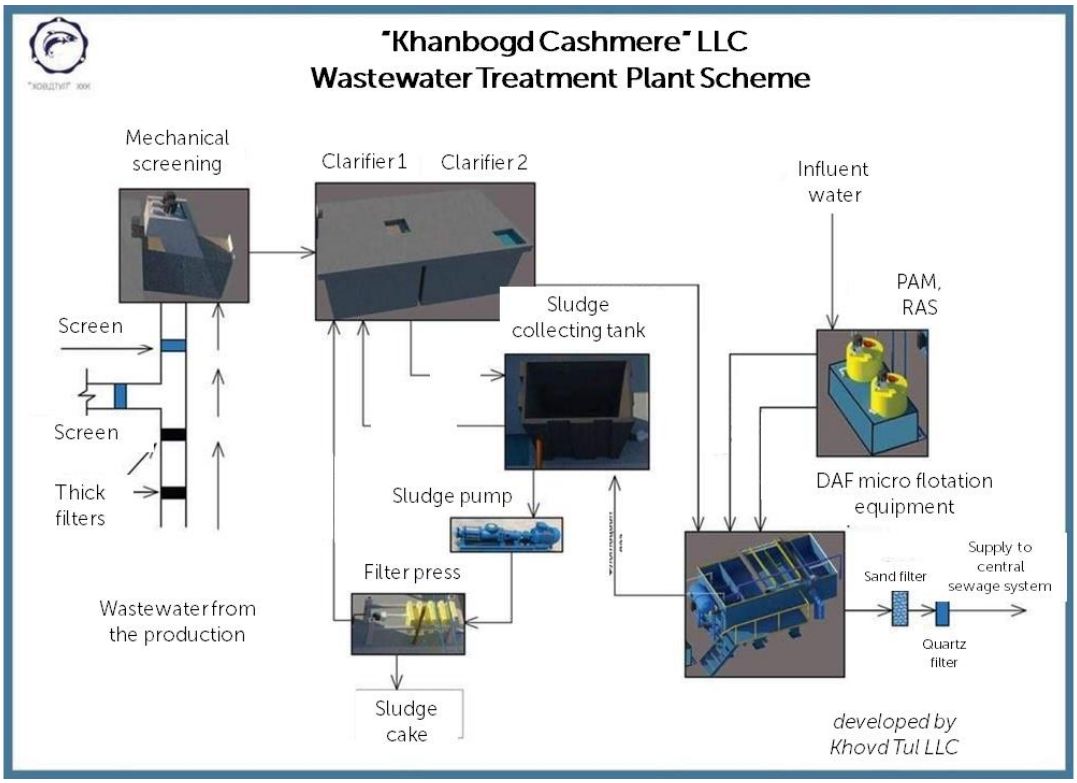
About 50 companies have joined the project.

For more information on the Acimit Green Label and to find out the companies suppliers of sustainable technologies visit the website[13].

3.4 Examples of wastewater treatment plant

KhanBogd Cashmere LLC's wastewater treatment plant technology

[13] www.green-label.it



Eligibility for green loan criteria:

- Loan products:
  - Industrial wastewater treatment microflotation equipment
  - Sludge pump
  - Filter press
  - Sand filter
  - Quartz filter
  - PAM and RAS dosing devices
- Green loan category: Wastewater treatment
- Green purpose: Wastewater treatment and reuse
- Financing: Signed a contract with the factory and completed the constrction, and installation work within 300-400 million MNT and commissioned in 2020.

Agaa Tsagaa LLC wastewater treatment plant technology

Eligibility for green loan criteria:

- Loan products: Industrial wastewater treatment microflotation equipment (HS code 8421)
- Green loan category: Wastewater treatment
- Green purpose: Wastewater treatment and reuse
- Financing: 300-400 million MNT for construction and installation work by a contracting company

Wastewater and sludge treatment equipment

Sludge treatment equipment	Green impact	HS code
Flotation equipment of the wool and cashmere wastewater treatment	Sludge treatment	8421
Mechanical grille	Sludge treatment	84212100
Sand sediment catcher	Sludge treatment	841990
Anaerobic facilities	Sludge treatment	84199090
Biological treatment plant	Sludge treatment	84212190
Membrane biological reactor	Sludge treatment	84212190
Vacuum pump	Sludge treatment	841410
Ventilation pump/ Airflow pump or blower	Sludge treatment	8410
Fat catcher	Sludge treatment	841990
Sludge pump	Sludge treatment	84137035
Pump with crusher	Sludge treatment	8413
Sludge pump	Sludge treatment	8413
Compressor	Sludge treatment	841480
Sludge thickener	Sludge treatment	8479

Sand and quartz filters

Sand and wastewater sediment catcher

Flotation equipment of the wool and cashmere wastewater treatment

Membrane biological reactor

Ventilation pump/ Airflow pump or blower

Sludge filter press

MODULE 4.

TEXTILE SECTOR GREEN LOAN PRODUCT DEVELOPMENT

Overview

This module will synthesize previous topics and explore hands-on experiences such as factory presentation and herder green loan practices.

Currently, there are no specific green financial products in the textile sector, and there is a need for tailored loan products which reflect the specifics of the sector and sustainable production. Therefore, the development of green loan products in the textile sector has been included as an exercise.

Featured topics:

- "Green Pasture" herder loan pilot projected implemented by XacBank and Green Gold Animal Health Project
- Sustainable production experience of GOBI JSC
- Exercise on green loan product development in the textile industry

4.1 "Green Pasture" herder loan pilot project

Pilot project results (XacBank & Green Gold Animal Health Project)

Livestock sector plays an important role in the Mongolia economy. Over 140 thousand herder households are herding livestocks.

The overall **objective** of the **"Green Pasture"** Soft loan project for herders is to support sustainable use of rangeland through reduction of livestock numbers to match the carrying capacity of rangelands, apply e-traceability system to ensure quality and origin of livestock products from herder households to processing plants, and to provide recommendations on the implementation structure and dispersal of the soft loans for herders beyond this pilot project.

For more information about project[14].

A total of 97 herder families participated in the project (Table 3) .

Table 3. Data of herder households

Herd size	Number of households	Number of family numbers	% in total	Livestock number	%	Soft loan received	% of in soft loans disbursed
901-1500	6	36	6%	6920	14%	52 500 000	11%
801-900	1	5	1%	888	2%	6 000 000	1%
601-800	19	109	20%	13318	27%	104 000 000	21%
401-600	34	177	35%	16444	34%	175 500 000	35%
301-400	20	87	21%	6481	14%	85 500 000	17%
100-300	17	71	18%	4283	9%	76 500 000	15%

Loan use

#	Loan use	Amount of soft loan	% of total soft loan distributed to health centers
1	Hay making, forage planting, fencing hay making areas to improve productivity	106,833,500	20.8
2	Rehabilitation of winter shelters for the animals	37,345,000	7.3

[14] https://www.youtube.com/watch?v=5OvQJPxVTws&t=748s

3	Rehabilitation of water wells	2,500,000	0.5
4	Purchase of high-quality breeding animals	96,085,000	18.7
5	Rehabilitation of passes to seasonal rangelands (mountain road)	2,000,000	0.4
6	Invest in none herding income creation	2,225,000	0.4
7	Pay for children's tuition fee	8,880,000	1.7
8	Purchase of goods for the family	14,880,000	2.9
9	Repay Khan bank loan with 2% interest rate	243,800,000	47.4
10	**Total**		**100%**

All beneficiary herder families have ear-tagged all livestock to sell with RFID (printed with individual code). Therefore, provided all necessary basic equipment.

1. Introduction of the animal health traceability system matching with the carrying capacity of rangeland

1. List of equipment provided

№	Equipment	Measuring units	#	Unit price	Total value
1	Emergency diagnosis kit for soum veterinarians	package	1	732,000	732000
2	Animal dipping motopump pieces	pieces	1	1,280,000	1280000
3	Phyto sanitation container	pieces	1	310,000	310000
4	Ear tag RFID reader pieces	pieces	1	1,620,000	1620000
5	Mobile printer pieces	pieces	1	240,000	240000
6	Ear tag fixer pieces	pieces	2	15,000	30000
7	RFID ear tags pieces	pieces	900	2,400	2160000
8	Drug residue detector with 100 pieces rapid test pieces	pieces	1	2,400,000	2400000
9	Computer pieces	pieces	2	1,100,000	2200000
10	Color printer pieces	pieces	1	386,667	386667
	Total value	11358667			

2. Introduction of herd size management software

Herders have agreed to reduce herd size. All beneficiary herder households and local livestock experts were trained to use the software.

All herder household's information is registered in the Animal Health traceability system.

3. Reduce number of livestock

The total number of livestock sold on the market with electronic veterinary certificates increased by 43.5 percent compared to the previous year. Compared to the previous year, the number of live goats sold on the market in 2020 increased by 53.3 percent and the amount of goat meat increased by 160.6 percent.

Herder households paid the loans as per the scheduled time.

Project result

All 97 beneficiary herder families have fulfilled their duties agreed in the Responsibility agreement signed at the onset of the project. Longer period and longer payment interval of the Green Pasture project has allowed herders make investments on some priority issues.

Each of 97 herder households selected for the pilot project were provided with introductory training prior to disbursement of the soft loan.

Green Gold project and Mongolian NFPUG have been working for about five years in Chandmani soum. During these years with improved grazing management, 47% of total rangelands of soum mainly winter and summer grazing areas have improved and the state of health has moved up in the recovery class.

However, 35% percent of rangelands, mostly spring rangelands, suffer from heavy levels of degradation without any or very little evidence of recovery. The recovery of the degraded rangelands will take at least 10 years.

The IT-based animal health traceability system has been implemented successfully. Animal health traceability system enables to track the health status of the livestock from birth. This system is designed to provide herders and veterinarians to provide accurate and verifiable information on livestock to buyers and consumers, including health history, veterinary treatments, and movements.

4.2 Sustainable production practices by GOBI JSC

Gobi JSC ensures the implementation of the environmental law by submitting a report to the Ministry of Environment and Tourism (MET). The next year's management plan is approved by MET and is overseen by the UB Department of Environment.

- In accordance with Articles 6.5 and 6.6 of the Law on Land, activities aimed at **reducing ecological impacts** are carried out on a regular basis, such as landscaping and tree planting, with the aim of increasing the area of green areas to 10%.
- **Biodiversity and air pollution reduction** - In accordance with the annual management plan, 1,200 larch and cedar trees were planted on 3 hectares of land in the valley of Khimoriin Ovoo, Bogd Khan Uul in 2010.
- **Chemical usage** - Chemical packaging is legally delivered under a cooperation agreement with a licensed professional organization. The UB Department of Environment has a special chemical destruction number. The Khan-Uul District Emergency Management Agency approves the Chemical Plan and ensures its implementation. Prohibited chemicals specified in the Law on Chemicals are not used in their activities.
- **Waste** - Introduced after 2019, waste management is organized within the organization, where each employee sorts waste from a centralized waste disposal site. The aim is to reduce waste, soil, water and air pollution by sorting waste at the source.
- **Energy** - Within the framework of the Law on Energy Conservation, the company has developed an Energy Plan and plans to increase energy efficiency to 5% in the future.
- It is planned to replace the **lighting** inside the factory yard with solar lighting in 2021.
- The **wastewater treatment plant** was renovated at a cost of 243 million MNT and flotation equipment was installed. The plant was put into operation using a combination of physico-chemical and mechanical technologies. The treated fully meets the water standards for the central treatment plant in Ulaanbaatar.
- In 2021, it is planned to install a **grwater reusable membrane filter** and use it in green areas.

In March 2020, Gobi JSC received a quality certificate for its yarn, as customers and buyers have been demanding the OEKO-TEX standard certificate in recent years. Upon receipt of the quality certificate, the OEKO-TEX external team conducts an annual quality inspection and extends the certification when it meets the requirements. For example, Gobi JSC has 1,800 colored yarns, of which 20 yarns were tested and certified.

Figure 19. GOBI JSC's OEKO-TEX Certificate

OEKO-TEX®
INSPIRING CONFIDENCE

CERTIFICATE

The company

OEKO-TEX®
STANDARD 100

for the following articles:

The certificate BJ805 149871 is valid until 28.02.2021

Since 1992, OEKO – TEX is a globally accepted standard that proves that it does not contain harmful or toxic chemicals. In March 2020, the yarn produced by GOBI JSC met the requirements of OEKO-TEX® 100 standard and received a quality certificate.

In 2021, STeP EcoLab project and the Mongolian Wool and Cashmere Association jointly developed the "Voluntary codes of practices for Sustainable Textile Production". Gobi JSC has accepted the terms and conditions of the Mongolian Sustainable Textile Production Code and has agreed to operate in an environmentally friendly and socially responsible manner.

Figure 20. Certificate of commitment to join Voluntary Codes of Sustainable Textile Production

In the first quarter of 2021, the primary factory received a "Silver Award" from the UK-based Sustainable Fibre Alliance (SFA) for its compliance with the "Clean Fibre Processing – Code of Practice". This proves that GOBI JSC is a responsible company that operates in accordance with certain criteria in terms of human resource management, labor safety and environmental friendliness in sorting, washing and combing raw materials.

Figure 21. Figure 21. GOBI JSC's Silver Award for Clean fibre processing Code of Practice

SOCIAL RESPONSIBILITY IS OPENLY REPORTED IN ANNUAL ACTIVITY REPORT

Gobi JSC has implemented a tripartite joint venture on sustainable cashmere as part of its social responsibility.

Strengthen the relationship between GOBI JSC Production - Science - Herders to enhance animal health, care and breeding on a scientific basis, and then use the best inseminators for breeding and selection, and teach herders the right practices of goat cashmere technology. The "Sustainable Cashmere Joint Project" has been implemented since 2020 in cooperation with scientists, teachers and herders of the Mongolian University of Agriculture, with the aim of improving and increasing the income of herder households.

A total of 18 herder households from Khunug bagh of Jinst soum of Bayankhongor province and Asgat bagh of Ikh-Uul soum of Khuvsgul province have been selected as herder representatives.

Under the project, in 2020, a total of 21 elite goats were selected as breeders and handed over to herders. Hay and fodder were also provided for winter preparations.

In the future, training and counseling for herders, animal health, introduction of herders to cashmere production, comparative research, and creation of a database will be carried out.

Module 4. Green loan product development for the textile sector

Topic: Green loan production development

Instructions:

The participants were divided into teams and used the knowledge, guidance and materials related to (1) Handbook for the Management of Environmental and Social Impacts in the Mongolian Wool and Cashmere Industry, (2) Sustainable finance guideline for the textile sector, (3) Textile sector ESG risk assessment tool, (4) Textile sector-specific Green loan criteria and guidance, and (5) Green finance market demand study.

Work as a team to develop the following 3 types of loan products for the textile industry.

Team 1, 2: Green business loan for the textile sector

Team 3,4: Green working capital loan for the textile sector

Team 5,6: Green herder loan

This can be done according to the following form, and you can add new lines and details. The facilitators will present information on the exercises at the end of the first day of the training, and the teams will present to others on the second day of the training the development of loan products resulting from the team's work.

The presentation time for one team is 10 minutes.

1. General information	
Team name:	Check the green loan product:
	☐Green business loan for the textile sector ☐Green working capital loan for the textile sector ☐Green herder loan
Relevant laws and regulations to be followed when developing the loan product:	
For example: ▪ *Civil Code, Banking Law, Law on Non-Bank Financial Activities* ▪ *Law on Deposits, Settlements and Credit Activities of Banks and Authorized Persons and other laws and regulations enacted in accordance with them* ▪ *General loan procedures for banks and NBFIs* ▪ *Procedures for implementing sustainable financing in FIs, etc.*	
Definition of terms related to loan products:	
For example: ▪ *Green equipment means:* ▪ *Raw materials produced in sustainable manner are referred to:* ▪ *Green buildings mean:*	
2. Green purpose/impact	
Determine the purpose of the selected loan product based on the 8 objectives listed in the green loan crtieria for the textile sector.	
3. Loan terms	
▪ *Loan amount* ▪ *Loan duration* ▪ *Interest rate* ▪ *Down payment* ▪ *Loan service fee* ▪ *Term of exemption from principal payment* ▪ *Warranty* ▪ *List of excluded activities*	

4. Requirements for borrowers
▪ *Requirements for legal entities* ▪ *Requirements for business activities* ▪ *Financial capability requirements*
5. Loan collateral
▪ *Type of loan collateral* ▪ *Collateral requirements (depending on the amount, purpose, business activities)*
6. Materials to be submitted by the loan applicant
▪ *Documentation by individual* ▪ *Materials to be submitted by a legal entity* ▪ *Materials related to business activities* ▪ *Materials related to financial capacity* ▪ *Collateral-related documents*
7. Loan analysis/research, disbursement, monitoring, reporting and repayment process
Describe the following steps, and note that concept of a "green" loan product. ▪ *Loan applications* ▪ *Loan research* ▪ *Loan review* ▪ *Committee decision* ▪ *Loan agreement* ▪ *Loan disbursement* ▪ *Preparation and documentation of loan usage* ▪ *Monitoring* ▪ *Loan repayment* ▪ *Reporting*
8. Other units of the organization and foreign stakeholders that need to participate in the public awareness, promotion and effective implementation of the loan product
▪ *Marketing department* ▪ *Credit/loan department* ▪ *Green loan office* ▪ *Risk department* ▪ *Special Assets Office* ▪ *Mongolian Sustainable Finance Association* ▪ *Central Bank of Mongolia* ▪ *Financial Regulatory Commission, etc.*
9. Marketing promotion and strategy plan
▪ *Target customer* ▪ *Marketing channel* ▪ *Activation method* ▪ *Activation plan, etc.*
9. Responsibilities

What are the responsibilities of the following parties?

- *Borrower who received a green loan*
- *Financial institution issued green loan*
- *Other parties*

Sources:

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