

GEF-8 REQUEST FOR CEO CHILD ENDORSEMENT/APPROVAL

TABLE OF CONTENTS

GENERAL CHILD PROJECT INFORMATION	3
Project Summary	3
Child Project Description Overview	5
CHILD PROJECT OUTLINE	8
A. PROJECT RATIONALE	8
B. CHILD PROJECT DESCRIPTION	30
Institutional Arrangement and Coordination with Ongoing Initiatives and Project.....	61
Table On Core Indicators	64
Core Indicators	64
Key Risks	68
C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES	71
D. POLICY REQUIREMENTS	73
Gender Equality and Women's Empowerment:.....	73
Stakeholder Engagement	74
Private Sector	74
Environmental and Social Safeguards	74
E. OTHER REQUIREMENTS	75
Knowledge management	75
Socio-economic Benefits	75
ANNEX A: FINANCING TABLES	76
GEF Financing Table	76
Project Preparation Grant (PPG)	76
Sources of Funds for Country Star Allocation.....	76
Focal Area Elements	77
Confirmed Co-financing for the project, by name and type.....	77
ANNEX B: ENDORSEMENT	77
Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):.....	77
ANNEX C: PROJECT RESULTS FRAMEWORK.....	78
ANNEX D: STATUS OF UTILIZATION OF PROJECT PREPARATION GRANT (PPG)	90
ANNEX E: PROJECT MAP AND COORDINATES	91
ANNEX F: ENVIRONMENTAL AND SOCIAL SAFEGUARDS DOCUMENTS INCLUDING RATING.....	105
ANNEX G: BUDGET TABLE.....	106
ANNEX I: RESPONSES TO PROJECT REVIEWS	112

General Child Project Information

Child Project Title

Eliminating hazardous chemicals from supply chains in Mongolia

Region	GEF Project ID
Mongolia	11171
Country(ies)	Type of Project
Mongolia	FSP
GEF Agency(ies)	GEF Agency Project ID
UNDP	UNDP-9610
Project Executing Entity(s)	Project Executing Type
Ministry for Food, Agriculture and Light Industry of Mongolia	Government
GEF Focal Area (s)	Submission Date
Multi Focal Area	6/27/2024
Type of Trust Fund	Project Duration (Months)
GET	72
GEF Project Grant: (a)	Agency Fee(s) Grant: (b)
3,272,018.00	294,482.00
PPG Amount: (c)	PPG Agency Fee(s): (d)
150,000.00	13,500.00
Total GEF Financing: (a+b+c+d)	Total Co-financing
3730000	40,070,000.00

Project Sector (CCM Only)

Rio Markers

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
Significant Objective 1	No Contribution 0	No Contribution 0	No Contribution 0

Project Summary

Provide a brief summary description of the project, to offer a snapshot of what is being proposed. The summary should include: (i) what is the problem and issues to be addressed? ii) as a child project under a program, explain how the description fits in the broader context of the specific program; (iii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. (max. 250 words, approximately 1/2 page)

The fashion sector in Mongolia uses a considerable amount of hazardous chemicals in their production lines. Throughout the production process, several hazardous wastes are also generated at each stage, including treatment sludge, used mineral salts, contaminated containers, packaging material waste and wastewater.

Under this context, the main objective of this child project is to achieve GEBs to promote transformation change in the cashmere and leather supply chains by replacing resource-intensive chemical processes and materials with sustainable alternatives and by eliminating/reducing chemical waste in Mongolia. It will stimulate innovation in new materials, technologies, and practices and in tandem will create markets and demand for new materials through private sector driven initiatives.

For the fashion sector, namely the textile industry, it will concentrate on the value chain of cashmere and leather processing. These supply chain interventions will concentrate on the best suited producing territories at the national level. The child project will carry out a group of activities aiming at the creation of circular and transparent supply chains that eliminate/reduce these negative impacts on the environment in this industry.

Under Component 1, activities will enhance design sustainability and circularity into cashmere and leather products before the material sourcing, manufacturing and production stages begin. This component tackles the first stage of the supply chain—design and business models—through a focus on promoting innovation and learning, leveraging finance, and multi-stakeholder dialogues and partnerships (throughout). Policy coherence activities should be included as appropriate, particularly in the governance at the national level

For Component 2, the child project will support and scale-up the use of sustainably sourced, innovative, responsibly managed, regenerative, nature-based and recycled/recyclable materials in products in the textile supply chain, specifically, an extensive adoption of innovative, safer, and sustainable production practices in the value chains for animal fibers and leather.

In Component 3, it will support and enable the replacement and/or upgrading of conventional, unsustainable production and manufacturing processes with innovative processes that require less water, energy, hazardous chemicals, conserve natural resources and produce less pollution, emissions and waste.

Under Component 4, it will create the market context necessary to support activities in Components 1, 2 and 3, by creating markets for innovative products and stimulating upstream and downstream behavior change toward more sustainable consumption and use practices.

For Component 5, it will create and implement reverse logistic processes that ensure that circularity designed into products is not wasted, e.g., ensuring that products are reused and repaired, and that recyclable materials and chemical inputs are indeed recycled, and for

Component 6, activities will carry out monitoring and evaluation based on a monitoring strategy with S.M.A.R.T. indicators that incorporate the gender approach, Gender-based Violence (GBV) risk management, Global Environmental Benefits as well as co-benefits.

The project will provide GEBs by improving practices of 85,800 ha of landscapes, avoiding 573,875 metric tons of CO₂, reducing 1,500t of POPs containing products, reducing 2.66 gTEQ persistent organic pollutants to air, and benefiting at least 1,970 women and 1,179 men, with a total of 3,149 beneficiaries.

Child Project Description Overview

Project Objective

Promote transformation change in the cashmere and leather supply chains by replacing resource-intensive chemical processes and materials with sustainable alternatives and by eliminating/reducing chemical waste in Mongolia.

Project Components

Component 1. Regenerative design and circular business models

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
581,700.00	7,123,652.44

Outcome:

Outcome A. Innovative, regenerative products are available and designed using circular business models.

Output:

Output A.1 Strengthened political and technical environment for the application of sustainability and circularity approaches in the design of products in the textile industry supply chain.

Output A.2 Strengthened capacity of public planners, corporations, producers, and academia using circular business models.

Component 2. Innovative materials

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
727,100.00	8,904,259.39

Outcome:

Outcome B. Sustainably sourced, innovative, responsibly managed, recycled and recyclable materials, regenerative or nature-based where possible, are used in products (substituting non-renewable materials).

Output:

Output B.1 A more favorable environment is enabled for innovative materials to substitute non-renewable materials.

Component 3. Cleaner production

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
1,018,000.00	12,466,697.92

Outcome:

Outcome C. Production and manufacturing processes are transformed to require less water, energy and no hazardous chemicals; produce less pollution and waste; and design for zero waste.

Output:

Output C.1 National stakeholders strengthened to support sustainable reductions along most significant supply chains

Component 4. Sustainable consumption

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
261,760.00	3,205,582.37

Outcome:

Outcome D. Markets for innovative products are created and behaviour shifts favour longevity over unnecessary consumption.

Output:

Output D.1 Sustained procurement processes between private suppliers and buyers for more sustainable products and circular business models

Component 5. Post use 9Rs

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
319,958.00	3,918,290.50

Outcome:

Outcome E. Reverse logistics processes are implemented which return products and materials back to manufacturers to reuse or recycle.

Output:

Output E.1 Awareness of project stakeholders raised on the management of Industrial (POPs) Chemicals, related wastes and safer alternatives.

Output E.2 Knowledge management system for best practices and communication platforms at national and global levels established.

M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
200,000.00	2,449,253.03

Outcome:

F. Accountability and adaptive management is ensured to track and maximize program results.

Output:

Output F.1 M&E and adaptive management applied.

Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
Component 1. Regenerative design and circular business models	581,700.00	7,123,652.44
Component 2. Innovative materials	727,100.00	8,904,259.39
Component 3. Cleaner production	1,018,000.00	12,466,697.92
Component 4. Sustainable consumption	261,760.00	3,205,582.37
Component 5. Post use 9Rs	319,958.00	3,918,290.50
M&E	200,000.00	2,449,253.03
Subtotal	3,108,518.00	38,067,735.65
Project Management Cost	163,500.00	2,002,264.35
Total Project Cost (\$)	3,272,018.00	40,070,000.00

Please provide Justification

PMC figure is 5% of the overall GEF grant, corresponding with the approved amount on the Child Project included in the PFD

CHILD PROJECT OUTLINE

A. PROJECT RATIONALE

Describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Since this is a child project under a program, please include an explanation of how the context fits within the specific program agenda. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

Mongolia is a landlocked country in East Asia with an area of 1,564,116 km², bordered by Russia to the north and China to the south, divided into 21 provinces, the Capital City, districts and soums: the “*soum*” is a secondary territorial subdivision. The total population in Mongolia was estimated at 3.45 million people in 2022, and population density is 2 habitats/km². The total territory of Mongolia is administratively divided into 21 aimags (provinces) and the Capital city Ulaanbaatar. Aimags are divided into soums. “Soums” is the secondary administrative units, and soums are divided into “bags”, which are smallest administrative units. Nowadays, 70% of total population is living in urban areas with already 1.6 million people in the capital Ulaanbaatar (NSO 2021). Most of the population is of the Khalkha ethnic group (84.5%), who consider themselves heirs of Genghis Khan. The rest are Kazakhs (3.9%), Dorvod or Dörbet (2.4%), Bayats (1.7%), Buryats (1.3%), Zakhchin (1%), and others (5.2%)^[1]. Much of its territory is covered by grassy steppe, with mountains running to the north and west and the Gobi Desert to the south. Ulaanbaatar is the largest city, the nation’s capital and home to roughly half of the country's population.

The economy of Mongolia has been traditionally based on agriculture and livestock, it also has extensive mineral deposits: copper, coal, molybdenum, tin, tungsten, and gold that account for a large part of its industrial production. The twin shocks of the border closure with the People’s Republic of China (PRC) due to the coronavirus disease (COVID-19) in 2020 and the Russian invasion of Ukraine in 2022 have caused significant stress on Mongolia’s economy. Conditions began to improve during the second half of 2022 when border restrictions eased, allowing for increased exports of its mineral products to the PRC. Growth in 2022 was 4.8% compared to 1.6% in 2021 and –4.6% in 2020. Mongolia’s ongoing economic recovery remains vulnerable to shocks, though the economy is transitioning to a post-pandemic expansion^[2].

Mongolia’s livestock sector has some unique characteristics. Throughout the four seasons of the year, five kinds of livestock (sheep, goat, cattle, horse, and camel) graze in pastures. As indicated by the findings from 2022's year-end livestock census, 190.780 herder families are actively involved in animal husbandry, utilizing natural reserve pastures to manage a herd comprising 71.12 million animals^[3]. There are 305,079 herders in Mongolia,

a herder is a person who cares and manages herd of domestic animals in open pasture throughout the year, representing 8.8% of the population of Mongolia.

Mongolia covers 110.3 million hectares of pastures and 1.7 million hectares of hayfields, stretching across varied landscapes including high mountains, the Khangai region, steppes, and the Gobi region. The pastureland occupies 70.1% of total area and 65% of grasslands have undergone changes and degradation. The combination of pastures and hayfields encompasses a total of 112.0 million hectares, accounting for 97 percent of all agricultural land. Of this, 52.0 million hectares are utilized in winter and spring seasons, while 60.0 million hectares are used in summer and autumn. The grassland area is increasingly smaller due to shifts from pastureland categorization to other uses such as urban infrastructure, mineral mining, agriculture, flood damage, and sand migration. When compared to data in 1964, the current pasture area has shrunk by 10.1 million hectares^[4]. It is estimated that the number of animals suitable for the Mongolian grazing area is 50 million.

Herders traditionally practice animal husbandry using a four-season migration schedule, thus preserving ecological balance, and safeguarding pastoral production from natural risks. However, recent years have seen the impact of global climate change and human factors such as prolonged residence in one location by pastoralists, an increase in pest infestation such as rodents damaging pastures, and animal numbers surpassing the natural load capacity of pastures. Consequently, there has been a decline in the composition of pasture vegetation and a reduction in yield, leading to a disruption in the balance of nature and ecology and intensifying desertification^[5].

Over the past 70 years, the average air temperature in Mongolia increased by 2.24 C and the average annual precipitation declined by 7% (MET 2018). Despite the overall decrease in precipitation, winter snowfall has increased, and more rainfall occurs on days with precipitation (MET 2018). The frequency and magnitude of extreme weather events such as harsh winters (*dzud*), drought, snowstorms and dust storms are increasing. This changing climate has had adverse effects on key sectors such as agriculture, particularly animal husbandry, as well as the natural ecosystem requiring urgent and timely actions.

A *dzud* is an extreme weather event with temperatures dropping to -30°C or lower, with strong winds, heavy snow and ice. The 2023-2024 winter has seen the highest snowfall recorded in the last 49 years. About 90% of the territory of Mongolia is covered with thick layers of snow. As of 26th of February 2024, according to the National Emergency Management Agency (NEMA), report on the loss of livestock reached 2.3 million heads.

Agriculture, especially the livestock sector, is integral to the Mongolian economy and society. Livestock management accounts for nearly 90% of agricultural output; pastoralism, mostly goat and sheep, is a key economic activity and employs a fourth of the Mongolian population (305,079 herders)^[6], providing more

jobs than any other sector^[7]⁷. After the transition to a market economy in 1991, the number of herder families increased from about 147,000 in 1990 to 284,000 in 1995 and then fell steadily to about 190,780 today^[8]⁸.

During this period, the state failed to enforce customary rangeland use rules and norms and this resulted in widespread overgrazing and degradation, conflicts with wildlife habitat, land use disputes, and unsustainable livestock production practices, with the number of livestock head increasing from 22 million heads in 1990 to around 71 million heads in 2022^[9]⁹. According to the survey conducted by the Mongolian Sustainable Cashmere Platform (MSCP), the UNDP, and the Mongolian Wool and Cashmere Suppliers' Association in 2021, 31.8% of herder family income comes from livestock and meat sales. Cashmere sales account for 30.4% of these households' income, while wool sales make up 8.3%, hides and skins 5.5%, and milk and dairy products 15.5%. Salaries and pensions contribute 6.6% of income, with a small portion derived from tourism and other sources^[10]¹⁰.

Mongolia's livestock production system is extremely vulnerable to climate change. Increasingly, extreme weather patterns have affected the livelihoods of herder communities and their economy. Productivity of the animal husbandry sector has decreased due to pastureland degradation and water shortages have exacerbated due to decreased precipitation and warming temperatures.

According to the Mongolia NDC, GHG emissions from the agriculture sector are increasing due to the growing number of livestock, contributing to 41.2% of total GHG emissions by 2010^[11]¹¹. The carbon footprint of the livestock sector shows that 85% of the methane is excreted during the process of chewing, and the remaining 15% comes from animal feces. About 91% of methane emission in Mongolia comes from livestock and 52% of this methane contributes to climate change^[12]¹².

From a biodiversity point of view, there is no policy that aims to limit the growth of livestock numbers, which is impacting land degradation. Instead, there is an increase of the number of economic instruments such as compensation for wool producers and state subsidies for cashmere makers, which in turn has a reverse effect on land because overgrazing results in the reduction or elimination of vegetation cover^[13]¹³, and in consequence, productivity and quality of livestock fell by 2022^[14]¹⁴ and impacting cashmere products' competitiveness.

Herds are pastured according to a nomadic system lacking modern tracking and tracing technologies^[15]¹⁵. Herders use chemicals to wash their cashmere goats (*Capra aegagrus*) and camel, sheep wool and leather produce from cow, sheep and goat; animal slaughter is largely unmechanized, with most slaughter taking place on the farm. All kinds of livestock require dip washing or spraying one or two times per year. For sheep and goat, this procedure is recommended after removing and cutting their wool and cashmere, respectively. No other chemicals are used in livestock directly (except for medicines to combat ectoparasites). Herders slaughter the animals and use salt for conservation of food, raw hide and skin.

The Cashmere and Leather Industry in Mongolia

The cashmere industry: its role in the global supply chain

Cashmere is Mongolia's third-largest export after copper and gold^[16]¹⁶. Cashmere is a natural protein fiber that comes from the cashmere goat. Quality is determined by fiber length, fiber fineness, and color. As a strategic commodity in Mongolia, cashmere is an important pillar of the country's economy; the cashmere sector shares 55% of the light industry sector.

The following figure summarizes -at the national level- the value supply chain of the cashmere industry:

Figure 1. Mongolian cashmere value chain

	RAW MATERIAL PRODUCTION	TRADING OF RAW MATERIAL	PRIMARY PROCESSING	INTEGRATED PROCESSING	SALES AND TRADE	USE, CONSUMPTION	END OF USE, DISPOSAL
ACTIVITIES	Breeding, herding, care, treatment, cashmere harvesting, sorting, storage, transportation	Storage, transportation, sorting, grading, sales	Sorting, grading, scouring, dehairing, storage, sales (domestic and export)	Design, bleaching, dyeing, spinning, weaving, knitting, sewing, finishing	Marketing, advertising, export and domestic sales, branding, storage and shipping	Use, wear and consumption, exchange, maintenance, care, reuse, giving away, donation	Disposal, transportation, landfill
PARTICIPANTS, STAKEHOLDERS	Herder, herder household, herder group, cooperative, PUG, MNFPUG, civil society	Broker (changer), processing company, trader, MCE, shipper, Associations of traders	Primary processors, integrated processors, MWCA, civil society organizations	Spinning plants, integrated processors, MWCA	Stores (company, outlet, brand, online, chains) wholesale buyers, exhibitions	Buyers, domestic and overseas	Second hand shops, waste collection, transportation and disposal entities, companies
FACTS AND FIGURES	298,700 herders, 181,000 herder families, 27.7 mln goats, 11.8 thousand tonnes of raw cashmere in 2020	Traders with 15-20 year history and experience, the Chinese buyers and the market sets the price	45 scouring lines - 2% value addition, In 36 plants 282 dehairing lines - 12% value addition	In 18 plants 49 spinning lines - 3% value addition; 4.4 mln knitted goods production capacity - 38% value addition	21% value addition, 2019 sales USD 481.6 mln, export to 20+ countries USD 416.3 mln, domestic USD 65.3 mln	With proper care cashmere products can withstand 10 years of use lasting for 10+ years	Currently, no commercial scale reuse and/or recycling. At end of use, cashmere products are thrown away
REGULATORY BODIES	MoFALI, MNET, MLSP, Donor and Development agencies	MoFALI, Mongolian Commodity Exchange (MCE)	MoFALI, MNET, WSSA, GASI	MoFALI, CX3YT, GASI	MoFALI, MoF, MOFA, General Authority of Customs	Civil society organizations	Aimag and Ulaanbaatar city administrations

Ref. 2030 Roadmap for the Sustainable Development of Cashmere Sector in Mongolia, page 55.

Over the past 30 years, herders have shifted their focus from quality to quantity when preparing raw materials such as cashmere and leather, which is a noteworthy trend. Less attention to the quality of raw materials leads to a decline in the overall quality of the final product, cashmere garments and leather goods; this may affect the reputation of the product on the market. Because of this behavior, the diameter of cashmere fiber increased from 15.8-16 micron in 1990 to 16.6-16.8 micron in 2023[1]. Approximately 45% of all prepared skins undergo industrial processing, while the remaining 55% are discarded. This is mainly due to the poor quality of the leather raw materials that fail to meet industrial standards[2]. It was found that 21% of the hide damage in live cattle (such as horn scars and wounds) occurred before slaughter, while 76% occurred during slaughter. Similarly, skin damage in live sheep (such as parasitic mites, scabies, and stipa grass) accounted for 77%, with 61% occurring during slaughter. In live goats, skin damage (such as mites, scabies, tattoos, combs, and stipa grass) accounted for 92%, with 76% occurring during slaughter[3].

The production of ready-made garments from raw wool and cashmere requires extensive use of water, energy, chemicals, manpower and a variety of machinery and equipment; hence the manufacturing, processing, transportation, and sales activities all result in greenhouse gas emissions and other significant global environmental impacts. The “*Baseline Assessment Report of Environmental and Social Impact of Mongolian Cashmere and Wool Processing Sector*” determined that while cashmere processors take certain measures to cut energy use, there is inadequate action on optimizing the use of chemicals, water consumption and efficiency, and wastewater treatment[4].

Even though wool and cashmere are safe, reusable, organic, protein fibres with a unique, “smart” ability to absorb carbon dioxide and are fully biodegradable which means they do not accumulate in the environment but break down naturally into harmless compounds; the entire supply chain of cashmere has high environmental impact from pastureland degradation to urban soil and water pollution. Fiber processing uses large amounts of water and electricity along with heavy use of chemicals in fiber and yarn production and assembly stages. About 11,000 tons of cashmere is produced

each year in Mongolia, 80% of it is exported after primary processing; only 20% of total cashmere produced is made into final products locally[5].

Although the tanning industry in Mongolia has made some progress in past decades, it is still based on traditional practices, outdated facilities and inefficient processing equipment. Tanning factories process 80% of rawhide up to the wet blue stage (moist chrome-tanned leather that is neither dried, dyed nor finished), while only 20% is fully processed to finished leather. The sludge and solid waste from the factories is disposed directly into open dumps without any treatments. Consequently, the improper disposal of solid waste, including chrome-containing materials, negatively impacts the environment. Excess unused skins and hides at Emeelt, a major livestock raw material collection center, often end up in open dumps or are discarded in the environment. The low pricing of raw skin and hide (500 MNT for sheep skin, 10,000 MNT for cattle hide) leads herders to sell livestock carcasses without regard for the quality of the skin and hide. This lack of collection from herders has resulted in large dumps of organic waste in the countryside.

A total of 28 tannery units (there is a total of 34 tannery fabrics in Mongolia), three wool processing firms and the Khargia Wastewater Treatment Plant are in the 20th Khoroo Khan-Uul District of Ulaanbaatar City. The site area is approximately 40 hectares with around 9,800 people living and working in this urban area[6]. Due to the presence of air, water, and soil pollution in the vicinity of this area, the rights of the residents to live in a safety and healthy space are not respected. Therefore, a decision has been made to move the tanneries to the periphery of the Ulaanbaatar city, but it has not yet been implemented.

Processing facilities: There are around 312 enterprises including wool, cashmere and leather facilities officially registered across Mongolia, of which 194 plants are wool and cashmere processing factories of different capacities (34 primary scouring, 50 dehairing/combing, 16 spinning, and 94 knitting factories, including 14 industrial hubs, and 80 are small and medium enterprises -SMEs-). Regarding leather facilities, there are 34 tannery factories of different capacities (14 half-processing, 16 deep-processing, and 4 dry treatment workshops), and about 100 small and medium factories operating throughout the country, with most of processing facilities located in Ulaanbaatar.

Global manufacturing: Mongolia accounts for 40% of global cashmere supply for garment production. Most of the produced cashmere is scoured in Mongolia and then exported to China. The main markets for dehaired cashmere include Italy, the UK, and Germany^[7]. In 2020, a total of 85% of Mongolia's scoured cashmere was exported to China and most dehaired cashmere to Italy. As for final cashmere products, exports are primarily to the US, Germany, Korea, Japan, and Belgium. Global fashion brands have a strong interest in sourcing certified sustainable cashmere from Mongolia and thus have strong incentives to engage with national level stakeholders in the cashmere and textile sectors to support herders and processors to improve production and processing practices.

Cashmere exports reached US\$333 million in 2021. Of this, US\$294 million was scoured cashmere, dehaired cashmere exports worth only US\$40 million in 2021. Therefore, there is considerable opportunity to move up the cashmere and wool value chain. In 2021, Mongolia's wool industry (excluding cashmere) exports reached US\$6 million and are expected to grow rapidly as an adjunct to the nation's established cashmere industry.

A study carried out by the World Bank points out that most companies do not produce final products. Over 82 percent of the companies involved in processing cashmere continue to produce intermediate rather than final products. Most intermediate products are exported, although an increasing proportion is supplied to domestic garment manufacturers. Such pattern of sales lowers profitability, given that value added is the largest at the end of the value chain, at the point of sale to the final client[8].

A niche, luxury fabric until the 1980s, cashmere is now a mainstream retail offering, with little awareness among consumers of the damage caused by burgeoning herd sizes, climate change impacts and the use of hazardous chemicals. In response to the increasing consumption demand, the cashmere value chain has distorted to generate unsustainable fiber quantities. In other words, the way pastureland is used, cannot sustain current animal numbers.

The leather industry

Mongolia's livestock sector is made up of five types of cattle grazing, i.e.: cows, horses, camels, sheep, and goats. The leather making operation consists of converting the raw hide or skin, a highly putrescible material, into leather, a stable material, which can be used in the manufacture of a wide range of products[9]. The raw materials for producing leather are obtained during the summer season up until the beginning of winter after the livestock are slaughtered for food consumption and export. In 2022 the country produced about 20 million pieces of leather raw material[10], of which sheepskin accounted for the largest percentage at 49.6%, followed by goat skin at 38.9%, cowhide at 5.3%, horse hide at 3.3%, and camel hide at 0.3%.

Most slaughtering and skinning activities continue to be completed by hand although a new law on slaughtering has been put before the GoM requiring slaughterhouses move to 100% mechanized slaughtering processes. This would help to improve recovery rates of viable hides for processing and may impel demand for relocation given the need to invest in new mechanized facilities.

As of 2021, the leather sector accounted for 0.2% of total industrial production, 0.8% of light industry, and 0.7% of the manufacturing sector respectively[11]. The tanning industry sector includes two sub-sectors, leather processing and leather manufacturing. There are 34 tanneries, mostly registered in Ulaanbaatar and two large plants in Darkhan, and more than 100 small and medium-sized factories and workshops producing leather products in rural areas and, as of January 2022[12], there were a total of 24 operating tanneries. Wet blue, crust, and leather products are used to produce and deliver shoes, bags, and small articles to consumers by factories not operating at full capacity due to the poor quality of the leather raw materials that fail to meet industrial standards. As a result, approximately 45% of all prepared skins undergo industrial processing, while the remaining 55% are discarded[13].

Animal hides and skins are processed into various products, including leather boots, shirts, and sheepskin coats. When hides and skins are salted, normally 25-30% of their weight is made up of semi-finished products, while the rest is waste. The solid leather waste can be divided into non-chromium-tanned waste, such as the waste produced from rawhide trimmings, scraping the remains of meat and fat, and limescale, and chromium-tanned waste, which includes the waste generated from tanning rags and scrapings. Data gathered yearly by the Research and Development Institute of Light Industry of the University of Science and Technology, shows that the processing of hides and skin from 600,000 cattle, 3,600,000 sheep, and 3,000,000 goats results in approximately 4,663 tons of tanned skin waste and 384 tons of untanned fat, rags, and other waste materials[14].

It is worth mentioning that leather processing companies are beginning to focus on technological innovations, the use of water and chemical materials, energy efficiency in production processes, and waste management improvement. This is because they need to adopt eco-friendly production practices and achieve zero waste to meet more sustainable practices to cope with the demand of international markets when exporting their products, for instance:

- There have been attempts to utilize physicochemical and enzymatic methods to treat waste raw materials. However, these solutions were not introduced in practice, as the findings of the research projects only

produced technological instructions, patents, research reports, and further research and development was not conducted.

- It was reported that the private firm *Darklan Nekhi* has been successful in increasing the reuse of chromium and nickel by 15-20% and wastewater by 45-50%[\[15\]](#).
- Leather processing companies are taking the initiative to organize innovative actions such as manufacturing artificial leather and shoe insoles using chromed leather waste.
- They are also producing soap to be used in the soaking and washing steps of leather processing.

Environment impacts of the cashmere and tanning industry

The cashmere wool industry uses more than 40 types of chemicals and 3 to 4 types of dyes (over 40 different colors). In accordance with existing data, wool and cashmere factories collectively utilize 344 tons of dyes and chemicals annually. Notably, 42% of these substances are sourced from Europe, with the remaining majority originating from China. It is noteworthy that primary scouring factories exclusively use soap produced in China. The tannery industry uses 70 types of chemicals and dyes. Quantitative data cannot be sourced due to insufficient registration and consolidated data reports, which is a major hurdle for the sustainability of this industry from the lens of chemicals.

According to data from the Ministry of Environment and Tourism (MET), 26 companies in the leather, wool, and cashmere industries have received permits for the import and use of chemicals and related products; the consumption of substances used in the leather industry is 53.4% of pure chemicals. In the case of the wool and cashmere industries, the consumption of soap accounts for 30.8% of the total substances used, and pure chemicals account for 26.3%.

Pesticides: Although the use of POP pesticides has been banned in Mongolia since 1997, traces can still be found in soil, water, and air. This is likely because the residues of POP pesticides used in the past were transported from the original source through various routes and spread through the air. The results of an analysis conducted on the sludge of the Central Wastewater Treatment Plant of Ulaanbaatar (WWTP) showed that the sludge is polluted with the POP-pesticide HCH (hexachlorocyclohexane) at a concentration of 1.87 mg/kg (dry weight of sludge). This may have been caused by wool, cashmere, and leather from animals grazing in areas contaminated with POP pesticides, which were then supplied and processed in Ulaanbaatar's cashmere wool and leather processing plants.

PCDD/PCDF: In addition, dioxins (PCDDs) and furans (PCDFs) are unintentionally POPs produced from various processes involving combustion of waste (78.8%) and chemical production, as a result, approximately 139 grams of TEQ of dioxins/furans are generated annually in Mongolia.

Primary processing and dyeing/bleaching consume great amount of water and chemicals because natural fibers require more processing steps than artificial fibers. Certain dyes from popular dye ranges fall under pre-metalized and azo dye classes prohibited by some organic standards. Release of dioxins and furans (PCDD/PCDF) during chemical treatment for cashmere production is an issue. Through processing, some forms of chlorine are used and to some extent released during the dry-cleaning process, so PCDD/PCDF chemicals are extracted from the textiles and become a source of chemical pollution. The gathered inventory for cashmere wool, tanning process and many other kinds of manufacturing goods in the country shows that the annual release from this source is 10.65 gTEQ, which is 7.7% of the total release.

U-POPs: For U-POPs release, according to the 2012 source of PCDD/PCDF inventory, approximately 139 grams of TEQ dioxins/furans are generated annually in Mongolia. Of this, 42.6% of total dioxin/furan emissions come from open burning, 29.7% from incineration of medical waste, and 6.6% from waste disposal. In other words, 78.8% of the sources of dioxin/furan emissions in Mongolia are related to waste.

The following causes of dioxin (PCDD) and furan (PCDF) contamination from leather and cashmere wool production have been identified in the '*Best Available Techniques and Best Environmental Practice (BAT/BEP)*' handbook issued by UNEP and the Stockholm Convention Secretariat[16]. PCDD/PCDF contamination through introduction of dioxin-contaminated chemicals into the production chain and new formation of PCDD/PCDF in thermal disposal operations of production-specific wastes.

The reason for detecting dioxin in the chemicals is due to the fact that PCDD/PCDF unintentionally produced as by-product in the production process of these substances. Chemicals known to be contaminated with PCDD/PCDF or other unintentional POPs are used for different purposes and include the chemicals listed below (UNEP 2013):

- **Pentachlorophenol** (listed in Annex 'A' of the Stockholm Convention) and **chloronitrofen** pesticides used to protect the quality of wool, synthetic materials, and leather raw materials.
- Dyes based on **dioxazines** or **phthalocyanines**.
- Triclosan used as biocides;
- Short- and medium-chain chlorinated paraffins used as flame retardant;
- Secondary HCl used for neutralizing and cleaning process.

The sludge derived from wastewater treatment and solid waste containing dioxin-contaminated substances, along with other halogenated compounds, represent potential origin of PCDD/PCDF formation during the burning or incineration process.

Hexa- and Pentabromodiphenyl ether ('Annex A') and Hexabromocyclododecane ('Annex A') POPs referred to by the Stockholm Convention have been used internationally to make textiles, carpets, and fire-resistant fabrics. All halogenated flame retardants are involved in the formation of PCDD/PCDF when incinerated (European Commission 2022). It is worth noting that PFOS (perfluorooctane sulfonate) and perfluorooctane sulfonyl fluoride, which were commonly used to prevent water and oil penetration in carpets, textile products, and leather, are also substances restricted by the Stockholm Convention. However, there is no available information on the usage of these particular substances in Mongolia.

Chromium: Overall, for leather processing, thirty-four (34) tannery factories process 3,600,000 sheep skin, 2,900,000 goat skin, 20,000 camel skin, and 400,000 cowhide annually. Approximately 45 percent of the leather coming to the factory from the herders meets quality requirements, with the remaining raw material thrown away due to damage caused during slaughter. 60-70% of the leather that meets the initial requirements of the factory is semi-processed to produce wet-blue, and the remaining 30-40% is deep-processed and tanned by chromium to produce the final product.

According to data from the General Department of Customs, companies imported 3,560 tons of chromium compounds from China for tanning industry needs from 2018 to 2023. Chromium compounds account for 4.4% of the total chemical substances used by the tanneries. The average concentration of total chromium in the wastewater from tannery fabrics is 24 ppm, with levels ranging from 1 to 67 ppm. It does not meet the requirement of National standard, which set 1 ppm (MNS6561: 2016. Environment-Water quality. Effluent water for sewerage network. General requirement).

The result of latest survey shows that soil of 15.5 ha of industrial zone in Ulaanbaatar where registered 28 tannery fabrics and Khargia treatment plant is contaminated with chromium. The average concentration of chromium is determined 375.9 ppm.

Waste: The Mongolian Environmental Statistical Database reveals that in 2022, 2.1 million tons of waste were disposed at 398 waste collection sites nationwide. According to the records, of the 286,300 tons of hazardous waste generated, 3,244 tons was disposed of by landfilling, 291.1 tons by biological method, 1,998 tons by chemical and physical methods and 2,411 tons by incineration in designated facilities[17]¹⁷.

Wastewater: It is estimated that 10 cashmere factories operating in Mongolia use about 60 tons of chemical dyes and an average of about 850 tons of chemicals of 20 different types when dyeing and bleaching 2,600 tons of cashmere per year at full capacity; about 800,000 cubic meters of 100% fresh groundwater will be used for this chemical treatment.

The Water Supply and Sewerage Authority (WSSA) statistics indicate that amount of freshwater consumption by 21 cashmere processing factories in Ulaanbaatar was 133,191 m³ in 2020. Treatment of wastewater from the leather industry is a major challenge because leather is one of the main industries in Mongolia, while most of the leather factories are small and medium-sized enterprises, and it is difficult for them to secure funds to install pre-treatment facilities. If the inability to set up pre-treatment facilities continues, factories will be forced to stop operations to fully comply with environmental regulations[18]¹⁸.

According to the Wastewater Treatment Law, processing industries are required to have a pretreatment facility to reduce pressure to the city Central Wastewater Treatment Plant, managed by WSSA. However, none of them has established pretreatment plants at factory level arguing that they have already paid a canon for their wastewater discharge. Even though Mongolia has a legislative framework, enforcement is poor in the implementation stage due to the absence or incompleteness of some regulations. As a result, the cluster industrial area of Ulaanbaatar is highly polluted by wastewater discharged from the tannery facilities, without sufficient wastewater pre-treatment operations. This context is even more complex due to the lack of monitoring and oversight of wastewater discharged.

Until 2022, wastewater from the industrial area is not treated individually at each factory but is collectively treated at the plant “Khargia” Industrial Wastewater Pretreatment Plant, and then discharged into Central Wastewater Treatment Plant.

Volatile Organic Compounds (VOCs), ammonia and hydrogen sulfide: Also, VOCs released from leather tanning processes contribute to air pollution, leading to respiratory problems and other health issues for workers and nearby residents. The beamhouse, re-tanning and fat-liquoring, Coating stages of leather manufacturing are main sources of VOCs including kerosene, alkane, low molecular alcohol; organic amines, *mercapto* compounds, formic acid, formaldehyde or glutaraldehyde; acetone, N-dimethylformamide, N-methyl pyrrolidone, etc. It is important to note that

most of the waste collected in the country is sent for disposal. About 93.5% of waste is disposed of by burial^[19]¹⁹. Solid waste from the tanning industry, such as hair and flesh, can release methane and other harmful gases as they decompose, also contributing to greenhouse gas emissions.

In summary, the leather industrial processing value link needs a fundamental upgrade. As pointed out by the WB study, there are a few high-quality leather processing centers in Mongolia. Of the 34 large factories nationwide, 16 carry out final processing, only two produce final leather products while the remainder engage in semi-final solutions, and all but two are in Ulaanbaatar, with a high percentage of low-quality production linked to resilience, odor and skin damage^[20]²⁰.

The following Table summarizes -at the national level- the supply chain of this industry for this child project:

Table 1. Supply chain of cashmere and leather in Mongolia

In-country context / Material sourcing	Livestock[1]	Apparel Processing	
		Cashmere/Wool	Leather (cow, sheep, and goat)
Supply of raw materials[2]			
Provinces/regions	21 aimags/330 soums		
Pastureland (Ha)	109 million		
Total livestock (million heads, 2022)	71.1	45,824 tons	19.23 million pieces
		raw material	(raw skins, hides)
Sheep (million heads, 2022)	32.7	34,709 tons	9.64 million pieces
		(raw sheep wool)	(raw skins)
Goat (million heads, 2022)	27.6	9,672 tons	7.89 million pieces
		(raw cashmere)	(raw skins)
Cattle (million heads, 2022)	5.5	-	1.03 million pieces
			(raw hides)
Horse (million heads, 2022)	4.8	-	0.61 million pieces
			(raw hides)
Camel (million heads, 2022)	0.5	1,443 tons	0.06 million pieces
		(raw camel wool)	(raw hides)
Number of herders (2022)	305,079	N.A.	N.A.
Male (59,6%)	181,827	N.A.	N.A.
(estimated as of 2022)			
Female (40,4%)	123,252	N.A.	N.A.
Main chemical inputs	Animal dip washing insecticides:	-	Salts

	maybe contain POP-pesticides such as HCH, DDT		
Wastes (million tons)	-	-	-
Solid waste		There may be dust and manure in the prepared raw cashmere wool	Horns, animal legs and hooves are discarded during animal slaughter
Water discharge	Wastewater from animal dip washing process	-	-
Industrial processing[3]			
Main processing cities		Ulaanbaatar	Ulaanbaatar and Darkhan
Processing factories		312 plants	
Cashmere		178	-
-Primary and Secondary processing		84	
-Knitting		94	
Leather		-	134
-Tanning			34
-Leather goods processing			100
Labor (people)	-	10,055	4,225
Male	-	1,508	1,478
Female	-	8,547	2,746
Main chemical inputs		Detergents, dyes, acids, bases, inorganic salts, hydrogen peroxide, ammonium hydroxide, auxiliaries, blending oils, tetrachloroethylene	Bases, acids, sodium sulfide, aldehydes, chromium salts, ammonium salts, biocides, enzymes, dyes
Hazardous and restricted chemicals to watch out for monitoring		PCDD/PCDFs, POP-pesticides, PBDEs, Pentachlorophenol, PFOS and PFOA, Azo colorants, Formaldehyde etc.	PCDD/PCDFs, Pentachlorophenol, SCCPs, Chromium, Aldehydes
Main energy inputs	-	Coal-based combined heat and power (CHP)	
Production (2022)		1,2 million pieces (garments)	105.8 thousand pieces leather (Sheep)
		6,300 tons scoured cashmere (exported)	1,047 thousand pieces leather (Goat)
		919.5 tons dehaired cashmere (809 tons exported)	138.4 thousand pieces leather (Cattle)
		2,168 tons scoured wool	
Wastes (tons)	-	823,597	1,156,115
Municipal solid waste	-	23,597	17,115
Water discharge	-	800,000	1,139,000
Waste processing	-	Landfills, open dumps, wastewater discharge	
Manufacturing[4]			
Local factories	-	Ulaanbaatar and Darkhan (15%)	
		Global markets (85%)	
Production (USDM)	-	481.6	7.154
Export	-	416.3	6.190
Domestic	-	65.3	0.964

Objective of the child project:

The development challenge is to overcome a sectorial context that encompasses a series of economic, social, technological and political gaps that delay the national capacity in Mongolia to address the significant environmental impacts of the cashmere and leather sector, specifically, to eliminate harmful/hazardous chemicals and toxic waste of highest impact in the supply chain, under an environmentally sound management approach.

The main objective of this Full-Size Project is to promote transformation change in the cashmere and leather supply chains by replacing resource-intensive chemical processes and materials with sustainable alternatives and by eliminating/reducing chemical waste in Mongolia.

2.7 Barriers to Systemic Transformation in the Target Sector

The analysis of the development challenge carried out at the PPG stage for the preparation of the problem tree has distinguished three different levels of causes for eliminating hazardous chemicals from the cashmere and tannery supply chain within the framework of national and international guidelines on chemical substances and hazardous waste management, i.e.: immediate causes[1], underlying causes[2] and structural/root causes[3].

The Programme Framework Document (PFD) provides a guiding process for the identification and analysis of key systems drivers in the cashmere and leather sector, setting up the foundation for the analysis of this environmental challenge for Mongolia, in four dimensions, i.e.: *a) Economic, b) Social, c) Technological, d) Political* and *e) Environmental*.

A group of immediate causes may delay compliance with the commitments of the corresponding MEAs and will support over the long-term the need for transformative changes to this sector, a fundamental reasoning for the project. Initially, the following four (4) immediate causes have been identified at the PPG stage as key drivers of global environmental degradation of global environmental degradation and they need to be tackled by the project:

- i. Need to enhance financial opportunities to create green supply chains.
- ii. Limited enforcement of the existing policies and regulations for the sound elimination of hazardous chemicals from supply chains.
- iii. Essential need to develop innovative, cost-efficient, materials and processes.
- iv. Lack of multi-sectorial communication and outreach information of sustainable alternatives.

In addition, during the PPG, discussions and analysis with key stakeholders also determined the need to integrate a group of environmental barriers, as follows:

- v. The need to reduce the use hazardous chemicals and reduce the waste of raw materials.

Five underlying barriers and their root causes were also identified as the basis of the immediate causes mentioned above. These underlying causes, that prevent the country from achieving the environmentally sound management along the textile supply chain in Mongolia, are determined by their root causes in the following manner:

a) Economic drivers

Underlying cause: The underlying cause related to the “*economic driver*”, for the fashion industry, is the need for constant growth in this sector, which fuels increased consumption rates.

This condition is determined by a group of root causes as follows:

➤ Lack of accessible finance

Investment in innovation is considered as a high-risk financial activity by commercial lenders, among other reasons, because a wide variety of material suppliers in the informal sector do not keep records of their cash flows, with insufficient understanding of bank regulations for credits or other financial products, hampering their access to finance. Financial challenges in the cashmere and leather industries, particularly in value-added product manufacturing, often demand substantial financial investment for technology innovations and updated equipment.

Access to financing is a great challenge, particularly for herders and producers facing high interest rates and short loan periods stranding SMEs. Also, domestic industries have limited financial capacity to purchase all the raw cashmere produced locally and invest in spinning, knitting, and weaving, therefore most raw cashmere is traded with low value addition with negative environmental impacts that are not internalized.

➤ Traceability of the products origin is difficult

This incentivizes short-term gains and cross-cutting measures that lead to unsustainable practices, such as labor exploitation, inefficient energy processes, lack of wastewater treatment, land degradation, and unaccountability of externalities. In addition, desperate to remain competitive, the availability of cheaper imported textiles from other Asian countries has hindered the sector’s capacity to green Mongolian’s supply chain.

➤ Loss of raw material preparation and quality check systems

Inconsistency, poor quality of raw materials, and an unstable supply chain significantly affect the growth of factories and overall development of an industry in the cashmere and leather sectors.

➤ Weak market integration of small-scale herders

Approximately 57% of herder families own a small number of livestock, specifically fewer than 200 herds. They face more difficulties in accessing markets, services, and achieving market integration. The inherent seasonality of livestock production, coupled with low volumes and the absence of a logistical system, results in consistently low returns for herders in the final market values. The market power

superiority of processors and traders allows them to pay a fixed price to herders for animals and fiber without quality differentiation.

➤ Low-level of awareness and information outreach for herders

This is critical to the micro and SME stakeholders engaged in the supply chain due to a lack of systemic organization.

Even though there exist various knowledge management platforms at the global level implemented by large textile initiatives and alliances containing valuable information; most are limited by a lack of specific information on chemicals and waste, typically at the expense of more information on climate change and biodiversity loss.

➤ Price fluctuations and dependence on intermediaries and buyers

This barrier is related to the high dependence on foreign markets. In this regard, there is a need for information to cashmere and leather producers about the preferences of consumers in global markets.

➤ Lack of financial incentives for innovation

The lack of financial and fiscal incentives for innovation limits the willingness introduce sustainably sourced of alternative, traditional materials and best practices. Innovative finance related to the scale up of materials and greening manufacturing practices is also limited.

There is a clear linkage between pastureland management and cashmere quality. For instance, there is a need to improve the livelihoods of herder communities and the quality of raw cashmere by providing impact incentives from potential buyers, while preserving the ecosystem and resource of grassland through controlling the number of goats.

b) Social drivers

Underlying cause: The underlying cause related to the “*social driver*” faces the phenomenon for unsustainable polluting processes and the lack of consideration of occupational health.

This social condition is determined by a group of root causes as follows:

➤ Lack of knowledge

The lack of knowledge of supply chain actors on why changes to fashion supply chains are necessary, for instance, most of the export is raw cashmere, as well as the lack of knowledge of existing alternatives to POPs, like Chlocresol (CMK), Methyl thiocyanate (TCMTB), Octylisothiazolinone (OIT), and Phenylphenol (oPP) ^[4].

➤ High dependence on global trends

Some challenges are outside its own direct influence such as global fashion designers and brands which drive the use of certain materials through their designs, influenced also by global unsustainable consumption patterns.

➤ Adverse social and cultural norms.

In patriarchal societies, where men are the primarily owners of assets, it is required that women and girls defer to men, therefore it is difficult for them to participate in the digital economy. However, it is difficult not only woman and girls but also for men and boys to participate in the digital economy due to lack of digital development in general.

➤ Critical need to mainstreaming gender

Low wages, high informality, a lack of skill tasks, together with a wide variety of social and cultural issues for women working on the fashion sector, puts their human rights at risk and greatly limit gender equality since most of the labor force is made up of women and young people.

➤ Limited awareness at the processing factory workers and community level

Local communities, especially herders, are not aware of the possibilities of the collection and use of waste and the role they can play in the transition towards more responsible business practices.

c) Technological drivers

Underlying cause: The underlying cause related to the “*technological driver*” shows a weak technical capacity, due to a wide range of root barriers:

➤ Uncertain market outcomes

Technological readiness is often impacted by uncertain market outcomes, with changing regulations and unclear legal environment playing a key role in sustaining market demand.

➤ Lack of Best Available Technologies (BAT) and innovative technologies.

In general, there is not enough good data collection for nature-based, sustainable, financially viable solutions for the cashmere and leather producing sector through the lens of chemicals.

For instance, the difficulty of measuring pastureland quality at the herder level due to the common nature of the pastureland and the irregular monitoring of vegetation cover at a granular level. Also, at the industrial level, chemicals are used to dye and bleach the cashmere in the processing facilities but there is no control or regulation of unintentionally produced chemicals such as PFOs resistant to typical environmental degradation processes.

➤ Insufficient qualified human resources

This root barrier includes the lack of knowledge and low levels of consumer education, which limits the stakeholder’s capacity to assess and implement 9Rs actions to address the negative effects on other sectors such as environment, health, water and energy. This barrier also embraces the lack of qualified and trained human resources for fashion design and other links downstream in the supply chain. For instance, the leather finished products made locally do not always comply with international quality standards.

MOFALI also highlighted the lack of breeding specialists and reduced breeding units, and the private sector has raised that the lack of qualified professionals (mechanical, textile, and IT engineers) is affecting producers' capacity, particularly of SMEs.

Also, at the herder's level, more capacity building is needed in terms of sustainable/regenerative practices, animal welfare, breeding, herd management, rangeland management, financial management, collaboration across herders as well as at the middlemen level because they play a fundamental role in the cashmere value chain as connectors between herders and producers.

➤ Limited infrastructure and lack of investment

An important barrier to circularity is outdated infrastructure and inadequate logistics to segregate recyclable materials, a condition nationwide that limits reverse logistics and restricts recovery.

For instance:

- Although raw material depends on the domestic market within the sector, there is a lot of dependency on imports due to consumption of chemical substances and products for processing.
- One key challenge is wastewater from primary processing plants with high turbidity, Chemical Oxygen Demand (COD) and pH values can be out of permitted ranges. These plants must comply with national standards related to pollution control and requirements on disposed wastewater. However, across the processing industry wastewater treatment practices are found to be largely inadequate, outdated, or non-existent.
- Lack of monitoring of environmental performance of the cashmere supply chain and tannery. The technology for processing leather is outdated, requires a high level of maintenance and creates environmental hazards such as noise, health, safety risks, etc., aggravated by the lack of laboratory capacity and trained human resources.

➤ Lack of awareness of POPs/U-POPs impacts

This barrier encompasses different aspects, such as:

- Unknown impacts of releases from manufacturing processes on health and environment.
- Weak knowledge in the handling, storage and utilization of hazardous chemicals waste in cashmere wool and leather industry as well as green manufacturing principles (both at the management level and at the technology level)
- Poor development of waste recycling technology. There are some technologies for utilization of protein rich wastes from cashmere and leather industries such as fertilizer, gelatin, collagen hydrolysates, but their production is not yet properly established.
- Outdated technology. The technology used in the leather industry is chrome tanning, and does not satisfy to the the requirements of the European Union on chromium VI content (3 mg/kg or 0.0003% by weight) in leather products.

➤ Limited digitalization for micro and SMEs

Lack of affordability of digital tools for the micro and SMEs to boost digitalization for innovative design for both, men and women. This is critical because most of the entrepreneurial composition of the sector in Mongolia corresponds to micro, small and medium enterprises.

d) Political drivers

Underlying cause: The underlying cause related to the “*political driver*”, for the fashion industry, is the weak regulatory framework and enforcement.

This condition is determined by a group of root causes as follows:

➤ Lack of political will and enforcement

At a sectoral level, there are policies focused on production and trade, and more recently, on climate change, but not on environmental hazards from the value chain, such as the harmful use of chemicals and disposal of waste.

This industry is highly linear, characterized by long, complex and fragmented value chains that involve sequential processes of production, design, manufacturing, distribution, consumption which happens mostly overseas. Therefore, there is no connection between consumers with Mongolian government agencies for a more bottom-up informed policies.

➤ Lack of ambitious national strategies

Multi-stakeholder approach is new and difficult for some sectors to become involved with. Each link of the chain has needs, so the importance of effective collaboration is critical—how to design a systemic approach that brings the whole supply chain together and or the key actors to address the issue at hand is fundamental.

This obscures transparency also for a coherent policy and regulatory framework in a context to align policies and planning at sectoral ministries among MOFALI (Pasture Law), MET (Soil Protection Law) and MOE (exports), that leads to duplication of efforts, fragmentation and contradicting “messages” in terms of overall herd management, animal composition, increase/decrease of total number of animals.

➤ Lack of regulations on exported leather cashmere textiles

At the farm level, there are currently no standard requirements regulating goat herd sizes for the cashmere trade, leading to continuing imbalances -where quantity sacrifices quality- due to the increasing number of goats to meet growing cashmere demand.

➤ Low awareness of environmental and industrial laws and regulations

This creates daunting challenges for national and local authorities to regulate this sector because knowledge and understanding on greening the production cycle is low.

- Lack of data collection capacity for Life Cycle Assessments (LCA)^[5] and policy making

There are no specific inventories or baselines for the chemicals used in the cashmere and leather sector, a condition that limits the basis to propose public policy actions to eliminate/reduce the use of hazardous chemicals in the industry.

e) Environmental drivers

Underlying cause: The underlying cause related to the “*environmental driver*”, for the fashion industry, is the decrease in the quality of raw materials.

This condition is determined by a group of root causes as follows:

- Loss of welfare of the animals

The increased greasiness in livestock fat, stemming from pasture degradation during recent years, poses challenges for both leather quality and heightened chemical usage in tannery process.

- Overgrazing and imbalance in livestock

The challenge is an excess of animals with respect to the available grazing land (estimated at 8 million excess head of goats per year over the available grazing land). Subsidies offered by the Government of Mongolia to herdsmen create incentives for overgrazing, jeopardizing the quality of Mongolia’s cashmere output. This is the most pressing challenge according to MOFALI and MET: land degradation limiting pastureland, especially in the eastern part of the country.

Mongolia’s medium-term ability to increase the productivity and profitability of wool and cashmere will depend, in part, on its ability to increase the amount of usable fleece yielded per kilo of raw produce^[6].

The Mongolian sustainable cashmere ‘branding’ needs to be improved, not only for exporting of raw cashmere but also for cashmere garments, currently, the quality of the product is not correlated with appropriate pricing.

- Other challenges

- Impacts due to climate change.
- Land degradation.
- Pollution from raw material waste dumping.
- Increase in the frequency of *dzud* drought.

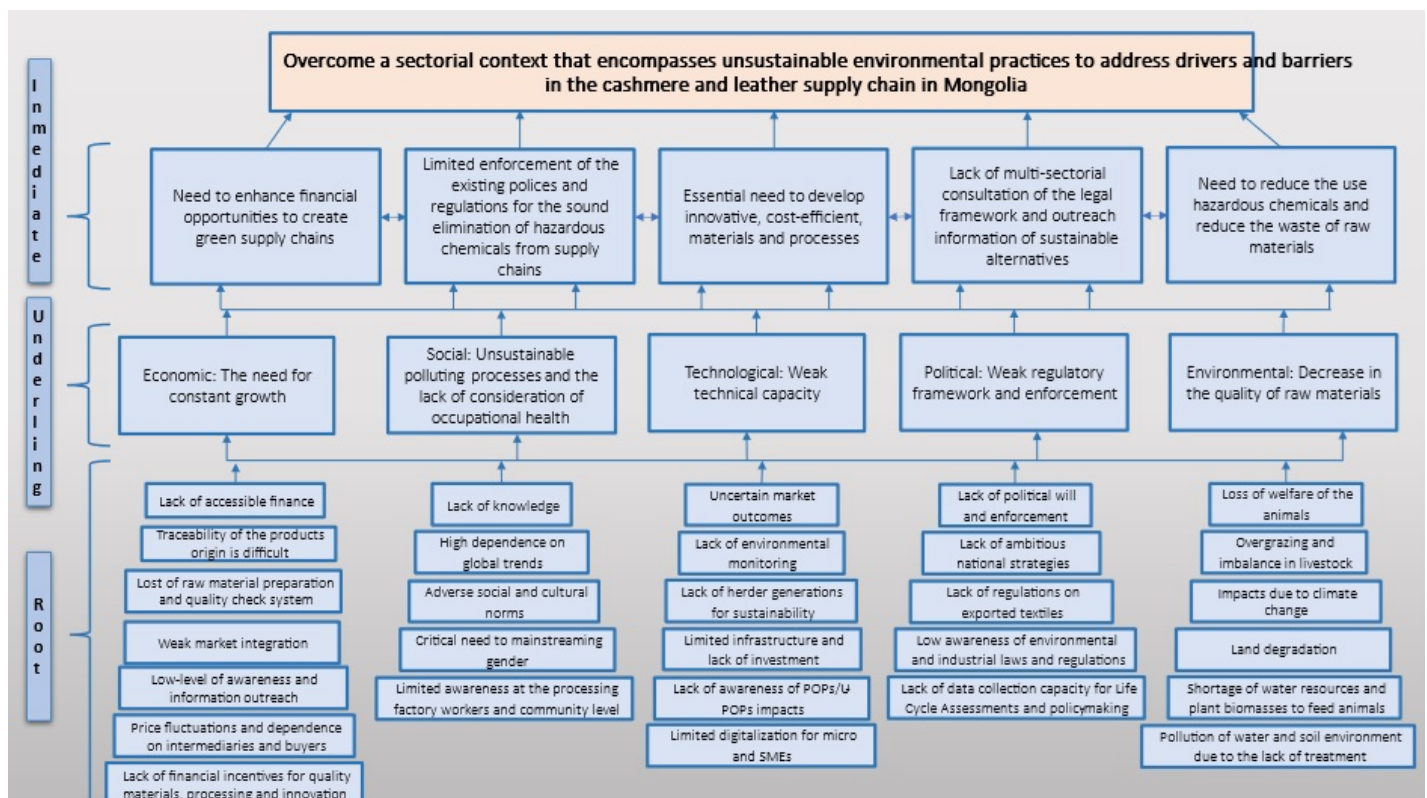
- Decrease water resources and quality due to the lack of treatment.

1. The above root causes manifest themselves in four major underlying causes, i.e.: *economic, social, technological, political* and *environmental*, that prevents the country from achieving an environmentally sound management aimed at **eliminating hazardous chemicals from supply chains** in the cashmere and leather sector in Mongolia, which guides the intervention principles of this FSP following the guiding process sated in the Programme Framework Document (PFD).

Business as usual situation

2. The above set of shortfalls is summarized in Figure 2 below.

Figure 2. Theory of Change: Problem Tree Analysis



To achieve the planned outputs and outcomes of this FSP, it will be necessary to engage various stakeholders that will be critical to deliver on the GEBs, i.e.: national and sub-national authorities, mainly the Ministry of Environment. They will be the responsible parties for the execution of this child project, together with regional and municipal governments, whose main interest is the achievement of the project's overarching objective of

development by carrying out the necessary implementation of national policies, under the mandate of the MEAs already ratified by Mongolia.

The implementation of this child project requires the active participation of numerous and diverse allies such as private companies committed to becoming greener partners and are already engaged in the cotton, bamboo and abaca markets, financial institutions, both private and state-driven financiers, universities actively performing research and development at the national level, NGOs that offer learning spaces and generate synergies with all actors in both supply chains as well as integrating gender equality, Gender-based Violence prevention, and socio-economic approaches.

There is a group of GEF-financed projects and other initiatives currently under implementation related to the development challenge this child project is also addressing, which could provide additional support to strengthen this institutional partnership approach in the Mongolian context. Thanks to the involvement of the same institutional partners in some of them, under the leadership of the Ministry of Environment, it is expected that the achievement of the outcomes for this FSP will be of mutual benefit. Specifically, this FSP will ensure coordination and count on the capacity built and knowledge gathered from the concurrent projects that are already in progress.

[1] Regenerative design makes sure the built environment has a net positive impact on natural systems.

[2] Circular business model articulates the logic of how a system/process/product creates, offers, and delivers value to its broader range of stakeholders while minimizing ecological and social costs.

[3] 9Rs stands for Refuse, Rethink, Reduce, Reuse, Repair, Refurbish, Remanufacture, Repurpose, Recycle and Recover.

[4] POPs chemical substances that persist in the environment, bioaccumulate through the food web, and pose a risk of causing adverse effects to human health and the environment.

[1] **Immediate causes** are the most evident manifestation of the development challenge and determine the status of the problem to be analyzed.

[2] **Underlying causes** are the consequence of a lack of policies and laws, institutional factors and unavailability of resources.

[3] **Root causes** are pervasive and long-standing development performance issues, often related to historical and cultural legacies, which affect development outcomes through attitudes and behavior at different levels, often regardless of policy and legislative changes.

[4] Section VI: Guidance/guidelines by source category: Source categories in Part III of Annex C.

[5] LCA: It is a methodology that measures the environmental impact of a product or service.

[6] World Bank. Page 31.

[1] 2030 Roadmap.

[2] Materials include the needed inputs for the whole production cycle of cashmere and leather.

[3] Industrial processing for the textile industry includes production of fibers, yarns, dyes, print and fabrics produced from cashmere, leather and wool from other camelids.

[4] Manufacturing for the textile industry includes design, print, manufacturing of clothing and other consumer products made of cashmere, leather and wool from other camelids.

[1] <https://www.montsame.mn/mn/read/281041>

[2] MFALI, 2020

[3] Report of Research and Development Center of the MFALI, 2022

[4] 2030 Roadmap for the Sustainable Development of Cashmere Sector in Mongolia, page 7.

[5] <https://theubposts.com/mongolia-walked-one-step-back-from-advancing-cashmere-industry-development/>

[6] Soil and Water sampling and Lab Analysis in Khan-Uul District, Ulaanbaatar, Mongolia. Report prepared by GMIT, Mongolia. 2023, P.7-8

[7] <https://www.gschneider.com/annual-cashmere-market-report-2020/>

[8] World Bank, Page 36.

[9] SECTION VI. Guidelines/Guidance by source category: Part III of Annex C, page 10.

[10] Circular on the Agricultural Sector' Statistical Yearbook of Mongolia, 2022

[11] NSO, 2022, Statistical Yearbook of Mongolia-2021, page 63.

[12] Coordination Department of the Ministry of Food, Agriculture, and Light Industry (2020).

[13] MOFALI, 2020.

[14] S. Dashbal, A. Gantumur (2009). Ecological problems of leather and fur production. Ulaanbaatar. p. 20-21.

[15] Activity report of 'Darkhan Nekhi' JSC, 2017.

[16] Guidelines on BAT and Guidance on BEP. Part III Source category (j): Textile and leather dyeing (with chloranil) and finishing (with alkaline extraction), 2023.

[17] https://eic.mn/statistic/statistics_box.php

[18] Further information, please refer to Data Collection Survey for Environmental Infrastructure Development in Ulaanbaatar City, Mongolia, JICA Final Report, April 2021.

[19] STeP EcoLab. GAP ANALYSIS on the Regulatory Framework the Sustainable Textile Production and Eco-Labeling, Mongolia page 16.

[20] World Bank. Page 46.

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- [1] https://es.wikipedia.org/wiki/Etnias_de_Mongolia
 - [2] <https://www.adb.org/where-we-work/mongolia/overview>
 - [3] <https://www.1212.mn/stat>
 - [4] <https://mofa.gov.mn/branch/maa/616f8fba73bc4a5fc70f21f3>
 - [5] <https://mofa.gov.mn/branch/maa/616f8fba73bc4a5fc70f21f3>
 - [6] Mongolian Statistical Yearbook – 2022, Page 10; 630
 - [7] 2030 Roadmap, page 08.
 - [8] <https://www.1212.mn/mn/statistic> Statistics site of Mongolia
 - [9] <https://english.news.cn/20221228/afab2f9efeb14443bee215f1b5419c2b/c.html>
 - [10] Enhancing Livestock Products Commodity Exchange: Recommendations from a Study on Middlemen Activity in Raw Material Preparation (2023 Report).
 - [11] <https://unfccc.int/sites/default/files/NDC/2022-06/First%20Submission%20of%20Mongolia%27s%20NDC.pdf>
 - [12] 2030 Roadmap, page 08.
 - [13] WWF, UNEP, GEF, Ministry of Environment. National Biodiversity Program 2015-2025.
 - [14] 2030 Roadmap, page 22.
 - [15] “World Bank. 2019. Mongolia Central Economic Corridor Assessment, A Value Chain Analysis of the Cashmere-Wool, Meat, and Leather Industries. © World Bank.”, Page 39.
 - [16] <https://www.gschneider.com/annual-cashmere-market-report-2019/>

B. CHILD PROJECT DESCRIPTION

This section asks for a theory of change as part of a joined-up description of the project as a whole, including how it addresses priorities related to the specific program, and how it will benefit from the coordination platform. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF’s policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the guidance document. (Approximately 3-5 pages) see guidance here

The integrated approach proposed for the Mongolia child project fully responds to and reflects the four transformation levers identified by the GEF Eliminating hazardous chemicals from supply chains (financial leverage, governance and policy, innovation and learning, and multi-stakeholder dialogues) to promote a transformational change in the fashion and leather industries by replacing resource-intensive processes and materials with sustainable alternatives and creating and strengthening circular and transparent supply chains, as shown in the Supply Chains Integrated Program’s Theory of Change (ToC), through six main components, i.e.:

- Regenerative design^{[1]²¹} and circular business models^{[2]²²}
- Innovative materials
- Cleaner production
- Sustainable consumption
- Post use 9Rs^{[3]²³}, and
- Monitoring and Evaluation.

The child project's components are fully aligned with the Integrated Global Programme components. The child project outcomes and outputs directly contribute to the Global PFD as described in the Mongolia Project's Results Framework (Section VI). As such, this child project proposes suitable, innovative, and appropriate options to tackle systematic challenges for addressing the significant environmental impact of the fashion sector, which include exploitation of labor, land use, water and energy consumption, harmful/hazardous chemical use and pollution, and greenhouse gas emissions. If no interventions are made to address the unsustainable practices in both sectors, the future will be marked by worsening environmental degradation, resource depletion, and social injustice.

This child project's added focus to promote green practices throughout the entire supply chain (from animal raising, material processing, product manufacturing to consumer behavior change) will be instrumental for Mongolia to upgrade its cashmere and leather industries while reducing the associated environmental impacts. Such an intervention is urgently needed given the crucial role played by both supply chains in the country's economy.

The child project will achieve tangible and desired transformation including GEBs and co-benefits, enhancing environmental management and compliance of the fashion sector in Mongolia toward accelerating progress on the action plans for the UNFCCC (NDC), UNCBD (NBSAP), Minamata Convention on Mercury (NAP), the Stockholm Convention on POPs (NIP) and the SAICM global initiative. As mentioned above, gender mainstreaming will be critical to all project activities, and a Gender Action Plan has been developed to support this (Annex 10), as well as the identification, assessment and management of Gender-Based Violence (GBV).

Theory of Change for this FSP

The Mongolia child project fully responds to the Elimination of Hazardous Chemicals from Supply Chain Integrated Programme's Theory of Change, with a holistic solution that is envisioned to adequately address the issues related to the significant environmental impacts of the fashion sector, and by aligning each of its Components to the Supply Chain PFD's Theory of Change.

The transformational change proposed for the cashmere and leather supply chains in Mongolia follows the same five stages of the product lifecycles of the PFD through an integrated approach. The components and outcomes aim at ensuring the same vertical coherence between the child project and the Global Programme.

There is currently a lack of integrated, multi-sectoral approach for promoting the sustainable production and consumption of cashmere and leather, while addressing the fundamental challenge of enhancing herders' livelihoods and protecting the fragile ecosystem of grasslands at the same time. Through improved grazing practices and raw material collecting, this project will increase the area of landscapes with improved practices (Core Indicator 4). By adopting sound technologies and practices, this project will reduce/eliminate POPs^[4]²⁴ and products with chemicals of global concern, and contribute to GHG emissions reduction (core indicators 6, 9 and 10).

To improve the provisions to protect human health and the environment against the use of hazardous chemicals of the cashmere and leather sector; there are significant challenges that need to be faced to overcome the barriers shown in the previous section. As summarized from the Theory of Change analysis, Figure 3 shows the alternative pathway and solutions, based on the entries proposed by the global project:

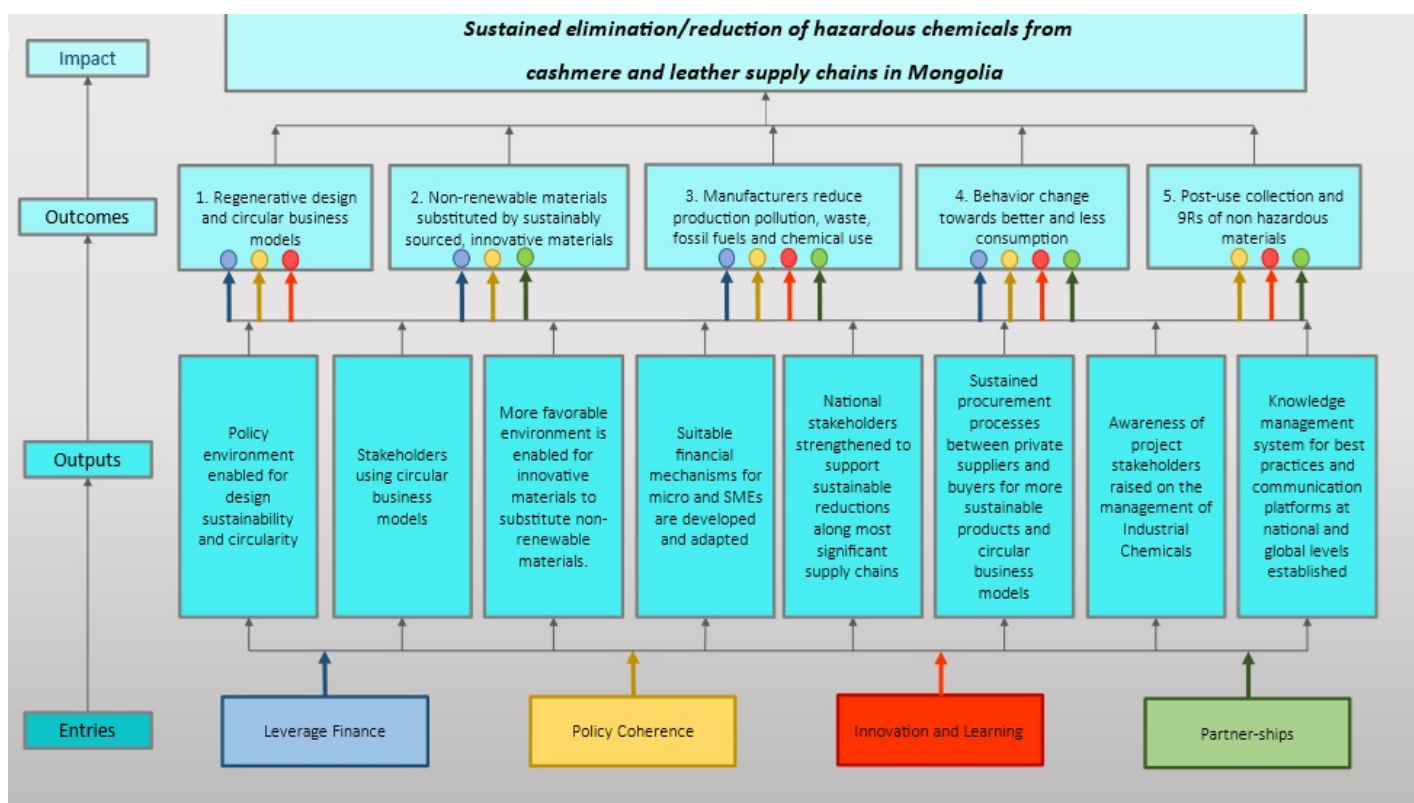
[1] Regenerative design makes sure the built environment has a net positive impact on natural systems.

[2] Circular business model articulates the logic of how a system/process/product creates, offers, and delivers value to its broader range of stakeholders while minimizing ecological and social costs.

[3] 9Rs stands for Refuse, Rethink, Reduce, Reuse, Repair, Refurbish, Remanufacture, Repurpose, Recycle and Recover.

[4] POPs chemical substances that persist in the environment, bioaccumulate through the food web, and pose a risk of causing adverse effects to human health and the environment.

Figure 3. Theory of Change: The Alternative



Mongolia's child project will contribute to the Global Supply Chains Integrated Programme with the following environmental benefits:

- 85,800 hectares of area of landscapes under improved practices.
- Direct reduction of 114,775 metric tons of CO₂ and 459,100 of indirect emissions.
- Reduction/elimination of 629 tons of chemicals and their waste into the environment, materials, products and processes.
- Reduction of 2.66 grams gTEQ of POPs emissions into the air from different sources.
- 3,149 people benefited through improving of their living conditions.

These environmental benefits will be visible in both supply chains by:

- a. Strengthening institutional capacities and regulatory framework to improve the appropriate management of chemicals in the supply, storage, transport, use and import. The project will also trigger alternative schemes for the industries to eliminate, reduce or replace chemicals that have adverse effects on the environment and health, with safe and cost-effective alternatives.
- b. Stimulating market demand for alternative/renewable materials and products in both supply chains.
- c. Promoting best available techniques and best environmental practices for monitoring, preventing, and reducing emissions and releases of hazardous chemicals in both supply chains.
- d. Enabling the implementation of circularity to promote responsible consumption to change from linear to circular systems, and
- e. Supporting post-use and 9Rs reverse logistics together with knowledge management systems for best practice communication outreach at the national and global levels.

The Project Approach

The child project's vision is to proceed with direct interventions on the immediate, underlying and root causes previously identified, recognizing the multi-dimensional impacts due to the use of hazardous chemicals in the **cashmere and leather** supply chains on the environment, health and poverty. These impacts are clearly aligned with the *UNSDCF Outcome 3 and CPD Outcome 2: By 2027, communities and ecosystems in Mongolia are more resilient to climate change, with improved capacity for evidence-informed and gender-responsive sustainable natural resource and environmental management and disaster risk reduction.*

The project **Development Objective** aims to contribute to the phase-out of hazardous chemical pollution from these supply chains in Mongolia by promoting and enabling circular economy principles and practices that synergize existing and future regulatory tools, leverage innovative technologies and unlock multi-sector partnerships at various scales and levels.

For the GEF and UNDP, it is of extreme importance to assist Mongolia in setting an alternative path to overcome barriers and accomplish the development challenge while achieving significant Global Environmental Benefits. For this purpose, the project's strategy is implemented, as accepted by the GEF and UNDP, through six project components, leading to specific outcomes and outputs, following the overall approach shown in Figure 4, i.e.:

- Component 1 will encourage product designers and private producers to incorporate circularity upstream while enabling a more favorable policy, regulatory and institutional environment to prioritize green design and best practices in the textile and leather sector,
- Component 2 will scale-up innovative and locally sourced regenerative products utilizing local knowledge where possible,
- Component 3 will support and enable the replacement of conventional and unsustainable manufacturing processes to a wide variety of stakeholders to use cleaner production practices,
- Component 4 aims at shifting behavioral attitudes amongst consumers, and
- Component 5 will nurture new businesses that champion innovative new materials and post-use 9Rs schemes, and
- Component 6 will complete a comprehensive process of Monitoring and Evaluation throughout the child project's implementation.

Figure 4. Overall child project approach

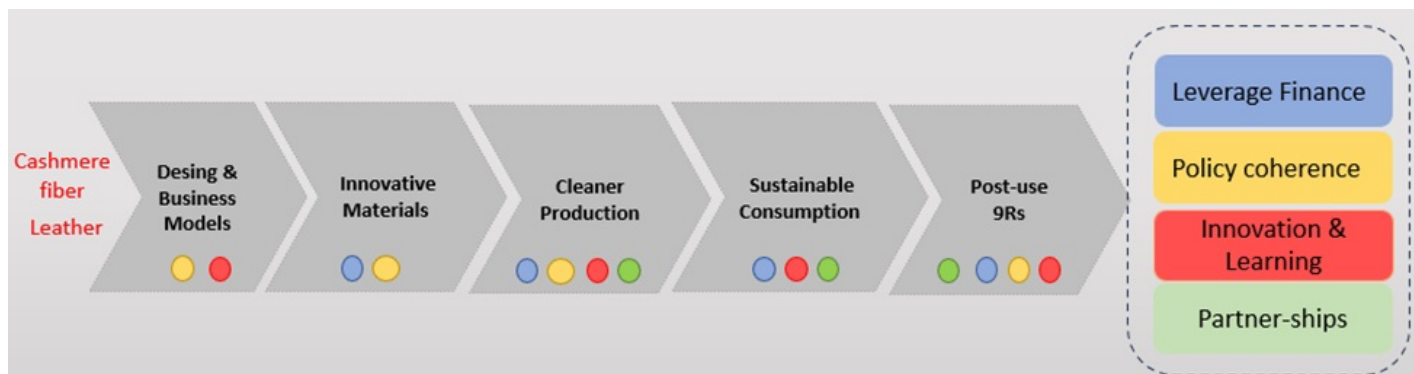


Figure 4 above articulates the project's transformative potential throughout the activities to be carried out under the six components to overcome the identified barriers. This integrated approach, by combining enhancement of the regulatory framework, technical assistance, pilot projects, and capacity building, leads to an increased-on leverage finance, more policy coherence, enhancing innovation and learning and the creation of sustainable partnerships to transformative change in the cashmere and leather industries.

It is also important to note that the project includes gender-responsive measures to cope with the needs of women and youth given their fundamental role in the first link of the cashmere supply chain, especially in safeguarding animal herds. Women also play a key role in the other stages of the value chain where they make up most of the workforce in the textile industry and play an important role in greening the supply chain.

Component 1. Regenerative design and circular business models

The area of focus of Component 1 is to design sustainability and circularity into cashmere and leather products before the material sourcing, manufacturing and production stages begin. This component tackles the first stage of the supply chain—design and business models—through a focus on promoting innovation and learning, leveraging finance, and multi-stakeholder dialogues and partnerships (throughout). Policy coherence activities should be included as appropriate, particularly in the governance at national level.

Furthermore, this child project will promote private sector-led innovative circular solutions and investments such as research and development (R&D) for new product development including alternatives to chemicals and best available techniques used in goat cattle raising, cashmere processing, leather and wool tanning, reuse and repair, and recycling.

The user's needs are immersed into complex and interdependent environmental, social and economic systems. Both approaches, regenerative design and circular business models imply a product design which is suitable for people and takes into consideration its entire life cycle, minimizing the use of hazardous chemical substances, raw materials and energy consumption during the production stage as well as during the product's lifetime.

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From the gender perspective, all activities under this component, will include vulnerable groups' access to formal theoretical and hands-on training, for instance, with the herder's rural associations located in the soums of Chandmani, Tsogt, and Erdene in the Province of Gobi-Altai Province and Alag-Erdene, and Burentogtokh, in the Khuvsgul Province, in accordance with the lines of action #1, #2, and #3, planned for this component in the Gender Action Plan (Annex 10).

For leverage financing, the child project design will emphasize, in Component 2, under Activity B.1.iii, a holistic framework to leverage financing of innovation, as well as in conjunction with Component 5, Activity E.2.i, the creation of multi-stakeholder dialogues to disseminate knowledge and good practices included in this component regarding the designing, implementation, and validation of innovative circular business models in both supply chains.

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The following outcome and two outputs are proposed to trigger the desirable change in the current paradigm for both supply chains:

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Outcome A of Component 1 is: *"Innovative, regenerative products are available and designed using circular business models"*.

Under this outcome, this child project will support Mongolia with policy and institutional actions such as guidelines and standards to address the challenge of a "weak policy environment" through supporting capacity building -under a multi-stakeholder approach- aiming at limiting/reducing the number of livestock raised in the production of cashmere and other wool products to protect the ecosystem, while enhancing product quality with innovation and learning using circular business models.

From the gender perspective, activities include indigenous peoples access to formal and informal training and working with vulnerable groups' owned circular businesses, as per line of action #3 of the Gender Action Plan #3.

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Output A.1: Policy environment enabled for design sustainability and circularity^[1].

This output will promote institutional and policy changes to support market uptake, barrier removal, and access to finance, in conjunction with activities to leverage financing in both sectors (Outcome B.1). A fresh group of policies will incentivize the flow of innovative and alternative materials. At the same time, these policies will aim at reducing production of unsustainable materials and practices, to avoid them showing up in other supply chains. This child project will seek to ensure that policies and regulations are put in place to secure equal opportunities for emerging green jobs and promoting continuous multi-stakeholder dialogue to enable a change in the current paradigm.

The following incremental activities will be carried out to achieve Output A.1:

i. Assessing national environmental policies and regulations (standards and certifications) in the cashmere and leather industry.

This assessment will propose, if needed, changes to regulations that limit circular practices and promote changes in existing national and territorial policies in Mongolia that can be modified through the lens of chemicals. This activity will implement and enhance strategies framed in the circular economy, focusing on the production of cashmere, wool and leather and key inputs, including but not limited to:

- Import and export regulations.
- National standards related to waste management.
- Middlemen and logistics issues of raw materials.
- Improved practice of slaughtering and quality control at the beginning of the supply chain.
- Extended Producer Responsibility (EPR) as an environmental policy to assess environmental costs related to the use of chemicals for the production of goods along their lifecycle, such as the Law on Air Pollution Fee, Law on Water Contamination.
- Options for enhancing the transparency and traceability of chemicals.
- Policies for marketing and trade standards.
- Trade and production incentives through other ministries such as Industry and Economy.

ii. Strengthening a policy and regulatory framework through guidelines and standards for sustainable grazing management.

During year one of the child project's implementation, this activity will elaborate an in-depth analysis of the main products used in the textile industry based on their chemical composition and the presence of harmful substances, like POPs and UPOPs. Subsequently, the PMU, in coordination with the corresponding partners under the leadership of MOFALI, will act through:

- Strengthening institutional capacity in terms of making a common platform based on the Mongolian Sustainable Cashmere Platform (MSCP) but involving MOFALI and MET for improving coordination and collaboration.
- The White Gold Action Program and the MSCP will be contributed and supported for developing and sustainable operations by the project with financial and other resources during the project period.
- Providing policy support for the approval of the Light Industry Law and advise on the development of rules and regulations to support after approval with technical assistance, also, from the lens of chemicals.
- Strengthening laboratory capacity with academic centers to determine and analyze the content of prohibited chemicals contained in processed products as well as analytical tests for wastewater, quality of wool fibers, skins and hides. This action includes the improvement of the capacity of accredited wool, cashmere and leather laboratories to carry out internal and external control.
- Developing minimum best practice operating standards. As per the NIP, the child project will assist the GoM to develop standards and permissible levels of POPs in air, soil, water and food products related to the livestock production of goats for sustainable grazing management, procedures and guidance on handling POPs containing products and equipment and waste disposal. The leather industry needs to apply international standards to the processing, storage, and supply of raw produce.
- Carrying out an inventory of hazardous chemicals, as described in Activity A.2.ii, of Component 1. This inventory will include the types, quantities, and compositions of hazardous chemicals used in the two sectors, cashmere and leather, along their full value chains, from pesticides applied to livestock down to final stages, revised and complemented.
- Supporting the GoM to identify sources of dioxins and furans and volume and scope of their emissions and releases precisely and create a monitoring system, introduce technological renovation in the major sources, and to reduce their emissions applying best environmental practices^[2].
- Supporting the GoM to conduct a systemic inventory of the PCDD/PCDF in the textile industry and plan management actions and implement greening strategies for the textile sector.
- Developing sustainable procurement standards with key public purchasing programs.
- Following up the current review of the Law on Waste to align this child project with new national policies from the lens of chemicals.

Besides, and in alignment with the rationale of components 2, 3, and 4, this activity will also consider:

- Assessing options for enhancing the transparency and traceability of chemicals (eco-traceability and transparency through digital reporting).

iii. Enhancing eco-label standards for cashmere and leather products for transparency and traceability.

This activity will collaborate with existing and ongoing green and sustainable chemistry initiatives for enhancing the transparency and traceability of chemicals in the cashmere and leather supply chains, by:

- Assisting in obtaining international eco-labels for cashmere wool and leather stakeholders by improving use of chemicals and waste management.
- Improving the supply chain of cashmere wool involves integrating origin information and health data of the animals into an electronic registry system, enhancing traceability, transparency, and quality control throughout the production process, while providing the herder with the opportunity to receive the Value-added tax (VAT) refund himself.
- Introducing and validating with key child project stakeholders the “Responsible Nomads of Textile Sustainability Standards” in three soums in each of the Gobi-Altai and Khuvsgul provinces. The Gobi-Altai Province is in the Gobi Desert, which is an area characterized with exceeding number of goats and with a significant shortage of water resources. The Khuvsgul Province is in northern part of the country around the freshwater Khuvsgul Lake and a mountain range with isolated and deep forests.
- Integrating into this child project scope the greening of the supply chain for the textile sector by regenerative design, implementing the “Mongolian Noble Fibre” under the “Responsible Nomads Standard” and “Sustainable textile production” standards for readymade garments which serve as requirements for raw material production from the herder field.

Besides, and in alignment with the rationale of components 2 (Act. B.1.II), 3 (Act. C.1.i), 4 (Act. D.1.iii), and 5 (Act. E.1.i), this activity will also consider:

- Increase adoption, harmonization, and strengthening of existing standards and certification through the Mongolian Agency for Standardization and Metrology (MASM).
- Develop brand incentives for supporting suppliers to meet sustainability targets and reporting.
- Introduce ERP Software for Material Management in leather supply chain and integrate with the Livestock Electronic System.

Output A.2: Strengthened the capacity of public planners, corporations, producers, and academia using circular business models.

Through the PPG, the project has identified a group of partners including **textile and leather producers, importers, exporters, and raw material suppliers from the private sector and research institutes and universities (for specific names, please refer to Table 10 on page 71 of ProDoc)**, to enhance offtake of new materials. Under this output, institutional strengthening will focus on partnerships with private sector stakeholders for the transformation of the supply chains in the processing of regenerative products. The tradeoffs between reducing/eliminating hazardous chemicals from supply chains and economic development goals need careful assessment.

The following incremental activities will be carried out to achieve Output A.2:

i. Strengthening capacity building to key market stakeholders to promote innovation and learning in circularity.

This activity aims at supporting proactive stakeholders to bring new technologies to commercial scale by considering the following:

- Strengthening strategic alliances with universities and research centers, key stakeholders such as artisanal producers to enable them with digital technology in the design of new models for inclusive development and better education, by innovating cashmere processing techniques and procedures, for instance, to reduce fabric cutting waste.
- Training and capacity building of qualified personnel -in association with universities and research centers- to decrease chemical use on cashmere, wool, and leather processing and on finished products, for instance, to develop methods to reduce the amount of residual chemicals on finished products.
- Supporting supplier/buyer exchange networks, both nationally and globally (e.g., the Fashion Pact), with a focus on youth and women-owned businesses.

ii. Designing, implementing, and validating innovative circular business models in the textile (*cashmere and leather*) value chain.

This activity aims at providing proactive stakeholders -through circular economy business models- with incremental learning capacity to bring alternative products, technologies and practices to commercial scale.

This learning capacity will follow the incremental educational approach of *train the trainers*, considering the geographic extension of Mongolia. This means that each pilot project also includes a capacity building program to enhance knowledge downstream for the project beneficiaries by training key leaders who will later share this knowledge with the herders at the community level.

To scale up child project's results after completion, it will work with private sector representatives from six herders' cooperatives located in Gobi-Altai and Khuvsgul Provinces and a group of SMEs located in the cities of Ulaanbaatar and Darkhan. These SMEs have been motivated to participate during the PPG, but will be officially engaged during the first year of implementation.

For increasing knowledge for decision making and under the leadership of the GoM and the participation of private producers and the academia, **integrating the gender equality approach, as per Annex 10**, this activity will carry out the following pilots:

Pilot #1.1: Determination of the national baseline situation of POPs and hazardous chemicals in cashmere and leather sectors in Mongolia.

Proposed cost: 150,000 USD

Pilot #1.2: Improvement of laboratory capacity to detect restricted chemical residues in textile and leather products and their raw materials.

Proposed cost: 200,000 USD_

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Pilot #1.3: Conducting Life Cycle Assessment (LCA) in both supply chains

Proposed cost: 120,000 USD

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Pilot #1.4: Support in involving more herder cooperatives in implementing the Responsible Nomads Standard within the raw material supply chain.

Proposed cost: 190,000 USD

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Pilot #1.5: Demonstrate advanced dip washing practice for effectively reducing skin damage caused by animal ectoparasites, including wastewater sludge treatment and disposal.

Proposed cost: 100,000.00 USD

Pilot #1.6: Establish raw skins/hides preparation and storage points (support centers) and demonstrate digital registration system to improve supply chain.

Proposed cost: 400,000 USD

Pilot #1.7: Training for raw material suppliers and veterinary specialists.

Proposed cost: 10,000 USD

Component 2. **Innovative materials**

The area of focus of Component 2 is to support and scale-up the use of sustainably sourced, innovative, responsibly managed, regenerative, nature-based and recycled/recyclable materials in products in the textile supply chain, specifically, an extensive adoption of innovative, safer, and sustainable production practices in the value chains for cashmere and leather.

As expected results, the child project proposes the gradual substitution of **cashmere and leather** materials and products containing hazardous chemical substances, for those without such substances. To achieve this, it will focus on the eco-design of products to eliminate or replace (with non-toxic) POPs and other chemical substances of concern. This will have a double effect: reducing chemical contamination and stimulating the development of new products or materials. From the gender perspective, the project will also search for new business opportunities for vulnerable groups through incubators and investment proposals and use, as much as possible, indigenous knowledge.

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Outcome B of Component 2 is: *“Sustainably sourced, innovative, responsibly managed, recycled and recyclable materials, regenerative or nature-based where possible, are used in products (substituting non-renewable materials)”*.

Under this outcome, this child project will conduct a lifecycle analysis to identify the key entry points for improving resource efficiency and encouraging circular design of materials, products and services along the supply chains of cashmere and leather. It will also introduce and pilot circular business models for sustainable use of materials.

By introducing green sourcing and production related standards (sustainable grazing management, eco-label, and traceability), this child project will help to attract responsible investors and increase market access as buyers are becoming increasingly aware of the environmental impacts of cashmere and leather throughout the production chain. **Following Action Line #2 of the Gender Action Plan (Annex 10), this component will integrate gender awareness into the leveraging financing to support cashmere herder communities and leather producers.**

The child project will also work closely with financial institutions to develop and promote sustainable finance mechanisms, which will help herder communities and local producers to access green financial products and services. Circular business models proposed by this project will leverage funding from the private sector too. This child project will also help to channel global finance into local solutions through increased and more coordinated collaboration with supply chain stakeholders connected by the global component of the Integrated Program led by UNEP.

This outcome also deals with a significant barrier, the lack of access to financing. Financing is required from producers, mostly to upgrade technology, increase local spinning capacity, adapt installed capacity to more sustainable, efficient practices, and increasing their capacity of buying cashmere from middlemen (usually SMEs have less cash flow and so it is challenging to get hold of a large quantity of raw material upfront);

Output B.1 A more favorable environment is enabled for innovative materials to substitute non-renewable materials.

This output aims at strengthening of the cashmere supply chain towards a long-term transformation in accordance with several ongoing national policies (Section 2.4.2 of ProDoc). The NDC for Mongolia, for instance, indicates the need to support technology transfer with the focus on soft approaches rather than solely relying on hard ones, including indigenous knowledge of local communities, combining traditional practices with modern know-hows[3]. The activities proposed in this output will follow this need.

The following incremental activities will be carried out to achieve Output B.1:

i. Conducting a lifecycle assessment to identify key entry points for improving resource efficiency and encouraging circular design of materials, products and services.

There are no specific inventories or baselines for the chemicals used in the **cashmere and leather sectors**, a condition that limits the basis to propose public policy actions to eliminate/reduce the use of hazardous chemicals in the industry.

This activity, aligned with Activity A.2.ii of Component 1, will tackle with the need to develop criteria for consistent knowledge of hazardous chemicals with the capacity to gather data for Life Cycle Assessments (LCA) to develop business models, through the pilot projects, for the whole value chain, starting from land to animal pasture, raw materials, production process, consumption, and waste, so we include land degradation and raw materials from land.

ii. Piloting circular business models for sustainable use of materials and products.

The child project, under this activity will be:

- Integrating green chemistry into institutional frameworks, for instance, with the Institute of Chemistry and Chemical Technology and the Mongolian University of Science and Technology.
- Working with existing and ongoing green and sustainable chemistry initiatives.
- Developing guidelines for the reduction/elimination of hazardous chemicals in the cashmere, wool, and leather production, **integrating the gender equality and vulnerable groups approach, as per the Gender Action (Annex 10).**
- Assessing options for enhancing the transparency and traceability of chemicals in close coordination with private stakeholders along the cashmere, wool and leather valuer chains **by increasing adoption, harmonization, and strengthening of existing standards and certification.**
- Holding technical workshops for extraction of natural dyes.

This activity will be aligned with the pilot project-driven activities C.1.i and C.1.ii of Component 3 but focusing on regenerative design and circular economy business models to increase the value-added of the raw materials through innovation and learning and incorporating traceability to track production practices upstream through reliable data.

iii. Leveraging financing to support cashmere herder communities and leather producers.

The child project will work with financial intermediaries such as **the Credit Guarantee Fund and the Mongolian Sustainable Finance Association**, enabling entrepreneurs to access finance to promote businesses that can supply new materials and products, de-risk financing, promote innovative competitiveness and incentivized green procurement between herders' cooperatives and global buyers.

Greening of the existing banking services to national producers should be upgraded by introducing sustainability lending criteria for green investments to drive the supply chains towards better management of pastureland, reduction of waste and chemicals, reduction of livestock heads according to the pasture carrying capacity, and for water management, both, for water supply and wastewater treatment facilities.

The following financial mechanisms were identified during the PPG that could be applied or adopted to leverage investments during the execution of the child project to close the gap between market demand and availability of green finance to implement sustainable, green production:

Table 2. Financial mechanisms to leverage further investments

[1] Circularity is a way to reduce waste as much as possible while keeping a product's value and in use for as long as possible.

[2] NIP. Page 86.

[3] Mongolia, NDC, page 8.

Table 2. Financial mechanisms to leverage further investments

Financial Instrument	Description	Feasibility of being implemented under this FSP
Small grants for formalization in the Textile and Apparel Sector	Provide non-reimbursable resources (grants) for micro, small and medium enterprises to enhance formalization.	The child project will support the GoM's soft loan program to provide loans to processing factories to increase domestic processing and production capacity. Pilot projects will be carried out as demonstrative examples to promote formalization and productive reconversion towards more sustainable practices throughout the value chain, for instance, creating strategic

Financial Instrument	Description	Feasibility of being implemented under this FSP
		alliances with existing lending programs to support the SME sector.
Green bonds	In addition to market strategies for alternative products, these types of credits can be offered by public or private financial institutions under certain conditions that are softer than commercial ones, destined for associations of producers committed to environmentally and socially responsible management, for example, under a cleaner production reconversion scheme.	Green financing can support herders and local producers in making the sustainable transition to less intensive/chemical-free businesses. For instance, this child project will assist the GoM with the public policy to increase financing and structure concessional loans green criteria.
Non-profit large textile networks	These are financial instruments that are created when a financial institution extends credit funds directly to a textile producer and receives a non-negotiable instrument as evidence of the asset as a provision for repayment of principal and interest. In addition to market strategies for alternative products, this sort of credits can be offered by public or private financial institutions under certain conditions that are softer than commercial ones, destined for associations of producers committed to environmentally and socially responsible management, for example, to provide direct financial support to cashmere herders for working towards achieving recognized best practices.	The child project will support current global initiatives that are developing different mechanism for major textile/fashion brands to provide direct financial support to cashmere herders for achieving recognized best practices. This child project will engage with them and leverage its influence in bringing together influential brands across the globe to take collective actions and to reach more common goals in reducing negative impacts of the industry to the environment, which would amplify the impact of the child project.
Competitive funds for associative ventures.	It consists of supporting, through a competitive and transparent process, local organizations with non-reimbursable financing for environmentally and socially desirable enterprises and technological innovation in the textile sector.	The child project will support the establishment of competitive funds for organizations and producers, with an emphasis on youth, women and academia for the financing of sustainable productive enterprises or technological innovation throughout the productive chain of the textile sector.
Credit Guarantee Fund (CGF)	This is a SME credit line to facilitate lending to the industry and reduce the cost of working capital sought by processors to buy raw material each season.	The child project will work with selected SMEs for accessing investment, mainly for improving storage and sorting facilities.
Fiscal and tax incentives	It consists of tax reductions or exemptions for the acquisition of alternative inputs to reduce waste and more energy efficient equipment and processes; this financial instrument may include tax exemptions for a certain period.	The child project will assist the sector by informing stakeholders in the field of existing fiscal and tax incentive mechanisms such as financial incentives and favorable legal regulations that support the use of leather that is discarded locally from the first stage of production.
Social and environmental responsible public purchases from responsible textile manufacturers.	It consists of financially supporting the set-up of responsible textile purchases of public institutions produced in a socially and environmentally	This child project will provide technical assistance to public sector entities to incorporate formalized associations and private producers into the public purchase quotas, and

Financial Instrument	Description	Feasibility of being implemented under this FSP
	sustainable manner enhancing public procurement of finishing goods.	other assistance required and consistent with the child project. Additionally, a higher price can be set up if the cashmere, wool, and leather products are certified to comply with the standards set up in the official guidelines as using less harmful chemicals.
Multilateral and bilateral cooperation agencies	There are several ongoing financing programs to support infrastructure development for water pollution control.	Some of these financial windows are designed to support relocation of factories in urban areas exposed to high levels of pollution[4].

Source: PPG Team, 2024.

Component 3. Cleaner production

The area of focus of Component 3 is to support and enable the replacement and/or upgrading of conventional, unsustainable production and manufacturing processes with innovative processes that require less water, energy, hazardous chemicals, conserve natural resources and produce less pollution, emissions and waste.

Along these lines, under this Component 3, the alternative path will tackle the third stage of the supply chain—production and manufacturing—through a focus on promoting innovation and learning (aligned with Act. 2.i of Component 1), leveraging finance (aligned with Act.A.1.iii of Component 2), and multistakeholder dialogues and partnerships (throughout) of Act.E.2.i of Component 5. As far as possible, policy coherence activities should be included as appropriate, particularly enhancing governance at national level, **mainly through MOFALI, the main public executing body for overseeing implementation of economic development policy and strengthening processing capacity of the cashmere and leather sectors.**

Innovative technologies will be introduced to the business-as-usual practices and piloted considering the identified risks, and the safest, most feasible, hazardous chemical-free alternatives that fit the cashmere producers and at leather tanning facilities **in Ulaanbaatar and Darkhan, where the main processing factories are located in Mongolia.**

Criteria for the feasible path will be drawn up and aligned with Mongolia's specific needs, recognizing gender and indigenous people needs and implementing –inclusively- a gender equality Action Plan (Annex 10), **specifically, under Line of Action #1 “Include gender issues in workshops with national stakeholders strengthened to support sustainable reductions along most significant supply chains”.**

The proposed pilot projects will be undertaken to identify the required technological approach as well as gender, environmental, and social co-benefits, and to establish the necessary control measures, including

monitoring the chemicals used, replacing chemical dyes with natural dyes, enhancing energy efficiency, innovative technologies and processes, improving wastewater and air emission treatments. Criteria for the feasible paths will be drawn up and aligned with Mongolia's specific needs during the PPG, recognizing gender needs and implementing –inclusively- a gender equality action plan (Annex 10).

The following outcome and output are proposed to trigger the desired change in the current paradigm:

Outcome C of Component 3 is: *“Production and manufacturing processes are transformed to require less water, energy and non-hazardous chemicals; produce less pollution and waste; and designed for zero waste”*.

This child project will bring together leading textile sector **national organizations and textile and leather producers / Importers / exporters with** the largest individual apparel brands and companies to make their supply chain holistically green in the following topics: EPR in apparel production, production incentives and access to finance, strong communication for awareness, and formalization processes for micro and SMEs.

-

Output C.1 National stakeholders strengthened to support sustainable reductions along most significant supply chains.

This output will focus on sustainable approaches that are integrated and applied in the textile industry, with a focus on circular economy, green chemistry, cleaner production and the concept of research, development and innovation (R&D&I), reducing and/or eliminating the use of hazardous chemicals (Cr+6, POPs, non-POPs, VOCs, others) during the life cycle of the products generated.

Pilot projects will be implemented to responsible production free of harmful chemicals, **integrating the gender equality approach, as per Annex 10 (Line of Action #1)**.

The expected impacts of the pilot demonstrations will tackle land degradation through improved practices for the sourcing of raw materials, the removal of hazardous chemicals and waste through improved design and manufacturing and will reduce GHG emissions through the promotion of low-carbon activities.

The participation of the private sector is key for the success of this output. Pilot interventions have been approached with at least five private sector manufacturers, i.e.: Gobi JSC, Khan Bogd Cashmere LLC, Goyol LLC, Bulgaar JSC, Bluesky LLC, located in the Capital City of Ulaanbaatar, and one raw material supplier, i.e.: Torgon shir beltgel LLC.

The following incremental activities will be carried out to achieve Output C.1:

i. Strengthening capacities to search for alternatives to harmful chemicals.

Pilot #2.1: Improve cashmere dyeing technology by optimization of dye selection and input rates to minimize chemical usage and reduce water consumption.

Proposed cost: 200,000 USD

Pilot #2.2: Recycle cashmere waste generated from spinning, knitting, and weaving factories.

Proposed cost: 60,000 USD

Pilot project 2.3: Enhancing the technology for treating wastewater and sludge in the primary scouring and dyeing workhouse.

Proposed cost: 70,000 USD

Pilot 2.4: Raising awareness about industrial chemicals (POPs, etc.) and hazardous waste management

Proposed cost: 10,000 USD

ii. Implementing pilot innovative technologies and green practices in processing facilities.

Pilot project #3: Leather processing improvement through cleaner production techniques in tanneries
(Two tanneries, one large and one small to introduce cleaner production practices)

Proposed total cost for pilot #3: 175p,000 USD

Pilot #3.1: Employee Awareness Program for the Leather Sector.

Proposed cost: 10,000 USD

Pilot #3.2: Strengthening capacities to search for alternatives to harmful chemicals.

Proposed cost: 55,000 USD

Pilot #3.3: Introduce BAT to reduce water and energy consumption in factories and evaluate productivity.

Proposed cost: 60,000 USD

Pilot #3.4: Enhancing the technology for treating wastewater and sludge in tannery processing

Proposed cost: 50,000 USD

Component 4. Sustainable consumption

The area of focus of Component 4 is to create the market context necessary to support activities in Components 1 (Act. A.1.ii), 2 (Act. B.1.II) and 5 (Act. E.1.i), by creating markets for innovative products and stimulating upstream and downstream behavior change toward more sustainable consumption and use practices.

This component tackles the fourth stage of the supply chain of the Integrated Programme —consumption and use—through a focus on creating multi-stakeholder dialogues and partnerships, fostering consumer behavior change (including through sustainability communication), as well as possible activities in promoting innovation and learning, and leveraging finance, as appropriate. From the gender perspective, the child project will explore opportunities to sustainable public procurement that include requirements on participation of vulnerable groups under the consumption stage.

The activities to be implemented under this Component will integrate the gender equality approach, as per Annex 10, specifically line of action #2 “*Incorporate affirmative actions in favor of women who offer cashmere and leather sustainable products free from hazardous chemicals*”.

Outcome D of Component 4 is: “*Markets for innovative products are created and behaviour shifts favour longevity over unnecessary consumption*”.

This outcome will aim at promoting the creation of national markets that will not only include private-driven producers and public sector but also academia and research centres that will promote further research on viable chemical-free alternatives, to highlight the ancient textile tradition of indigenous populations with the promotion of the productive supply chain. This represents an opportunity to introduce a circular economy approach for innovative producers to re-use waste, with a sound technical approach avoiding the use of harmful chemicals and the exploitation of raw materials.

Output D.1 Sustained procurement processes between private suppliers and buyers for more sustainable products and circular business models.

This output will aim at promoting the creation of a national network that will not only include producers and public sector but also academia and research centres, as described in Table 10 on page 70 of ProDoc.

The following incremental activities will be carried out to achieve Output D.1:

i. Sharing experiences and knowledge through a multistakeholder knowledge platform.

This activity will aim at promoting the creation of a national network of responsible producers in the textile sector through a knowledge network that will not only include producers and public sector but also academic institutions and research centers that will promote further investigation with proven results in harmful chemicals reduction. This activity will engage indigenous communities, women and youth through academic curricula innovations directly related to the fashion sector, by:

- Introducing international experience, BAT/BEP in cashmere wool and leather processing in Mongolia.
- Setting up practical training for herders and suppliers of preparation in raw materials such as wool, cashmere and skin hides.
- Designing and implementing training programs to help factory workers understand the chemicals they use, how to handle them safely, and comply with regulations.
- Organizing events, such as technical workshops to train workers, farmers, and processors to improved skills, in cooperation with all industry stakeholders and specialized research and academic centers.
- Engaging the existing *Mongolian Sustainable Cashmere Platform*, which works with a range of stakeholders to produce, implement, and monitor a Collective Action Plan for sustainable cashmere in Mongolia.
- Building upon the expertise and stakeholder network created by the Textile Exchange as part of the GEF-7 project *on Transforming the Fashion Sector with Nature*, which is co-executed by Conservation International and the Fashion Pact. In this regard, will work with the Fashion Pact members to commit to sourcing sustainable Mongolian cashmere and to invite them to support herder transition to sustainable cashmere production through Impact Incentives, and
- Finally, Mongolia is also a member of International Wool Textile Organization^[1] since 2010. Through this organization, the child project will engage stakeholders along the global supply chain to green the cashmere industry and share lessons learned.

ii. Creating strategic alliances with cashmere, wool and leather manufacturers, customers and academia.

Through academic centers (**research Institutes and Universities**), this activity will provide training on sustainable production and consumption with best management practices including staff education and training, maintenance of equipment, chemical storage, handling, dosing and dispensing, and improved knowledge of inputs and outputs of the processes, for raw materials, industrial processing, and product manufacturing, as well as best practices.

The PMU, in partnership with the group of universities and research centers engaged during the PPG phase, will undertake the following actions:

- Training of professional staff and qualified engineers and technicians in these 2 sectors:
- Vocational training for cashmere wool and leather industry personnel in foreign developed countries.
- Transferring knowledge and know-how (promotion of spaces for coordination and interaction, exchange of successful experiences, dissemination of products at fairs, fashion shows and others) developed and disseminated effectively, promoting replicability in similar contexts.
- Enhancing national collaborative Information and Technology (IT) networks that allow information sharing and management for the fashion sector on elimination of hazardous chemicals, for instance, an online “Knowledge Hub” connecting responsible consumers with alternative textile products, as per the previous Activity D.1.i.
- Best environmental practices will incorporate the gender action plan and will consider advocacy improvements for small and medium businesses.

iii. Promoting trading of national domestic processing companies from herders’ cooperatives with global buyers.

Efforts will be undertaken to introduce international best practices in sustainable procurement by enhancing long-term contracts of global buyers with herders to maintain the best quality **through existing standards and certification** and develop a strong scientific base in inner Mongolia.

The introduction of recent advancements in innovation and technology based on research and development, for instance, by employing nutrition feeding technology and the application of sustainable standards, traceability systems and certifications will be complemented under this activity by creating a more sustainable and environmentally friendly agricultural system for the future, promoting agreements with global firms and responsible cashmere buyers.

Component 5. Post-use and 9Rs

The area of focus of Component 5 is to create and implement reverse logistic processes that ensure that circularity designed into products is not wasted, e.g., ensuring that products are reused and repaired, and that recyclable materials and chemical inputs are indeed recycled.

This component aims to “close the loop” in the global value chain by connecting the consumption/use phase of products with the design/production phase, through promoting innovation and learning, leveraging finance, creating a coherent regulatory environment, and multi-stakeholder dialogues and partnerships.

The child project will work with key stakeholders exposed to high chemical risks, often present at the conventional end-of-life stage of products, to introduce end-of-life product management by integrating recycling practices of cashmere, wool and leather materials to increase people's ability and motivation to consume sustainably. The child project will work together with these groups to understand and accommodate their needs and concerns to ensure equitable and gender responsive solutions and access, for example, with youth and women, to ensure there is no negative repercussions from this child project's activities.

From the gender perspective, also, the project will target behavioral change, for instance, increasing awareness associated with POPs and UPOPs of the health impacts on women's working environments.

The following outcome and two outputs are proposed to trigger the desired change in the current paradigm for both supply chains:

-

Outcome E of Component 5 is: *“Reverse logistics processes are implemented which return products and materials back to manufacturers to reuse or recycle”*.

The fundamental principle of responsible consumption under this outcome is that, when making a consumption decision, the consumer assumes co-responsibility for the associated socio-environmental costs.

The working conditions of women and men will be analyzed, especially for small and medium-sized producers. Communication and awareness campaigns will be developed, targeting labour workers, with a particular focus on risks and alternatives such as the use of imported fabrics with very high content of micro-plastics.

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Output E.1 Awareness of project stakeholders raised on the management of Industrial Chemicals (POPs), related wastes and safer alternatives.

Comprehensive multistakeholder consultation mechanisms should be used to promote green supply chain concepts in the textile value chain to align the policies and priorities of the producing and manufacturing sectors and ensure supply chain transparency and traceability. It is important to deal with the barrier of fragmented links along these industries, so the child project will enhance the connections of **herders** from producers to markets.

The child project will provide support to herders to enhance market access. In Mongolia, because of its large territory, it is difficult for herders to sell their products directly with higher price, due to the lack of such logistics, raw materials have been dumped.

Carrying out adequate waste management is a national priority, considering that the main forces that drive the efficient use of resources include the protection of public health, the environment, the creation of value through the recovery of resources and the opportunity to include grassroots recyclers.

The following incremental activities will be carried out to achieve Output E.1:

i. Implementing a pilot project for waste management and promotion of circularity.

Pilot project #4 : Circular economy in leather's production, through by-product enrichment, will train herders and tannery workers and will trigger a broader dissemination, both, at local level, and in the international arena through the UNEP Child Global Project.

ii. Carrying out technical workshops to disseminate child project main findings, emphasizing innovation and learning approaches in “closing the loop”.

This activity, aligned with Activity D.1.i, will also enhance stakeholder dialogues emphasizing innovation and learning approaches in “closing the loop”, including technical workshops to train herders and processing workers to improve their skills, in cooperation with all industry stakeholders and specialized research and academic centers, including aspects such as returning post-use products back to manufacturers for recycling by using reverse logistics processes promoted in the implementation of the pilot projects.

iii. Designing and implementing a strategy pertaining to gender integration and child labor issues in the cashmere and leather manufacturing industry.

This strategy will pay attention to female workers exposed to chemicals, children, pregnant women and fertile populations and vulnerable groups to develop strategies to address this matter to prevent the adverse effects of chemicals on their health, as indicated in the SESP (Annex 5). The gender strategy also aims to address the barriers of preventing Gender-based Violence (GBV) in these value chains.

During the first year of implementation, this activity will carry out the following actions:

- Conduct a gender analysis to identify specific roles, needs, and constraints within the cashmere and leather value chains.
- Design a mechanism to inform the design of gender-responsive interventions and ensure that the child project's benefits are equitably distributed.

Output E.2 Knowledge management system for best practices and communications at national and global levels established.

The area of focus of this output is to enable knowledge and learning gained from developing and deploying innovations across the child project in Mongolia, aligned with the Global Child Project carried out by UNEP; to be collected, systematized, and made readily accessible to ensure that the best approaches are replicated, failures are not repeated, and lessons are harvested to improve future investments, in both dimensions, at the national and global levels.

The planned activities for this output follow a two-tier strategic approach. One is to implement actions at the national level to enhance an information and communication outreach strategy for multi-stakeholder dialogues and partnerships, and the other one to provide inputs for the creation of a unifying communications, coordination and knowledge management global platform, designed to facilitate knowledge exchange, coordination, technical assistance and monitoring and evaluation – to contribute to a transformative and coherent global framework.

Invited associates of the child project will participate actively in international meetings and events and ensure the flow of information between international conventions, donor agencies and critical stakeholders and decision-makers at global, national and local levels to promote Mongolian sustainable products and make connections between global buyers and local producers; this will create a foundation to limit the use of existing harmful materials and processes in Mongolia. The result will be that different producers along the supply chain, policy makers and regulatory agencies will have the robust evidence and facts necessary to make more fully informed decisions.

The role of women, young people and local knowledge on fine animal fibers, are key to textile manufacturing and in decision making in the purchasing process (consumer); facts that need to be empowered through strong participation and awareness-raising for knowledge transfer.

The following incremental activities will be carried out to achieve Output E.2:

i. Carrying out an information and communication outreach strategy.

This activity, to promote multi-stakeholder dialogues and partnerships, includes:

- Designing an awareness raising campaign and information strategy for herders and processors. Awareness raising and gender sensitive training materials will be developed and made widely available in Mongolian and relevant indigenous languages as needed.
- Developing a programmatic monitoring of FSP global indicators in accordance with the Section VI Project Results Framework of this ProDoc, together with dissemination of on-going activities to ensure successful project implementation in accordance with UNDP and GEF procedures.

- Enhancing a policy coordination scheme at the national level and multistakeholder consultation to meet the MEAs while having a common sustainability approach. The integrated method would be a multi-stakeholder approach bringing the various textile and cashmere actors, along with local and national government levels and private brands to collaborate, innovate and learn together about how to green their supply chains and significantly reduce hazardous chemicals.
- Supporting the reporting process of the national commitments through data collection and verification for preparation of the reports with participation of the different stakeholders.
- Creating a leather processing cluster with modern processing facilities and appropriate pollution control facilities, which would complement efforts to upgrade the processing technology^[2].

ii. Participating in the Supply Chains Integrated Program coordination global events to share results, lessons-learned and best practices captured in knowledge products.

This activity will boost knowledge sharing, coordination and communication by focusing on maximizing the impact of communications with the Integrated Programme through the UNEP Global Coordination Child Project, focusing on the six (6) components of this child project.

Close coordination and exchange of information and sharing of best practices will be ensured with other Supply Chain IP child projects tackling similar supply chains, such as the Peru child project on wool luxury fibres (vicuna and alpaca). The child project will collaborate closely with the global component and document and share good sustainable supply chain practices and lessons learned through the regional and global networks (e.g., sustainable grazing management, eco-labelling standards, green design of materials and products, circular business models for a shared economy) and lessons learned for replication and scaling up.

In this regard, product knowledge will be distributed, communications initiated, engagement with stakeholders conducted, technical assistance provided, and events organized, e.g.: global and regional programme meetings, an annual innovation forum, a project managers forum, a communications officers' forum, participation in events, campaigns, competitions and stakeholder dialogues organized by the Global Child Project led by UNEP, in-country meetings and webinars, to accelerate greener, more coherent policies, legislation, investment, finance, design, as well as standards and certifications.

Component 6. Monitoring and Evaluation

Monitoring and evaluation of this country-level child project is based on a monitoring strategy with S.M.A.R.T.^[3] indicators that incorporate the gender approach, Gender-based Violence (GBV), Global Environmental Benefits as well as co-benefits. This component was developed to measure project progress on a regular basis. Lessons learned on GBV risk management and related good practice can be incorporated into child project monitoring reports, MTR, and Terminal Evaluation.

Outcome F of Component 6 is: *“Accountability and adaptive management is ensured to track and maximize program results”*.

As a standard practice for every UNDP project, continuous monitoring of FSP results and achievements will be ensured, while the application of adaptive management of the project after conclusion of the Mid-Term Review (MTR) will be warranted. The Project Management Unit (see Section V below on Project Management for detailed information) will design the project’s M&E system and be responsible for implementing the project’s M&E Plan (see Section VII below), including the Project’s Inception Workshop, annual planning workshops and Project Implementation Reports (PIRs).

Output F.1: *“Monitoring and Evaluation (M&E) and adaptive management applied”*.

The child project results as outlined in the Project Results Framework (Section VI), will be monitored periodically during implementation to ensure the project effectively achieves these results; these will be reported in the Mid-term Review (MTR) and the Terminal Evaluation (TE) reports. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the [UNDP POPP](#) and [UNDP’s Evaluation Policy](#).

For M&E, technical and institutional capacity, and information will be needed to address climate vulnerability and enhance project and place-based resilience. This Output will develop a Monitoring, Evaluation and Learning (MEL) strategy, implementing and evaluating the selected climate vulnerability management options in the selected project pilot locations over the project lifetime and evaluating the projected impact uncertainties beyond that period.

Implementation and monitoring of identified risks and mitigation measures are required throughout the life cycle of the project. During project implementation, certain circumstances require the revision of the completed design-stage screening. These include but are not limited to: (a) where new information becomes available such as through a social and environmental assessment, (b) where there are substantive changes to the project (e.g., changes in design, additional components), or (c) where changes in the project context might alter the project’s risk profile. If the revised screening results in a higher risk category, then the revised SESP needs to be reviewed by the Project Board or a subsequent PAC process (and where relevant by the GEF). The UNDP Risk Register (Annex 6) should be updated accordingly.

The objective of this output will be also to ensure overall coordination, monitoring and evaluation with the GEF Supply Chains Integrated Program as a whole. The following incremental activities will be carried out to achieve Output F.1:

i. Carrying out the Inception Workshop (IW).

This activity, that will take place during the first three months after the project's implementation takes off, will be organized by the Project Management Unit (PMU) in a very participatory manner allowing the inclusion of multiple stakeholders involved during the PPG phase and those committed to the FSP's execution phase.

In case a significant amount of time elapses between the time of the CEO Endorsement and project initiation; by the time of the IW, it is highly recommended the PMU will also review and update the SESP (Annex 5) to ensure the assessment reflects the current social and environmental risk profile of the project. If needed, the PMU will strengthen the Stakeholder Engagement Plan (Annex 8) to reexamine up-to-date stakeholders' context, proposed pilot projects, and intervention site-specific targeted beneficiaries and promote their effective engagement throughout the implementation of the child project.

ii. Carrying out the “Mid-term Review” (MTR).

The MTR will be carried out after the second submission of the Project Implementation Report (PIR); it will assess the progress of each project activity and attainment of the project's indicators presented in the Project Results Framework (Section VI) and the Multiyear Workplan (Annex 4).

This review will also consider one Gender Assessment of project impact completed as part of MTR and the disbursement of financial resources, co-financing provided by project partners, reporting of GEBs and co-benefits, and it will monitor and assess administrative aspects for the execution of the project. The MTR will also inform the adaptive management of the project and improve its implementation for the remainder of the child project's duration.

iii. Monitoring and Reporting to the Supply Chains Integrated Programme.

The project will provide narrative reporting quarterly to the Supply Chains Integrated Program on key activities and areas of progress toward achieving the program and project-specific indicators, using a template provided by the Global Coordination Child Project, carried out by UNEP.

The Project Management Unit will also ensure that the Global Child Project will support the online community of practitioners in Mongolia that will be established by promoting and maintaining channels of communication among all child project teams, as well as other important external related initiatives on the fashion sector, to develop information designed to address highly diverse local knowledge and context-specific needs, in order to share project results and lessons learned from this UNDP/GEF initiative.

Under this activity, monitoring and reporting will include the Project Results Framework with outcome indicators, GEF Core Indicators, baseline, and annual target indicators and ProDoc annexes. The monitoring will capture and track progress regarding attainment of the child project's results, adherence to the results framework, program functioning as an integrated effort, how well this child project is working together with the other Eliminating hazardous chemicals from supply chains child projects and whether they complement each other.

The project will also actively participate in various internal program-wide coordination events, to enhance ongoing communication and knowledge sharing among the other child projects using templates and guides on knowledge management, provided by the Global Child Project, to monitor and evaluate global environmental impacts achieved by this in-country child project, including gender equality improvement, local peoples participation and youth concerns.

The child project will monitor -during implementation- differences related to vulnerable groups in key aspects that have been identified in research and scientific literature, including potential differences in access to finance; businesses; employment; impacts and exposure; awareness and knowledge of chemical, climate, and biodiversity risks; and the resulting behavioral differences to ensure effective mainstreaming and the full participation and benefit of vulnerable groups from the Integrated Programme. The outcomes of this analysis will be consolidated by the Global Child Project.

iv. Reporting of Global Environmental Benefits and Co-benefits.

This child project is meant to achieve multiple environmental benefits through an integrated approach.

Under this activity the child project will submit data of the Global Environmental Benefits (GEBs) to the Integrated Programme using the four core indicators and related co-benefits. The calculations carried out during the PPG stage will be updated, accordingly, for the MTR Report and for the Terminal Evaluation at the end of the project, in accordance with Annex 17 "GEF Core indicators" of this ProDoc.

Measuring and tracking Global Environmental Benefits from the project

To provide input into monitoring and evaluation of the Integrated Program as a whole, this child project will provide regular reporting to the UNEP Global Child Project on GEBs key indicators, activities and areas of progress. Under this activity this child project will submit data of the Global Environmental Benefits (GEBs) **once per year** to the Global Integrated Programme using the four core indicators shown in the following Table:

[1] <https://iwto.org/>

[2] World Bank Study. Page 26.

[3] S.M.A.R.T.: Specific, Measurable, Attainable, Relevant and Time-bound

Table 3. Child Project GEBs Indicators

Core Indicator (CI)	Description		PIF Stage	Endorsement
4 (4.3) (*)	Area of landscapes under improved practices (hectares)		80,000	85,800
6 (6.7) (6.8) (**)	GHG emissions expected to be reduced (MTCO ₂ e)	Direct (5 yrs) (6.7)	114,775	114,775
		Indirect (20 yrs) (6.8)	459,100	459,100
9 (9.1) (9.7) (***)	Chemicals of global concern and their waste reduced (tons of toxic waste reduced)	tons of chemicals	1,850	1,500
10 (****)	Persistent organic pollutants to air reduced (gTEQ)	Textile and Leather	2.66	2.66
11 (*****)	People benefiting from GEF-financed investments disaggregated by sex (people)	Female	1,700	1,970
		Male	1,100	1,179
		Total	2,800	3,149

Source: PPG Team, 2024

Measuring and tracking co-benefits from the project

The project will also deliver local environmental, social and economic benefits that improve people's lives, in addition to delivering Global Environmental Benefits (GEBs). In this regard, the PMU will meet the GEF's requirements for measuring and tracking the co-benefits -where the planned pilot projects will be implemented- as per the GEF/STAP/C.64/Inf.03 Guideline "Incorporating Co/benefits in the Design of GEF Projects"^[1]. These measurements will consider not only the duration of the FSP but also the lifetime of the expected GEBs.

Likewise, under this activity the project will submit data **once per year** to the Global Integrated Program, the related co-benefits data report. The following co-benefits will be tracked and measured under this child project:

Environmental co-benefits: reduce air pollution / reduce freshwater pollution / reduce pollution caused by chemicals outside the mandate of GEF-supported MEAs / reduce waste and wastewater pollution.

Social co-benefits: reduce poverty / promote better human health, by avoiding the exposure of humans to chemical substances of concern in the field textile/ enhance participation, equality, and inclusion / improve education, skills, capacity and technology for sustainable development.

Economic co-benefits: create job opportunities / improve income and jobs / mobilize new finance sources.

Regular reporting is also important for tracking the quality of co-benefits and for ensuring that planned co-benefits accrue, in accordance with the GEF-8 Results Measurement Framework (RMF). Under this activity the project will submit data of the related co-benefits, shown in the following Table 4:

[1] Annex 1: GEF/STAP/C.64/Inf.03 Guideline “Incorporating Co/benefits in the Design of GEF Projects.”

Table 4. Child Project Co-benefits

Environmental	CEO Endorsement	Social	CEO Endorsement	Economic	CEO Endorsement
reduce air pollution	Volatile organic compounds (VOCs) released from processing contribute to air pollution, leading to respiratory problems and other health issues for workers and nearby residents.	reduce poverty	For textile producers, unexpected droughts or floods can reduce the profitability of their operations as a direct consequence of severe changes in climate conditions.	create job opportunities	Strengthening the incorporation of women as a factor to reduce poverty and to empower them economically, increase family income.
reduce freshwater pollution	Textile and leather production requires significant amounts of chemicals, affecting the supply of drinking water for nearby communities.	promote better human health	There is a wide range of socio-economic impacts of dioxins and furans and POPs pesticides, including but not limited to higher medical costs associated with health deterioration which lower productivity and human expertise.	improve income and jobs	Innovative products create sources of employment, especially for low-income people.
reduce pollution caused by chemicals outside the mandate of GEF-supported MEAs	There is a need to enforce regulations for textile and leather waste disposal, to avoid impacting land degradation.	enhance participation, equality, and inclusion	The health and safety practices of the textile sector, which employs mostly women, should be transformed through more responsible and green business practices.	mobilize new finance sources	
reduce waste and wastewater pollution	Increased wastewater volumes would cause significant pressure on wastewater treatment plants.	improve education, skills, capacity and technology for sustainable development			

Source: PPG Team, 2024

v. Carrying out the Terminal Evaluation (TE).

This activity aims to evaluate whether all planned child project activities have been developed, resources granted by the GEF have been disbursed and spent in line with GEF and UNDP policies and rules, and in accordance with the activities as set out in this Project Document. The Terminal Evaluation

will also extract and identify lessons-learned, how to disseminate them most efficiently, and make recommendations to ensure that the child project results become sustainable.

[1] <https://iwto.org/>

[2] World Bank Study. Page 26.

[3] S.M.A.R.T.: Specific, Measurable, Attainable, Relevant and Time-bound

[1] Circularity is a way to reduce waste as much as possible while keeping a product's value and in use for as long as possible.

[2] NIP. Page 86.

[3] Mongolia, NDC, page 8.

[4] For detailed information, please refer to the JICA Data Collection Survey, Final Report, April 2021.

[5] Annex 1: GEF/STAP/C.64/Inf.03 Guideline "Incorporating Co/benefits in the Design of GEF Projects."

Institutional Arrangement and Coordination with Ongoing Initiatives and Project.

Please describe the Institutional Arrangements for the execution of this child project, including framework and mechanisms for coordination, governance, financial management and procurement. This should include consideration for linking with other relevant initiatives at country-level (if a country child project) or regional/global level (for coordination platform child project). If possible, please summarize the flow of funds (diagram), accountabilities for project management and financial reporting (organogram), including audit, and staffing plans. (max. 500 words, approximately 1 page)

Implementing Partner: The Implementing Partner for this project is Ministry of Food, Agriculture and Light Industry.

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

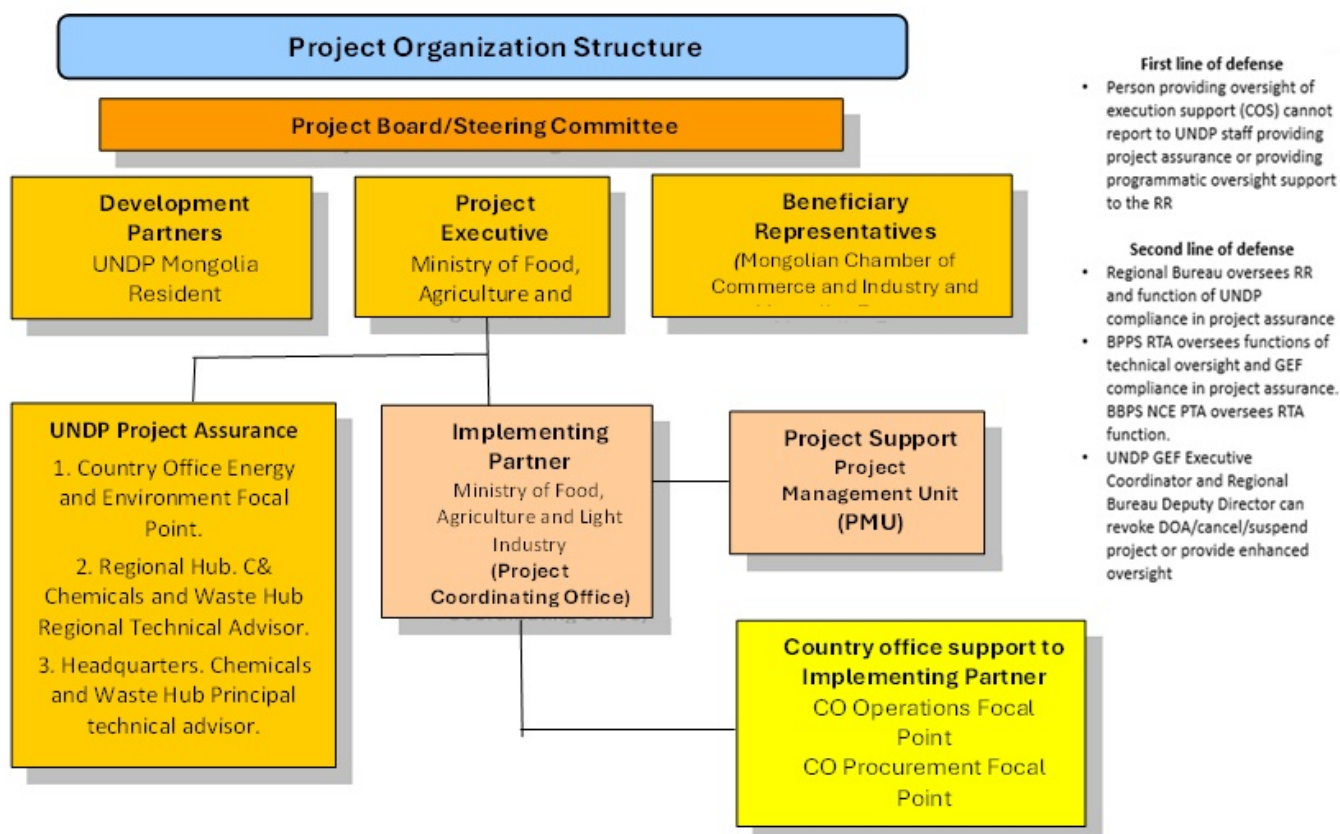
- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation.
- Procurement of goods and services, including human resources.
- Financial management, including overseeing financial expenditures against project budgets.
- Approving and signing the multiyear workplan.
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

Responsible Parties: (potentially Ministry of Environment and Tourism)

Specific tasks include:

- Support the elimination of hazardous chemicals in the textile and leather supply chains during the project's life.
- Support the development, validation and dissemination of best practices, training and awareness raising materials.
- Support the training of child project partners.

The following diagram outlines the proposed structure of the child project governance structure:



The stakeholders of the child project correspond to a diversity of entities including the Government of Mongolia, local stakeholders, private sector and CSOs. Partnerships of the FSP include private producers, universities, financial intermediaries, and research centers who can engage with the methodologies of the child project, having similar approach and goals for the elimination of hazardous chemicals, community health, sustainability, and financing.

Will the GEF Agency play an execution role on this child project? Yes

If so, please describe that role here and the justification.

UNDP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. The UNDP GEF Executive Coordinator, in consultation with UNDP Bureaus and the Implementing Partner, retains the right to revoke the project DOA, suspend or cancel this GEF project. UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing (max. 500 words, approximately 1 page)

There are several ongoing initiatives and projects related to the development challenge this child project is also addressing, **as presented in detail in Table 11 of the Project Document**. It is expected that the achievement of the outcomes for this FSP will be of mutual benefit. Specifically, this FSP will ensure coordination and

count on the capacity built and knowledge gathered from the concurrent initiatives and projects that are already in progress such as the Multilateral Environmental Agreements (MEAs) Action Plans, i.e.: NDC, NBSAPs, NIP, SAICM, BURs.

The design and implementation of this project's activities are key to achieve Mongolia's global commitments and can also deliver immediate and direct health and economic benefits for the Mongolian people.

Global level initiatives related to the fashion sector, such as the Textile Exchange, the Fashion Pact, ZDHC, United Nations Alliance for Sustainable Fashion, SAC and the Global Fashion Agenda. These global initiatives and platforms will connect the child project in Mongolia with the fashion, textile, and apparel industry for sustainable chemical management and share best practices which can be replicated across different contexts.

Table On Core Indicators

Core Indicators

Indicate expected results in each relevant indicator using methodologies indicated in the GEF-8 Results Measurement Framework Guidelines. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
84880	85800	0	0

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.2 Area of landscapes under third-party certification incorporating biodiversity considerations

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
84,880.00	85,800.00		

Indicator 4.4 Area of High Conservation Value or other forest loss avoided

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.5 Terrestrial OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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Documents (Document(s) that justifies the HCVF)

Title

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)	114775	114775	0	0
Expected metric tons of CO₂e (indirect)	459100	459100	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)				
Expected metric tons of CO₂e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)	114,775	114,775		
Expected metric tons of CO₂e (indirect)	459,100	459,100		
Anticipated start year of accounting		2025		
Duration of accounting		20		

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
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Indicator 8 Globally over-exploited fisheries moved to more sustainable levels

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
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Fishery Details

Indicator 9 Chemicals of global concern and their waste reduced

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
1,850.00	1,500.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride	850.00			
Short-chain chlorinated paraffins (SCCPs)	1,000.00	1,000.00		
Pentachlorophenol and its salts and esters		300.00		
Perfluorooctanoic acid (PFOA)		200.00		

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.3 Hydrochlorofluorocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
1			

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
1			

Indicator 9.6 POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.7 Highly Hazardous Pesticides eliminated

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.8 Avoided residual plastic waste

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 10 Persistent organic pollutants to air reduced

Grams of toxic equivalent gTEQ (Expected at PIF)	Grams of toxic equivalent gTEQ (Expected at CEO Endorsement)	Grams of toxic equivalent gTEQ (Achieved at MTR)	Grams of toxic equivalent gTEQ (Achieved at TE)
2.66	2.66		

Indicator 10.1 Number of countries with legislation and policy implemented to control emissions of POPs to air (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 10.2 Number of emission control technologies/practices implemented (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	1,700	1,970		
Male	1,100	1,179		
Total	2,800	3,149	0	0

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

CI #4: The target is made up by six soums of two aimags mostly covered by pasturelands, with an area of 4,294,000 ha, 20% used for goats pasture grazing, equivalent to 858,800 ha. The estimated improvement of grazing practices and controlling total number of animals is 10% of total areas.

CI #6: 20,000,000 pieces of leather (roughly 20,000 tons) and 2,200 tons of processed cashmere are produced in Mongolia each year. One ton of cashmere produces 28.7 tons of CO₂, and one ton of leather generates 19.8 tons of GHG emissions (from animal raising to final product). Overall GHG emissions are 459,100 tons of CO₂-equivalent per year and the child project target is 10% reduction.

CI #9: 1500t of POPs containing products (9.1) including: 1,000t of Short-chain chlorinated paraffins (SCCPs) containing products, 300t of Pentachlorophenol and its salts and esters containing products, 200t of Perfluorooctanoic acid (PFOA) containing products. 19,439 tons of raw leather and 7,413 tons of raw cashmere are processed each year, that represents a total chemical usage of 5,897 tons for leather and 397 tons for cashmere, respectively, for a total of 6,294 tons. The child project is aimed at 10% reduction of this chemicals usage.

CI #10: From Mongolia's National Implementation Plan (NIP) under the Stockholm Convention, the PCDD/F emission from the textile industry is 1.6 gTEQ/yr and from the leather industry is 9 gTEQ/yr, the total of both sectors is 10.65 gTEQ/yr. The target of child to achieve a reduction of 5% of these emissions.

CI #11: 9,583 people live around 24 tanneries, which are located in Khan-Uul district 20 Khoroo, Ulaanbaatar (54% women), 10,000 people employed in cashmere industry (85% women), 4,225 people employed in the tanning industry (65% women), 7,689 herders live in project area (42% women). Improvement impact on 10% of all these people is targeted. Target: 3,149 people benefitted (1,970 women, 1,179 men).

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	Moderate	Risk 6: Natural disasters could eventually affect the locations and operations where the planned pilot project interventions are carried out. A targeted assessment will be conducted prior to commencement of each of the pilot interventions. The targeted assessment for all the pilots will assess the vulnerability of the facilities to natural disasters and propose mitigation measures to safeguard them in the resulting site-specific ESMPs.
Environmental and Social	Moderate	Risk 1: Companies and micro, small and medium sized (MSME) enterprises may not be involved in decision-making including the introduction of legislation that may affect them. The project has developed a Stakeholder Engagement Plan (SEP) that ensures participation of all stakeholders in project activities. It will also put in place a Grievance Redress Mechanism (GRM) to provide meaningful means for local communities and affected

populations to raise concerns and/or grievances when activities may adversely impact them. Risk 2: Potential loss of income for artisanal producers as a result of implementation of new standards adopted in cashmere and leather industries. The project is designed to increase the income of the artisanal producers through improved circularity designs and best producing practices, leverage finance and the enhancement of responsible supply chains from the lens of chemicals, alongside the adoption of resource efficient inputs, processing methods and pollution control measures. Nevertheless, a targeted assessment of the economic impact of the proposed standards will be undertaken and, if needed, a Livelihood Action Framework will be developed to ensure that the economic impact on artisanal producers is mitigated. Refer to the ESMF for additional information on this process. Risk 3: Gender discrimination reproduced through limiting women's ability to contribute to decision-making and to benefit from the project. A Gender Action Plan (GAP) has been prepared to mitigate the identified risks and propose measures that ensure that women are represented in decision-making on project activities and are included in capacity building activities. Implementation of the GAP will help strengthen gender equality and empower women by improving their working conditions when directly participating in the activities related to the environmentally sound management of hazardous chemicals, deployment of alternative technologies and best practices along the supply chain. Risk 4: Pollution of natural resources and exposure to local community from implementation of pilot projects. Although no major civil works are expected to take place as the pilot projects will be implemented in existing facilities, a targeted assessment of pollution and emission risks will precede each intervention. These assessments will inform the Environment and Social Management Plan (ESMP), tailored to specific context of each pilot intervention. ESMP will encompass mitigation measures for identified risks, ensuring that environmental and social impacts are minimized throughout the project implementation. A Pollution Prevention and Management Plan will be incorporated into the ESMP to address any potential pollution issues that may arise during the pilot project. Risk 5: Risks on community health and wellbeing or natural resources as a result of activities funded by the Financial Mechanism. All activities related to the financial mechanisms will undergo an environmental and social screening to determine the level and type of assessment/management needed, if any. This assessment will delve deeper into specific risks and impacts, culminating in the development of an ESMP. The ESMP will outline tailored mitigation measures to minimize adverse impacts and promote responsible practices throughout the project's financial operations. Risk 6: Natural disasters could eventually affect the locations and operations where the planned pilot project interventions are carried out. A targeted climate/natural disaster risk assessment will be undertaken to assess the vulnerability of the facilities to natural disasters and propose mitigation measures to safeguard them. in the resulting site-specific ESMPs. Risk 7: Working conditions within project demonstration activities in contravention

		to principles and standards of ILO fundamental conventions. A targeted assessment of working conditions will be conducted prior to commencement of each of the pilot interventions. The targeted assessment will encompass thorough due diligence of all participating enterprises to ensure they align with ILO principles. The resulting site-specific ESMPs will include proper mitigation measures including an Occupational Health and Safety Plan to safeguard the well-being of workers involved in the pilot interventions.
Political and Governance	Moderate	Limited capacity in project monitoring and stemming from co-financed activities. The project foresees in its Component 6, Output 6.1, a series of activities aimed at a periodic monitoring and follow-up on the overall development of this child project and comprehensive reporting during the MTR, where possible deviations from the programmed actions can be identified early, as well as compliance with the proposed objectives.

INNOVATION

Institutional and Policy	Moderate	Risk 12: Limited capacity in project monitoring and stemming from co-financed activities. The project foresees in its Component 6, Output 6.1, a series of activities aimed at a periodic monitoring and follow-up on the overall development of this child project and comprehensive reporting during the MTR, where possible deviations from the programmed actions can be identified early, as well as compliance with the proposed objectives.
Technological	Moderate	Poor information outreach throughout the project implementation.. As part of the implementation of the Stakeholder Engagement Plan (Annex 8), briefings with a wide variety of stakeholders were organized during the PPG phase and will continue during the full implementation of the FSP under Output E.2.
Financial and Business Model	Substantial	Risk 16: Unsustainable materials often cost less than sustainable alternatives. The project will work on identified financial partners and schemes for substituting unsustainable processes and materials and accompanied the implementing partners to take action in its effort towards policy compliance

EXECUTION

Capacity	Moderate	Limited capacity development of national FSP partners and availability of cofounding sources to accomplish the proposed outputs. Low policy implementation and enforcement will weaken the incentive structure for all stakeholders to take actions and political support is needed to drive private sector engagement. During the implementation of the FSP, awareness-raising, research and technical training programs will be developed and implemented, as well as capacity building in national and rural authorities and other public parties who are working on issues related to the use of hazardous chemicals in both sectors, to ensure generating the knowledge and experience needed to carry out their tasks properly (Output E.2).
Fiduciary		
Stakeholder		

Other	Moderate	Other (Financial) Risk 8: Uncompetitive pricing for sustainable practices and alternative products and materials. The project, as in Component 4, will increase consumer information on the cost of externalities and explore the impact of subsidies on the market to reverse potential adverse effects. In addition, the project will work on identified financial partners and schemes for substituting unsustainable processes and materials and accompanied the implementing partners to act in its effort towards policy compliance. Other (Financial) Risk 9: Stressful national economic context and political instability discourages clients and investors. For FSP expenses, UNDP monitors expenditure on a regular basis. Further UNDP HQ provides global oversight of project delivery minimizing the risk due to economic unrest. For cofinanciers along the supply chains, the FSP will coordinate among the owners to obtain the lowest possible disposal cost through economies of scale and strengthening of both supply chains. Other (Operational) Risk 10: Poor information outreach throughout the project implementation. As part of the implementation of the Stakeholder Engagement Plan (Annex 8), briefings with a wide variety of stakeholders were organized during the PPG phase and will continue during the full implementation of the FSP under Output E.2. Other (Operational) Risk 11. Limited capacity development of national FSP partners and availability of cofounding sources to accomplish the proposed outputs. Low policy implementation and enforcement will weaken the incentive structure for all stakeholders to take actions and political support is needed to drive private sector engagement. During the implementation of the FSP, awareness-raising, research and technical training programs will be developed and implemented, as well as capacity building in national and rural authorities and other public parties who are working on issues related to the use of hazardous chemicals in both sectors, to ensure generating the knowledge and experience needed to carry out their tasks properly (Output E.2).
Overall Risk Rating	Moderate	An evaluation of the likelihood of a risk and the potential impact on the objectives of each individual risk identified, the overall risk rating remains moderate. It is important to note that, if required, the risk analysis will be adjusted when more information becomes available during project implementation.

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Explain how the proposed interventions are aligned with GEF- 8 programming strategies, including the specific integrated program priorities, and country and regional priorities, Describe how these country strategies and plans relate to the multilateral environmental agreements, such as through NDCs, NBSAPs, etc.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how.

(max. 500 words, approximately 1 page)

The Supply Chains IP is fully aligned the GEF 8 programming strategy as one of the eleven Integrated Programs. It is a multi-focal area program delivering integrated solutions to address multiple environmental challenges and achieve higher visibility and momentum through connecting different environmental, social and economic agendas. The IP is designed to explicitly address the four transformation levers identified by the GEF and STAP.

Similarly, the Global child project has been designed in alignment with the GEF 8 strategy. It adopts a sector-wide approach in the fashion sector rather than taking a chemical-by-chemical approach and through this will be able to engage targeted stakeholders and audiences more effectively.

The global child project will coordinate closely with the 8 country child projects under the IP which are aligned with national priorities. It has been designed to support the widespread rollout of low and non-chemical development strategies, the promotion of best practices, circular business models, green and sustainable chemistry principles and sustainable procurement which are all prioritized in the GEF 8 programming direction. The global child project will receive information from activities of the country child projects and generate case studies and knowledge to be disseminated across the country project and across fashion and construction stakeholder networks.

It will also gather information in relation to MEA obligations across all focal areas. Through this, the project will contribute to the Stockholm Convention National Implementation Plans, Minamata Convention Initial Assessments, Paris Agreement Nationally Determined Contributions (NDC), the Convention for Biological Diversity and National Biodiversity Strategic Action Plans (NBSAP), the Kunming-Montreal Global Biodiversity Framework (GBF) (particularly Targets 7, 15, 18 and the Global Framework on Chemicals).

This child project will contribute to the Kunming-Montreal Global Biodiversity Framework, particularly Targets 7, 15, and 18, as follows:

Contribution to Target 7: Reduce Pollution

- **Reduction of Hazardous Chemicals:** The project will work with producers, processors, and local stakeholders to phase out harmful chemicals (POPs and heavy metals), particularly those used in the leather tanning process. This will directly reduce soil and water contamination, benefiting ecosystems downstream of production areas. For instance, the wastewater treatment Pilot #2.3: *“Enhancing the technology for treating wastewater and sludge in the primary scouring and dyeing workhouse”*, under Activity C.1.i, will contribute to the reduction of chemical pollution to the environment, which will reduce negative impact on BD.
- **Sustainable Grazing Practices:** In the cashmere industry, the project will promote sustainable grazing methods to mitigate overgrazing and land degradation, which contribute to biodiversity loss and pollution. Sustainable grazing will enhance the health of ecosystems by maintaining vegetation cover and preventing soil erosion, thus reducing pollutants in water systems.
- **Waste Management and Circular Economy:** By promoting circular business models, the project will minimize the generation of waste, including plastics and toxic by-products, in both the leather and cashmere industries. This will further reduce pollution and ensure that supply chain processes are aligned with biodiversity protection goals.

Contribution to Target 15: Mainstreaming Biodiversity Across Sectors

- **Capacity Building:** The project will enhance capacity of local producers, government officials, and industry stakeholders through training and awareness raising activities to integrate biodiversity-friendly

practices throughout the supply chain. Training will cover sustainable production techniques, including reduced chemical use, habitat preservation, and practices that minimize impacts on biodiversity.

- **Stakeholder Engagement:** The project will establish a multi-stakeholder network that brings together private sector actors, regulatory bodies, and local communities. These platforms will facilitate the mainstreaming of biodiversity goals into sectoral policies, ensuring that industry practices support biodiversity conservation.
- **Policy Advocacy:** By working with national and local governments, the project will advocate for policies that incentivize sustainable and biodiversity-friendly practices in both industries. This will include the development of guidelines for sustainable production, as well as sector-specific regulations that integrate biodiversity considerations into corporate decision-making processes.

Contribution to Target 18: Sustainable Production and Consumption

- **Sustainable Production Practices:** The project will promote best practices in sustainable grazing (for cashmere) and eco-friendly processing methods (for leather). The companies would need to invest in biodiversity protection of the participating territories, pastureland restoration, and wildlife habitat in order to start the greening process in the cashmere and leather supply chains.

These practices will reduce the overexploitation of natural resources and the ecological footprint of both industries. For example, sustainable grazing management will prevent land degradation, while reduced chemical usage in leather production will minimize water pollution.

- **Circular Economy and Green Chemistry:** The project will introduce circular economy principles and green chemistry solutions into the supply chains, particularly by encouraging the reuse of materials and reducing reliance on harmful chemicals. These innovations will reduce the environmental impact of both industries, conserving biodiversity in areas affected by production activities.
- **Sustainable Consumption Patterns:** Through public awareness campaigns and engagement with brands and consumers, the project will promote sustainable purchasing choices. This will create market demand for environmentally responsible cashmere and leather products, incentivizing the industry to adopt and scale up sustainable practices.

Each of the country child projects will establish partnerships with the private sector, including this project, which serves to coordinate efforts between the regions and ensuring opportunities for learning and collaboration across region.

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed during Project Preparation as per GEF Policy and are clearly articulated in the child Project Description (Section B).

Yes

1) Does the project expect to include any gender-responsive-measures to address gender gaps or promote gender equality and women's empowerment?

Yes

If the child project expects to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment, please indicate in which results area(s) the project is expected to contribute to gender equality:

Closing gender gaps in access to and control over natural resources;

Yes

Improving women's participation and decision-making; and/or

Yes

Generating socio-economic benefits or services for women.

Yes

2) Does the child project's results framework or logical framework include gender-sensitive indicators?

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during Project Preparation as required per GEF policy, their relevant roles to project outcomes has been clearly articulated in the Child Project Description (Section B) and that a Stakeholder Engagement Plan has been developed before CEO endorsement.

Yes

Select what role civil society will play in the Project:

Consulted only; Yes

Member of Advisory Body; Contractor; Yes

Co-financier;

Member of project steering committee or equivalent decision-making body ;

Executor or co-executor;

Other (Please explain)

Private Sector

Will there be private sector engagement in the Child project?

Yes

And if so, has its role been described and justified in section B "Child project description"?

Yes

Environmental and Social Safeguards

We confirm that we have provided information regarding Environmental and Social risks associated with the proposed child project or program, including risk screenings/ assessments and, if applicable, management plans or other measures to address identified risks and impacts (this information should be presented in Annex E).

Yes

Please provide overall Project/Program Risk Classification

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
	Medium/Moderate		

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described during Project Preparation in the Project Description and that these activities have been budgeted and an anticipated timeline for delivery of relevant outputs has been provided. This includes budget for linking with and participation in knowledge exchange activities organized through the coordination platform.

Yes

Socio-economic Benefits

We confirm that the child project design has considered socio-economic benefits to be delivered by the project and these have been clearly described in the Project Description and will be monitored and reported on during project implementation (at MTR and TER).

Under Output F.1: “Monitoring and Evaluation (M&E) and adaptive management applied”, in addition to delivering Global Environmental Benefits (GEBs), this child project will deliver local environmental, social, and economic benefits that improve people’s lives. In this regard, the PMU will meet the GEF’s requirements for measuring and tracking the co-benefits -where the planned pilot projects will be implemented- as per the GEF/STAP/C.64/Inf.03 Guideline “Incorporating Co/benefits in the Design of GEF Projects”. These measurements will consider not only the duration of the FSP but also the lifetime of the expected GEBs.

The following co-benefits will be tracked and measured under each child project:

Environmental co-benefits: reduce air pollution / reduce freshwater pollution / reduce pollution caused by chemicals outside the mandate of GEF-supported MEAs / reduce waste and wastewater pollution.

Social co-benefits: reduce poverty / promote better human health, by avoiding the exposure of humans to chemical substances of concern in the textile sectors/ enhance participation, equality, and inclusion / improve education, skills, capacity and technology for sustainable development.

Economic co-benefits: create job opportunities / improve income and jobs / mobilize new finance sources.

ANNEX A: FINANCING TABLES

GEF Financing Table

Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non- Grant	GEF Project Grant(\$)	Agency Fee(\$)	Total GEF Financing (\$)
UNDP	GET	Mongolia	Chemicals and Waste	CW IP Contributions	Grant	2,257,692.00	203,192.00	2,460,884.00
UNDP	GET	Mongolia	International Waters	International Waters: IW IP Contributions	Grant	1,014,326.00	91,290.00	1,105,616.00
Total GEF Resources (\$)						3,272,018.00	294,482.00	3,566,500.00

Project Preparation Grant (PPG)

Was a Project Preparation Grant requested? true

PPG Amount (\$) 150000

PPG Agency Fee (\$) 13500

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
UNDP	GET	Mongolia	Chemicals and Waste	CW IP Contributions	103,500.00	9,315.00	112,815.00
UNDP	GET	Mongolia	International Waters	International Waters: IW IP Contributions	46,500.00	4,185.00	50,685.00
Total PPG Amount (\$)					150,000.00	13,500.00	163,500.00

Please provide Justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total(\$)
Total GEF Resources					0.00

Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
Hazardous Chemicals IP	GET	3,272,018.00	40070000
Total Project Cost		3,272,018.00	40,070,000.00

Confirmed Co-financing for the project, by name and type

Please include evidence for each co-financing source for this project in the tab of the portal

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	UNDP Mongolia	In-kind	Recurrent expenditures	70000
Recipient Country Government	Ministry for Food, Agriculture and Light Industry of Mongolia	Grant	Investment mobilized	30000000
Recipient Country Government	Ministry for Food, Agriculture and Light Industry of Mongolia	In-kind	Recurrent expenditures	10000000
Total Co-financing				40,070,000.00

Please describe the investment mobilized portion of the co-financing

The investment mobilized refers to investments that will be done in the future and does not include any past investments.

Activities involve the reduction of releases of POPs and other Hazardous Chemicals from the Fashion supply chain that are aimed to be eliminated during the Project's implementation Period.

ANNEX B: ENDORSEMENT

GEF Agency(ies) Certification

GEF Agency Coordinator	Date	Project Contact Person	Telephone	Email
GEF Agency Coordinator	6/5/2024	Nancy Bennet	2129065044	nancy.bennet@undp.org
Project Coordinator	6/5/2024	Xiaofang Zhou	2129065782	xiaofang.zhou@undp.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Please attach the Operational Focal Point endorsement letter(s) with this template.

Name of GEF OFP	Position	Ministry	Date (MM/DD/YYYY)
Sh. Tserendulam	Operational Focal Point	Ministry of Environment and Tourism	5/19/2023

ANNEX C: PROJECT RESULTS FRAMEWORK

Please indicate the page number in the Project Document where the project results and M&E frameworks can be found. Please also paste below the Project Results Framework from the Agency document. For the Integrated Programs' global/regional coordination child project, please include the program-wide results framework, inclusive of results specific to the coordination child project. For any country child project, please ensure that relevant program level indicators are included.

Contribution to the Sustainable Development Goal (s): SDG 1 / SDG 2 / SDG 3 / SDG 5 / SDG 6 / SDG 7 / SDG 8 / SDG 9 / SDG 10 / SDG 11 / SDG12 / SDG 13 / SDG 14 / SDG 15							
Intended Outcome as stated in the UNSDCF/Country Programme Results and Resource Framework:							
Contributing Outcome (UNSDCF/CPD): UNSDCF–Direct effect:							
UNSDCF Outcome 3 and CPD Outcome 2: By 2027, communities and ecosystems in Mongolia are more resilient to climate change, with improved capacity for evidence-informed and gender-responsive sustainable natural resource and environmental management and disaster risk reduction.							
Applicable Output(s) from the UNDP Strategic Plan:							
Output 1.1: The 2030 Agenda, Paris Agreement and other intergovernmental-agreed frameworks integrated in national and local development plans, measures to accelerate progress put in place, and budgets and progress assessed using data-driven solution.							
Indicator 1.1.2 Number of countries that have policy measures5 in place to enable the enhancement and/or implementation of Nationally Determined Contributions under the Paris Agreement.							
Output 4.1: 4.1 Natural resources protected and managed to enhance sustainable productivity and livelihoods.							
Indicator 4.1.2 Natural resources that are managed under a sustainable use, conservation, access, and benefit-sharing regime: · Area of terrestrial and marine protected areas created or under improved management practices (hectares) · Number of shared water ecosystems (fresh or marine) under new or improved cooperative management · Coverage and scale of ecosystems with enhanced resilience to climate change (hectares and kilometers) · Area of forest and forest land restored (hectares) · Areas of landscapes under improved practices, excluding protected areas (hectares) · Amount of chemicals reduced, disposed or avoided (metric tons).							
Output 4.2 Public and private investment mechanisms mobilized for biodiversity, water, oceans, and climate solution.							
Indicator 4.2.2 Number of people with enhanced resilience of health, food, and water security, and/or livelihoods due to public and/or private resources.							
Project title and Quantum Project Number: Eliminating hazardous chemicals from supply chains in Mongolia							
Objective and Outcome Indicators ^{[1]25[2]26}		Data Source	Baseline ^{[3]27}	Mid-term Target ^{[4]28}	End of Project Target	Data Collection Methods ^{[5]29}	Risks/Assumptions
Project Objective:		Promote transformation change in the cashmere and leather supply chains by replacing resource-intensive chemical processes and materials with sustainable alternatives and by eliminating/reducing chemical waste in Mongolia.					
The main objective of this Full-Size Project is to achieve <i>Global Environmental Benefits</i> to promote transformational change in the	Mandatory Indicator 11:	The source of the reference data is the Official Census, focusing mainly on the number of inhabitants of the regions	Total population of the participating territories.	933	3,149	Quarterly progress reports by the PMU, including participation and awareness log.	<u>Risk:</u> Gender discrimination is reproduced through the limitation of women from
	Number of direct project beneficiaries disaggregated by gender		47,280 28,054 (F) 19,226 (M)	567 (F) 366 (M)	1,970 (F) 1,179 (M)		

textile industry by replacing resource-intensive processes and materials with sustainable alternatives and by creating circular and transparent supply chains by eliminating/reducing these negative impacts into the environment.	(individual people) ^[630]	where the intervention pilots will be carried out.	(including inhabitants from 3 soums of Gobi-Altai + 3 soums of Khuvsgul)				benefiting from the project. <u>Assumption:</u> The implementation of the Gender Action Plan will promote the equal and fair participation of women and men in the design of innovative alternatives, benefits, and opportunities in each of its components.
	Mandatory GEF Core Indicator 4: Hectares of land and ecosystems under restoration (hectares)	Official records of land areas in which improvements have been implemented by the project.	6,006,700 hectares of the soums where the pilot interventions will be carried out, of which, 4,294,000 hectares are pastureland and goats used 858.800 hectares. Gobi-Altai aimag /3 soums/= 4,731,300 ha Khuvsgul aimag /3 soums/= 1,275,400 ha	24,000	85,800	Field monitoring Satellite photographs Participatory field evaluations	<u>Risk:</u> Low commitment from the direct beneficiaries to apply the knowledge imparted in the training to meet the goals. <u>Assumption:</u> There is a direct relationship between the number of trained participants and supply chain improvements. Allowing the natural regeneration of pastures through the traditional nomadic animal husbandry practice of distributing and utilizing the pastures across all hour seasons of the year.
	Mandatory GEF Core Indicator 6: GHG emissions	GHG emissions as per the National Inventory of GHG 2000-2019	Metric tons of CO ₂ released by the textile industry per year.	0	573,875	Official reports of MET based on the annual reporting of child	<u>Risk:</u> Low commitment from textile and leather producers to apply BAT/BEP and

	mitigated (MTCO2e)		2,295,500 MTCO2e (Leather 1,550,500 MTCO2e; Cashmere 745,000 MTCO2e)			project's PIRs	inadequate implementation of the technological solutions. Since the herders' income depends on cashmere sales, there's risk they might resist reducing their livestock numbers. <u>Assumption:</u> There is a commitment not to substitute business-as-usual and to prevent inappropriate practices. Improving herd structure and fertility by selectively breeding young goats for fine cashmere production could potentially enhance the herders' income without requiring a reduction in livestock numbers.
	Mandatory GEF Core Indicator 9: Chemicals of global concern and their waste reduced (tons)	No precise inventory data on utilization of hazardous chemicals in cashmere and leather sector Estimations of baseline data, Mid-term and End-of-Project Targets was performed by the PPG Team based on the technological regimes for chemical treatment of cashmere and leather.	10,696.4 tons chemicals (Leather sector 10,299.4 tons, in 2021 Cashmere sector 397 tons, in 2022)	500 (estimated)	629	The PMU will carry out an inventory survey and record the elimination of hazardous chemicals in the replacement pilots: azo- dyes, chromium etc. Monitoring of hazardous waste from the supply chain in both sectors and restriction of imports.	<u>Risk:</u> Limited capacity of government and stakeholders to enable a favorable environment for the innovation of materials and processes with hazardous chemicals (POPs, UPOPs, among others). <u>Assumption:</u> The PMU is committed to promoting coordination between the competent authorities for the creation and

							implementation of policies that allow the substitution and, when possible, the elimination of hazardous chemicals/products.
							Implementation of BAT in decreasing hazardous waste generation.
	Mandatory GEF Core Indicator 10: Reduction, avoidance of emissions of POPs to air from point and non-point sources (gTEQ)	National Implementation Plan for the Stockholm Convention.	0	0	2.36	The PMU will implement the technological improvement, BAT/BET and monitor the emissions of open burning.	<u>Risks:</u> Limited capacity of national stakeholders to adopt and implement BAT/BET as well as to encourage technological innovation. <u>Assumptions:</u> Key stakeholders are willing to participate and receive training in use on the implementation of BAT/BET and technological innovation.
Project component 1	1. Regenerative design and circular business models						
Project Outcome ^{[7]31} A A. Innovative, regenerative products are available and designed using circular business models.	Indicator 6: Policy alignments by different ministries and with non-state actors (In accordance with Indicator 3.a. of the ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME Indicators)	Technical standards published in the Official Gazette.	0	1	3	Technical standards published in the Official Gazette related to sustainability, clean production and/or circularity in product design, prepared with multi-stakeholder participation during the project execution period.	<u>Risk:</u> Small or medium-sized enterprises may not be involved in decision-making including the introduction of legislation that may affect them. Associated to Risk 1 (of SESP). <u>Assumption:</u> A sustainable and iterative approach to

							poicy-making fosters collaboration and ongoing improvement throughout implementation of the proposed activities.
	Indicator 7: Number of innovations strengthening gender equality <i>(In accordance with Indicator 2.c. of the ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME Indicators)</i>	Official records of product innovations related to sustainability, clean production, and circularity.	0 formulated initiatives related to sustainable innovations, clean production and/or circularity in product and processes designs.	2 initiatives related to sustainable innovations, clean production and/or circularity in product and processes designs.	3 initiatives related to sustainable innovations, clean production and/or circularity in product and processes designs. (at least one led by women entrepreneurs)	The PMU will keep track of the number of innovations and will inform on an annual basis in the child project reports.	Risk: Potential loss of income for stakeholders who decide not to take part in the project or otherwise transition to more sustainable practices. Associated to Risk 2. Assumption: A proactive engagement of the Project Management Unit (PMU) with the cashmere and leather stakeholders along the supply chain on the ground will be sustained through the child project implementation to guarantee relevant producers are engaged and willing to adopt the proposed alternatives.
Outputs to achieve Outcome A	A.1 Policy environment enabled for design sustainability and circularity.						
	A.2 Strengthened the capacity of public planners, corporations, producers, and academia using circular business models.						
Project component 2	2. Innovative materials						
Outcome B B. Sustainably sourced, innovative, responsibly managed, recycled and recyclable materials, regenerative or nature-based	Indicator 8: Production and uptake of new materials into supply chains <i>(In accordance with Indicator 2.a. of the ELIMINATING</i>	Official database in metric tons of recycled, recyclable and/or renewable/natural sources materials incorporated into the	0	0	1	The PMU will keep track of the number and volume of new materials and will inform on an annual basis in the child	Risk: Potential loss of income for artisanal producers who decide not to take part in the project or otherwise transition to more sustainable

where possible, are used in products (substituting non-renewable materials).	HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME Indicators)	production cashmere wool processes and/or finished leather products.				project's reports.	practices and of jobs of informal waste recovery people. Associated to Risk 2. <u>Assumption:</u> A proactive engagement of the Project Management Unit (PMU) with the textile stakeholders along the supply chain on the ground will be sustained through the child project implementation to guarantee relevant producers are engaged and willing to adopt the proposed alternatives.
	Indicator 9: Amount/number of financial resources unlocked for sustainable supply chains or financial flows influenced (In accordance with Indicator 1.a. of the ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME Indicators)	Official reports on green credits granted by the public and private financial institutions intended for the textile and leather industry to promote circular operations and/or the use of innovative materials in its production.	0 In the selected project pilot's intervention areas, none of the interested stakeholders have been trained on how to access financing.	USD200,000 made available to SMEs through financial mechanisms (disaggregated by gender and local people). 2 loan applications developed (with technical support of the child project). (at least one application led by entrepreneurial women).	USD750,000 made available to SMEs through financial mechanisms (disaggregated by gender and local people). 4 loan applications developed (with technical support of the child project). (at least two applications led by entrepreneurial women) These values will be calculated with accuracy once the child project is implemented.	The PMU will facilitate access to investment financing and will report, on an annual basis, the number of loans allocated by the financial intermediaries.	<u>Risk:</u> Risks on community health and wellbeing, natural resources, herders or workers as a result of activities funded by the Financial Mechanism and business opportunities. Associated to Risk 5. <u>Assumption:</u> Participating SMEs can overcome existing barriers in access to finance.

Output B.1 to achieve Outcome B	B.1 A more favorable environment is enabled for innovative materials to substitute non-renewable materials.						
Project component 3	3. Cleaner production						
Outcome C C. Production and manufacturing processes are transformed to require less water, energy and no hazardous chemicals; produce less pollution and waste; and design for zero waste.	Indicator 10: Number of pilot projects implemented <i>(In accordance with Indicator 3.b. of the ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME Indicators)</i>	Number of agreements signed with interested parties actively participating in the child project.	0	2	6	Progress and final reports from organizations declaring and demonstrating the reduction and/or elimination of hazardous chemicals and their waste, and water and energy efficiency, and the reduction in the use of non-renewable materials.	<u>Risk:</u> Pollution of natural resources and exposure to the local community from the implementation of pilot projects. Natural disasters could eventually affect the locations and operations where the planned pilot project interventions are carried out. Associated to Risk 7. <u>Assumption:</u> This child project seeks to promote adoption of technologies, processes, alternatives to harmful chemicals that are accessible (financially, geographically and culturally) and where possible, procured, locally.
	Indicator 11: Number of private sector and NGO stakeholders participating and adopting ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME solutions; and proportion of	Number of agreements signed with interested parties from the private sector participating in the child project.	0	2	6	Progress and final reports from private sector parties and NGOs declaring and demonstrating the reduction and/or elimination of hazardous chemicals and their waste, and water and energy efficiency, and the	<u>Risk:</u> The potential risk of project stakeholders being unable to participate in the project due to certain difficulties such as relocation to Emeelt Industrial Park, bankruptcy of the company, natural disasters, etc.

	market volume they represent <i>(In accordance with Indicator 3.b. of the ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME Indicators)</i>					reduction in the use of non-renewable materials.	Potential loss of income for artisanal producers who decide not to take part in the project or otherwise transition to more sustainable practices and of jobs of informal waste recovery people. Associated to Risk 2. - <u>Assumption:</u> A proactive engagement of the Project Management Unit (PMU) with the textile producers stakeholders along the supply chains on the ground will be sustained through the child project's implementation to guarantee relevant stakeholders are engaged and willing to adopt the proposed alternatives and best available technologies.
Output to achieve Outcome C	C.1 National stakeholders strengthened to support sustainable reductions along most significant supply chains in the textile industry.						
Project component 4	4. Sustainable consumption						

Outcome D D. Markets for innovative products are created and behaviour shifts favour longevity over unnecessary consumption.	Indicator 12: Number of jobs created in sustainable and alternative supply chains <i>(In accordance with Indicator 2.b. of the ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME Indicators)</i>	Technical and social reports with results of the implementation s carried out by private companies related to the proposed pilot interventions.	0 To date, none of the producers of the proposed child project's interventions sites have been made aware of the dangers of the use of hazardous chemicals and means to eliminate/avoid their use.	25 Female: 13 Male: 12	50 At least 25 new jobs created for working women.	Final reports approved and endorsed by the Executing Partner and UNDP and uploaded in the Global Platform managed by UNEP.	<u>Risk:</u> Working conditions within project demonstration activities in contravention to principles and standards of ILO fundamental conventions. Associated to Risk 7. - <u>Assumption:</u> Success in the implementation of the co-financed planned activities, therefore, committed textile and leather producers can easily access services.
	Indicator 13: Engagement of women, youth, vulnerable groups and local groups – individuals and organizations-participating in FSP activities <i>(In accordance with Indicator 4.b. of the ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME Indicators)</i>	Record files of attendance at child project activities segregated by gender, age and ethnicity.	In the framework of the PPG phase workshops, 37 direct project beneficiaries have participated: Female: 17 Male: 20	1,000 Female: 800 Male: 200 direct project beneficiaries (those who will benefit from and be directly involved in the implementation of the child project) for which the risk of hazardous chemical exposure has been reduced.	3,000 Female: 1,800 Male: 1.200 direct project beneficiaries and local community members for which the risk of hazardous chemicals exposure has been reduced.	PMU annual reports	<u>Risk:</u> Gender discrimination reproduced through limiting women's ability to contribute to decision-making and to benefit from the project. Associated to Risk 3. - <u>Assumption:</u> Successful implementation of the Gender Action Plan will help strengthen gender equality and empower women by improving their working conditions when directly participating in the activities

							related to the environmentally sound management of hazardous chemicals, deployment of alternative technologies and best practices along the supply chains.
Output to achieve Outcome 5	D.1 Sustained trading processes between private suppliers and buyers for more sustainable products and circular business models.						
Project component 5	5. Post-use and 9Rs						
Outcome E E. Reverse logistics processes are implemented which return products and materials back to manufacturers to reuse or recycle.	Indicator 14: Number of private sector stakeholders participating and adopting IP solutions <i>(In accordance with Indicator 4.a. of the ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME Indicators)</i>	Technical and social reports with results of the implementation s carried out by private companies related to the proposed pilot interventions.	0	2	6	Final reports approved and endorsed by the Executing Partner and UNDP and uploaded in the Global Platform managed by UNEP.	<u>Risk:</u> The potential risks of recycled products include market sales and competitiveness challenges with imported products. Working conditions within project demonstration activities in contravention to principles and standards of ILO fundamental conventions. Associated to Risk 7. - <u>Assumptions:</u> Effective synergies and communication created between the public authorities at the national and regional levels and private producers will enable a favorable environment to implement the project.

							This child project seeks to promote adoption of technologies, processes, alternatives to harmful chemicals that are accessible (financially, geographically and culturally) and where possible, procured, locally.
	Indicator 15: Knowledge created, disseminated, and applied <i>(In accordance with Indicator 2.d. of the ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME Indicators)</i>	Items produced and disseminated at the national and international levels such as audiovisual publications of success stories, technical manuals and/or best practices. Website tracking data, engagement analytics.	0 Knowledge on chemicals management in cashmere and leather is not always readily available.	2	4	Systematization of physical and digital publications of success stories, findings, learning and results, through a knowledge platform (Activities of Output E.2). Record of interactions with information: comments, contacts, shares.	Risk: Stressful national economic context and political instability discourages clients and investors. Associated to Risk 9. - Assumptions: ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME knowledge is relevant to and draws interest from target audiences in the textile sector. ELIMINATING HAZARDOUS CHEMICALS FROM SUPPLY CHAINS PROGRAMME partners are able to freely access and share IP knowledge.
Output E.1 to achieve Outcome 5	E.1 Awareness of project stakeholders raised on the management of Industrial (POPs) Chemicals, related wastes and safer alternatives.						
Output E.2 to achieve Outcome 5	E.2 Knowledge management system for best practices and communications at national and global levels established.						
Project component 6	Monitoring & Evaluation						

Outcome F F. Accountability and adaptive management is ensured to track and maximize program results.	Indicator 16: Percentage of project expenditure spent on the FSP planned activities	<i>Annual implementation reports (PIRs) prepared the PMU.</i>	0%	35%	100%	Compliance with the ProDoc M&E Plan (Section VII).	Risk: Limited capacity development of national FSP partners and availability of cofounding sources to accomplish the proposed outputs. Associated to Risk 17. Assumption: A very proactive role of the PMU in accordance with the implementing partner, UNDP and GEF management procedures.
Outputs to achieve Outcome 7	F.1 M&E and adaptive management applied.						

[1] UNDP publishes its project information (indicators, baselines, targets and results) to meet the International Aid Transparency Initiative (IATI) standards. Make sure that indicators are S.M.A.R.T. (Specific, Measurable, Attainable, Relevant and Time-bound), provide accurate baselines and targets underpinned by reliable evidence and data, and avoid acronyms so that external audience clearly understand the results of the project.

[2] In addition to the five GEF Mandatory Indicators, the FSP design has added 10 outcome indicators, in accordance with the IP Results Indicators proposed in the GEF-8 Project Framework Development (PFD), broadly following the transformation levers that are at the base of the IP theory of change. The correspondence between the IP Results Indicators and the adopted individual child Project outcome indicators to monitor and report on progress is the following:

- Indicator 6: Policy alignments by different ministries and with non-state actors. (In accordance with Indicator 3.a. of the IP Indicators)
- Indicator 7: Number of innovations. (In accordance with Indicator 2.c. of the IP11 Indicators)
- Indicator 8: Production and uptake of new materials into supply chains. (In accordance with Indicator 2.a. of the IP11 Indicators)
- Indicator 9: Number of financial resources unlocked for sustainable supply chains or financial flows influenced. (In accordance with Indicator 1.a. of the IP11 Indicators)
- Indicator 10: Number of pilot projects implemented. (In accordance with Indicator 3.b. of the IP11 Indicators)

- Indicator 11: Number of private sector and NGO stakeholders participating and adopting IP11 solutions; and proportion of market volume they represent. (In accordance with Indicator 3.b. of the IP11 Indicators)
- Indicator 12: Number of jobs created in sustainable and alternative supply chains. (In accordance with Indicator 2.b. of the IP11 Indicators)
- Indicator 13: Engagement of women, youth, vulnerable groups and indigenous groups –individuals and organizations- participating in FSP activities. (In accordance with Indicator 4.b. of the IP11 Indicators)
- Indicator 14: Number of private sector stakeholders participating and adopting IP11 solutions. (In accordance with Indicator 4.a. of the IP11 Indicators)
- Indicator 15: Knowledge created, disseminated, and applied. (In accordance with Indicator 2.d. of the IP11 Indicators)

- [3] *Baseline, mid-term and end of project target levels must be expressed in the same neutral unit of analysis as the corresponding indicator. Baseline is the current/original status or condition and needs to be quantified. The baseline can be zero when appropriate given the project has not started. The baseline must be established before the project document is submitted to the GEF for final approval. The baseline values will be used to measure the success of the project through implementation monitoring and evaluation.*
- [4] *Target is the change in the baseline value that will be achieved by the mid-term review and then again by the terminal evaluation.*
- [5] *Data collection methods should outline specific tools used to collect data and additional information as necessary to support monitoring. The PIR cannot be used as a source of verification.*
- [6] *This indicator captures the number of individual people who receive targeted support or assistance from a given GEF-financed project or program and/or who use the specific resources that the project maintains or enhances. Direct beneficiaries are all individuals receiving either: (a) Targeted support. This includes individuals whom can be identified as receiving direct support or assistance, can be counted individually and are aware they are receiving support in some sort and/or use the specific resources. This implies a high degree of attribution to the project; or (b) High intensity of support. This means receiving a high level of support/effort provided per person, assessed on a continuum with broad levels from Low to Medium and High, where only high intensity of support qualifies as direct beneficiary as per Table 1 (page 26) of the GEF's [Guidelines on the Implementation of the GEF-8 Results Measurement Framework](#)*
- [7] *Outcomes are medium term results that the project makes a contribution towards, and that are designed to help achieve the longer-term objective. Achievement of outcomes will be influenced both by project outputs and additional factors that may be outside the direct control of the project.*

ANNEX D: STATUS OF UTILIZATION OF PROJECT PREPARATION GRANT (PPG)

Provide detailed funding amount of the PPG activities financing status in the table below:

Project Preparation Activities Implemented	GETF/LDCF/SCCF Amount (\$)		
	Budgeted Amount	Amount Spent To date	Amount Committed
International Project Development Specialist (PPG Team Leader)	30,000.00	18,002.00	11,998.00

International POPs Specialist	25,000.00	7,800.00	17,200.00
International Gender Specialist	5,000.00		5,000.00
International Social and Environmental Safeguards Specialist	4,800.00		4,800.00
National Technical Expert	20,000.00	3,011.00	16,989.00
National Stakeholder Engagement Consultant & Coordinator	18,000.00	2,003.00	15,997.00
National Environmental Law and Sustainable Financing Consultant	16,000.00	1,007.00	14,993.00
Travel	18,400.00	6,278.00	12,122.00
Translation (Mongolian - English)	5,000.00	2,495.00	2,505.00
Inception and validation workshops	7,800.00	2,052.00	5,748.00
Total	150,000.00	16,846.00	107,352.00

ANNEX E: PROJECT MAP AND COORDINATES

Please provide geo-referenced information and map where the project interventions will take place

Location Name	Latitude	Longitude	GeoName ID
Burentogtokh soum	49.616997532	99.587997648	

Location Description:

Out of a total area of Burentogtokh soum 3,760 km², 2,870 km² are designated as pastures. As of 2023, it had a population of 4,405 residents, predominantly khalkh and khotgoid.

The center of the soum is Bayan, is situated in the valley of the Delger River, 51 km west of the provincial capital Murun, and 722 km from the national capital, Ulaanbaatar. There are 1771 herding families. 51.7% men, 48.3% women.

The total number of livestock is 385,563 herds

Goat-130,913; sheep-203,083; cattle-31,269; horse- 20,145; camel-153. The share of goats in the total number of animals: 34.0 %

-Operated deep washing facilities – 6 (old 5)

Activity Description:

Pilot 1.4. Support in involving more herder cooperatives in implementing the Responsible Nomads Standard within the cashmere and leather supply chains.

Establish two model cooperatives in project implemented soums of Khuvsgul and Gobi-Altai provinces to ensure their success and serve in the best pasture management, livestock raw material preparation.

NFPUG, their members and the soum authorities will be participate. As part of Pilot 1.6, raw skin/hide preparation, quality check points will be established.

Pilot 1.5. Demonstration of deep washing practice for improving livestock health and decreasing skin/hide damage caused by livestock ectoparasites.

Deep washing facility construction – two places, effective usage of veterinary chemicals – instruction, training, disposal of wastewater and sludge - demonstration.

Pilot 1.6. Support in establishment of raw skin/hide preparation and storage points - 1 near high-capacity slaughterhouse (Khuvsgul) and 2 near small abattoirs (Khuvsgul, Gobi-Altai)

Pilot 1.7. Trainings on preparation, curing, storage, transportation; animal health, disinfection, usage of veterinary chemicals will be organized for raw material suppliers, veterinary specialists, cooperative members will be organized.

Location Name	Latitude	Longitude	GeoName ID
Khanbogd Cashmere LLC	47.90097734450424	106.90549007227348	

Location Description:

Khanbogd Cashmere LLC factory located in Songinokhairkhan District, 20th Khoroo, Ulaanbaatar.

The company has a capacity to prepare, scour and dehair 1,500 tons of raw cashmere, and produce 100,000 knitted products.

Activity Description:

Pilot 2.1. Improving dyeing technology by setting up the new dye database. Support in purchasing Data color spectrophotometer; calculation of chemicals, water, energy savings.

Pilot 2.2. Organization of recycling cashmere waste generated from spinning, knitting, and weaving factories. The recycled cashmere waste can be utilize in spun yarn for knitting and weaving, garments, blanket.

Pilot 2.3. Supporting to technology research and implementation of technological solution in wastewater from scouring and dyeing factory.

Location Name	Latitude	Longitude	GeoName ID
Blue Sky Cashmere LLC	47.90903492927721	106.88631286824942	

Location Description:

Blue Sky Cashmere LLC factory is located in Khan-Uul District, 2nd Khoroo, Ulaanbaatar.

Blue Sky Cashmere LLC has an annual capacity to dye 200 tons of cashmere, spin 200 tons of spun yarn, weave 500,000 meters of woven fabrics and blankets, and produce 3,000 coats.

Activity Description:

Pilot 2.1. Improving dyeing technology by setting up the new dye database. Support in purchasing Data color spectrophotometer; calculation of chemicals, water, energy savings.

Pilot 2.2. Organization of recycling cashmere waste generated from spinning, knitting, and weaving factories. The recycled cashmere waste can be utilize in spun yarn for knitting and weaving, garments, blanket.

Pilot 2.3. Supporting to technology research and implementation of technological solution in wastewater from scouring and dyeing factory.

Location Name	Latitude	Longitude	GeoName ID
Snow Fields Cashmere LLC	47.890767668110456	106.9196556167386	

Location Description:

Snow Fields Cashmere LLC is located in Songino Khairhan District, 20th Khoroo, Ulaanbaatar.

The company has all stages from raw material preparation to final garment production. It has a capacity to dye 40 tons of cashmere, spin 90 tons of spun yarn, and produce 100,000 pieces of knitted products.

Activity Description:

Pilot 2.1. Improving dyeing technology by setting up the new dye database. Support in purchasing Data color spectrophotometer; calculation of chemicals, water, energy savings.

Pilot 2.2. Organization of recycling cashmere waste generated from spinning, knitting, and weaving factories. The recycled cashmere waste can be utilize in spun yarn for knitting and weaving, garments, blanket.

Pilot 2.3. Supporting to technology research and implementation of technological solution in wastewater from scouring and dyeing factory.

Location Name	Latitude	Longitude	GeoName ID
Erdene soum	44.445042	111.091789	

Location Description:

Erdene soum in Gobi-Altai province is the third-largest soum in Mongolia among the 330 soums. Situated at the end of the Altai Mountains, it occupies the northwestern part of Great Gobi. The center of the soum is 246 km from the province center and 946 km from Ulaanbaatar.

It has a population of 2,282 residents. There are 625 herding families: 49.9% men, 51.1%women.

The total number of livestock is 223,025 herds. Goat-172,821; sheep-40,921; cattle-1.234; horse-4,349; camel-3,700. The share of goats in the total number of animals: 77.5%

- Operated deep washing facilities – 1 (new 1)

Activity Description:

Pilot 1.4. Support in involving more herder cooperatives in implementing the Responsible Nomads Standard within the cashmere and leather supply chains.

Establish two model cooperatives in project implemented soums of Khuvsgul and Gobi-Altai provinces to ensure their success and serve in the best pasture management, livestock raw material preparation.

NFPUG, their members and the soum authorities will be participate. As part of Pilot 1.6, raw skin/hide preparation, quality check points will be established.

Pilot 1.5. Demonstration of deep washing practice for improving livestock health and decreasing skin/hide damage caused by livestock ectoparasites.

Deep washing facility construction – two places, effective usage of veterinary chemicals – instruction, training, disposal of wastewater and sludge - demonstration.

Pilot 1.6. Support in establishment of raw skin/hide preparation and storage points - 1 near high-capacity slaughterhouse (Khuvsgul) and 2 near small abattoirs (Khuvsgul, Gobi-Altai)

Pilot 1.7. Trainings on preparation, curing, storage, transportation; animal health, disinfection, usage of veterinary chemicals will be organized for raw material suppliers, veterinary specialists, cooperative members will be organized.

Location Name	Latitude	Longitude	GeoName ID
Emeelt village, hub for livestock raw material	47.892809580438566	106.86520347193733	

Location Description:

Emeelt, 30 km west of Ulaanbaatar, being one of them, is where products make their way in from 11 western provinces. Emeelt village serves as a hub for the slaughtering and meat processing industry, with a total of 49 companies operating within the Emeelt conurbation. Among these, 20 companies are primarily engaged in slaughtering and meat processing activities. a processing capacity of 1,243 tons of meat per day, employing up to 6,600 persons during peak periods of meat processing.

Activity Description:

Pilot 1.6. Supporting in establishment of curing place and improvement a cooling system for raw material preparation and storage in one high-capacity center. Improving the digital registration system to ensure traceability of leather raw material.

Location Name	Latitude	Longitude	GeoName ID
Gobi JSC	47.902798951681696	106.86930188675356	

Location Description:

Gobi JSC factory is based in Khan-Uul District, Ulaanbaatar.

Approximately 1,200 tons of raw cashmere (and camel wool) are processed annually by Gobi from its Ulaanbaatar factory, yielding approximately 500,000 pieces of knitwear, 250,000 length-wise meters of woven textiles, and 25,000 pieces of custom-fitted clothing.

Activity Description:

Pilot 2.1. Improving dyeing technology by setting up the new dye database. Support in purchasing Data color spectrophotometer; calculation of chemicals, water, energy savings.

Pilot 2.2. Organization of recycling cashmere waste generated from spinning, knitting, and weaving factories. The recycled cashmere waste can be utilize in spun yarn for knitting and weaving, garments, blanket.

Pilot 2.3. Supporting to technology research and implementation of technological solution in wastewater from scouring and dyeing factory.

Location Name	Latitude	Longitude	GeoName ID
Buligaar JSC, Arildii LLC, Ikh Ergelt LLC, Mon-Ireedui LLC	47.891767668110456	106.9196556167386	

Location Description:

These leather factories (except of Arildii LLC, Bayangol District) are located in Khan-Uul District, 20th Khoroo, Ulaanbaatar.

Current installed production capacity/Capacity utilization in 2023:

Buligaar JSC – 1,200,000 sheep-hide unit/84%

Arildii LLC – 2,900,000 sheep-hide unit/no data

Ikh Ergelt LLC - 800,000 sheep-hide units/53%

Mon-Ireedui LLC -907,500 sheep-hide units /80%

Activity Description:

Pilot 3.2; 3.3. Activity in Ulaanbaatar. As part of strengthening capacities to find alternatives to harmful chemicals, and introducing BAT, technological tests for reduction hazardous chemicals usage, water and energy usage will be conducted in industrial processing at leather factory in Ulaanbaatar.

Throughout this activity, wastewater treatment technology in the factory will be assessed to determine the more effective solution.

Location Name	Latitude	Longitude	GeoName ID
Darkhan Minj LLC	49.55675181448489	105.96509311264593	

Location Description:

Darkhan is the third-largest city in Mongolia and the capital of Darkhan-Uul Aimag.

Total area is 103 km². The population is 87,696 residents.

Current installed production capacity/Capacity utilization in 2021:

Darkhan Minj LLC – 15,250 sheep-hide unit/70%

Darkhan Nekhii JSC – 800-850 cattle hide/day,

2-2.2 mln. sheep hide/day

Activity Description:

Pilot 1.1. POPs and other hazardous chemicals inventories were conducted in cashmere and leather factories.

Pilot 3.2; 3.3. Activity in Darkhan. As part of strengthening capacities to find alternatives to harmful chemicals, and introducing BAT, technological tests for reduction hazardous chemicals usage, water and energy usage will be conducted in industrial processing at leather factory in Darkhan.

Throughout this activity, wastewater treatment technology in the factory will be assessed to determine the more effective solution.

Location Name	Latitude	Longitude	GeoName ID
Darkhan Nekhii JSC	49.43473744800933	105.96247016463013	

Location Description:

Darkhan is the third-largest city in Mongolia and the capital of Darkhan-Uul Aimag.

Total area is 103 km². The population is 87,696 residents.

Current installed production capacity/Capacity utilization in 2021:

Darkhan Minj LLC – 15,250 sheep-hide unit/70%

Darkhan Nekhii JSC – 800-850 cattle hide/day,

2-2.2 mln. sheep hide/day

Activity Description:

Pilot 1.1. POPs and other hazardous chemicals inventories were conducted in cashmere and leather factories.

Pilot 3.2; 3.3. Activity in Darkhan. As part of strengthening capacities to find alternatives to harmful chemicals, and introducing BAT, technological tests for reduction hazardous chemicals usage, water and energy usage will be conducted in industrial processing at leather factory in Darkhan.

Throughout this activity, wastewater treatment technology in the factory will be assessed to determine the more effective solution.

Location Name	Latitude	Longitude	GeoName ID
Mongolia	46.011854076075015	103.25171069603712	

Location Description:

Mongolia

Activity Description:

Pilot 1.1. POPs and other hazardous chemicals, hazardous waste inventories at national level will be conducted in cashmere and leather sectors. As part of the project, a database of chemicals used in both sectors will be constructed and integrated with existing e-system of MET and MOFALI.

Pilot 1.3. Using the data of all pilots and activities, conducting Life Cycle Assessment in cashmere and leather supply chains.

Location Name	Latitude	Longitude	GeoName ID
Alag-Erdene soum	50.11177	100.04288	

Location Description:

Alag-Erdene Soum is one of the 24 soums of Khuvsgul Province. Out of its 4,500 km² area, 1,460 km² is covered by forests, while 2,760 km² is grassland. As of 2023, the population of the soum was 6,743 people residing in various settlements including Halkh, Darkhad, Khotgoid, and Uriankhai.

The administrative center - Dunhan, is placed near the road connecting Murun and Khatgal, the provincial capital, 62 km north of Murun and 733 km from Ulaanbaatar. Khuvsgul Lake lies on the northern border of the soum.

There are 1,778 herding families. 49.4% men, 50.6 %women.

As of 2023, the total number of livestock is 267,688 herds.

Goat-87,063; sheep-116,050; cattle-45,729; horse-18,834; camel-12. The share of goats in the total number of animals: 32.5 %.

-Operated deep washing facilities – 2 (new 2).

Activity Description:

Pilot 1.4. Support in involving more herder cooperatives in implementing the Responsible Nomads Standard within the cashmere and leather supply chains.

Establish two model cooperatives in project implemented soums of Khuvsgul and Gobi-Altai provinces to ensure their success and serve in the best pasture management, livestock raw material preparation.

NFPUG, their members and the soum authorities will be participate. As part of Pilot 1.6, raw skin/hide preparation, quality check points will be established.

Pilot 1.5. Demonstration of deep washing practice for improving livestock health and decreasing skin/hide damage caused by livestock ectoparasites.

Deep washing facility construction – two places, effective usage of veterinary chemicals – instruction, training, disposal of wastewater and sludge - demonstration.

Pilot 1.6. Support in establishment of raw skin/hide preparation and storage points - 1 near high-capacity slaughterhouse (Khuvsgul) and 2 near small abattoirs (Khuvsgul, Gobi-Altai)

Pilot 1.7. Trainings on preparation, curing, storage, transportation; animal health, disinfection, usage of veterinary chemicals will be organized for raw material suppliers, veterinary specialists, cooperative members will be organized.

Location Name	Latitude	Longitude	GeoName ID
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Tunel soum	49.855163246	100.62333084	
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Location Description:

Approximately one third of Tunel soum 3,580 km² area is covered by forests. As of 2023, it had a population of 4,323 residents. Bulag is center of Tunel soum, is situated 46 km northeast of Murun, the capital of the province, and 667 km from the national capital, Ulaanbaatar. There are 1562 herding families: 52.1% men, 47.9% women.

The total number of livestock is 301.355 herds:

Goat-114,160; sheep-136,748; cattle-33,577; horse-16,734; camel-136. The share of goats in the total number of animals: 37.9 %

-Operated deep washing facilities – 4 (new 2)

Activity Description:

Pilot 1.4. Support in involving more herder cooperatives in implementing the Responsible Nomads Standard within the cashmere and leather supply chains.

Establish two model cooperatives in project implemented soums of Khuvsgul and Gobi-Altai provinces to ensure their success and serve in the best pasture management, livestock raw material preparation.

NFPUG, their members and the soum authorities will be participate. As part of Pilot 1.6, raw skin/hide preparation, quality check points will be established.

Pilot 1.5. Demonstration of deep washing practice for improving livestock health and decreasing skin/hide damage caused by livestock ectoparasites.

Deep washing facility construction – two places, effective usage of veterinary chemicals – instruction, training, disposal of wastewater and sludge - demonstration.

Pilot 1.6. Support in establishment of raw skin/hide preparation and storage points - 1 near high-capacity slaughterhouse (Khuvsgul) and 2 near small abattoirs (Khuvsgul, Gobi-Altai)

Pilot 1.7. Trainings on preparation, curing, storage, transportation; animal health, disinfection, usage of veterinary chemicals will be organized for raw material suppliers, veterinary specialists, cooperative members will be organized.

Location Name	Latitude	Longitude	GeoName ID
Tsogt soum	45.341331968	96.639330776	

Location Description:

Tsogt soum in Gobi-Altai province marks the end of the Altai mountain range. The center of the soum is located 188 km from the province center and 1050 km from Ulaanbaatar.

The total area of the soum is 16,618 km². It has a population of 3,203 residents. There are 1,193 herding families: 52.1% men, 47.9% women.

The total number of animals is 219,631 herds. Goat-158,869; sheep-47,796; cattle-4,576; horse – 4,666; camel-3,724. The share of goats in the total number of animals: 72.3%

-Operated deep washing facilities – 0 (old 2 not operated)

Activity Description:

Pilot 1.4. Support in involving more herder cooperatives in implementing the Responsible Nomads Standard within the cashmere and leather supply chains.

Establish two model cooperatives in project implemented soums of Khuvsgul and Gobi-Altai provinces to ensure their success and serve in the best pasture management, livestock raw material preparation.

NFPUG, their members and the soum authorities will be participate. As part of Pilot 1.6, raw skin/hide preparation, quality check points will be established.

Pilot 1.5. Demonstration of deep washing practice for improving livestock health and decreasing skin/hide damage caused by livestock ectoparasites.

Deep washing facility construction – two places, effective usage of veterinary chemicals – instruction, training, disposal of wastewater and sludge - demonstration.

Pilot 1.6. Support in establishment of raw skin/hide preparation and storage points - 1 near high-capacity slaughterhouse (Khuvsgul) and 2 near small abattoirs (Khuvsgul, Gobi-Altai)

Pilot 1.7. Trainings on preparation, curing, storage, transportation; animal health, disinfection, usage of veterinary chemicals will be organized for raw material suppliers, veterinary specialists, cooperative members will be organized.

Location Name	Latitude	Longitude	GeoName ID
Chandmani soum	47.658664032	92.808830098	

Location Description:

The total area of the soum is 4,629 km². As of 2023, it has a population of 2,216 residents. There are 760 herding families: 50.6% men, 49.4% women.

The total number of livestock is 197,614 herds.

Goat-122,111; sheep-64,916; cow-3,023; horse – 6,055; camel-1,509. The share of goats in the total number of animals: 61.8%

-Operated deep washing facilities – 0 (old 1 not operated)

Activity Description:

Pilot 1.4. Support in involving more herder cooperatives in implementing the Responsible Nomads Standard within the cashmere and leather supply chains.

Establish two model cooperatives in project implemented soums of Khuvsgul and Gobi-Altai provinces to ensure their success and serve in the best pasture management, livestock raw material preparation.

NFPUG, their members and the soum authorities will be participate. As part of Pilot 1.6, raw skin/hide preparation, quality check points will be established.

Pilot 1.5. Demonstration of deep washing practice for improving livestock health and decreasing skin/hide damage caused by livestock ectoparasites.

Deep washing facility construction – two places, effective usage of veterinary chemicals – instruction, training, disposal of wastewater and sludge - demonstration.

Pilot 1.6. Support in establishment of raw skin/hide preparation and storage points - 1 near high-capacity slaughterhouse (Khuvsgul) and 2 near small abattoirs (Khuvsgul, Gobi-Altai)

Pilot 1.7. Trainings on preparation, curing, storage, transportation; animal health, disinfection, usage of veterinary chemicals will be organized for raw material suppliers, veterinary specialists, cooperative members will be organized.

Location Name	Latitude	Longitude	GeoName ID
Ulaanbaatar city center	47.921230	106.918556	

Location Description:

Ulaanbaatar is the capital and most populous city of Mongolia. With a population of 1.673 million, it is the coldest capital city in the world by average yearly temperature. The municipality is located in north central Mongolia at an elevation of about 1,300 metres (4,300 ft) in a valley on the Tuul River. As the main industrial center of Mongolia. Most cashmere and leather factories are located in Ulaanbaatar.

Activity Description:

Pilot 1.1. The analysis of hazardous chemical residues in cashmere and leather product samples will be carried out in domestic laboratories or sent to international laboratories.

Pilot 1.2. Enhance the capacity of analytical laboratories in cashmere and leather sectors. Support in purchasing spare parts, small apparatus, chemical reagents; Training of laboratory staff from accredited laboratories, research and industrial organization to enhance their skills in detecting banned chemical compounds will be organized.

Pilot 1.6. Update the digital Mongolian animal health information system (www.mahis.gov.mn) to enable better traceability of livestock products.

Pilot 2.4; 3.1 Workshops and trainings aimed at raising awareness about industrial chemicals (POPs, etc.) and hazardous waste management for engineers and technicians employed in primary and deep processing cashmere and leather factories.

Location Name	Latitude	Longitude	GeoName ID
Institute of Chemistry and Chemical Technology, Mongolian Academy of Sciences	47.91671076411843	106.88160713676149	

Location Description:

The Institute of Chemistry and Chemical Technology (ICCT), Mongolian Academy of Sciences is located in Bayanzurkh District, 13th Khoroo, Ulaanbaatar.

The ICCT is a central chemical research institute in Mongolia with focus on the investigations of chemical, physicochemical, biochemical and technological characterizations of domestic raw products of animal, plant and mineral origin and eventually to emerge an environmentally friendly and advanced technology. The ICCT consists of 10 research laboratories with 97 researchers.

Activity Description:

Pilot 4. Developing a pilot to recovery of protein from skin and hide waste in the leather industry.

Supporting a workshop at MAS for collagen hydrolysate production, with a capacity of 200 kg per month and private company in gelatin production by providing some equipment/ technology transferring and business model.

Please provide any further geo-referenced information and map where project interventions are taking place as appropriate.

Khuvsgu 1	Alag- Erdene	50° 6' 59. 1'	10 0° 2' 49. 3'	
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	Burentogt okh	49° 36' 57. 4'	99° 35' 22. 6'	
Gobi- Altai	Chandma ni	45° 20' 3.9 '	97° 59' 27. 8'	

Tsogt	45° 20' 55. 8'	96° 38' 36. 6'	
Erdene	45° 9' 33. 1'	97° 42' 20. 4'	

Ulaanbaa tar	Gobi JSC	47° 54' 12. 4'	10 6° 52' 6.5 '	
	Khanbogd LLC	47° 54' 17. 7'	10 6° 45' 49. 4'	

Darkhan	Darkhan Minj	49° 26' 22.2"	10° 58' 34.8"	
	Darkhan Nekhii	49° 26' 3.8"	10° 57' 44.5"	

ANNEX F: ENVIRONMENTAL AND SOCIAL SAFEGUARDS DOCUMENTS INCLUDING RATING

Attach agency safeguard datasheet/assessment report(s), including ratings of risk types and overall project/program risk classification as well as any management plans or measures to address identified risks and impacts (as applicable).

Title

PIMS_9610_GEFID_11171_SupplyChainMongolia_PRODOC_Annex9_ESMF

PIMS_9610_GEFID_11171_SupplyChainMongolia_PRODOC_Annex5_SESP

ANNEX G: BUDGET TABLE

Please upload the budget table here.

Annex 1: GEF Budget Template

Expenditure Category	Detailed Description	Component (USDeq.)										Total (USDeq.)	Responsible Entity
		Component 1		Component 2	Component 3	Component 4	Component 5		Sub-Total	M&E	PMC		(Executing Entity receiving funds from the GEF Agency)[1]
		Outcome A		Outcome B	Outcome C	Outcome D	Outcome E			Outcome F	PMC		
		Output A.1	Output A.2	Output B.1	Output C.1	Output D.1	Output E.1	Output E.2		Output F.1	PMC		
Contractual services- Company	Organizations to carry out pilots: Pilot #1.1 at USD\$60,000, Pilot #1.2 at USD\$25,000, Pilot #1.3 at USD\$50,000, Pilot #1.4 at USD\$50,000, Pilot #1.5 at USD\$50,000, Pilot #1.6: at USD\$150,000, , Pilot #3.1 at USD\$ 2,000, Pilot #3.2 at USD\$5,000, Pilot #3.3 at USD\$5,000, Pilot #3.4 at USD\$5,000, and Pilot #4 at USD\$60,000. Costs will be split between the two outputs of this component	134,750	134,750						269,500	-	-	269,500	MOFALI
Contractual services- Company	Organizations to carry out pilots: Pilot #1.1 at USD\$60,000, Pilot #1.2 at USD\$25,000, Pilot #1.3 at USD\$50,000, Pilot #1.4 at USD\$50,000, Pilot #1.5 at USD\$50,000, Pilot #1.6: at USD\$150,000, , Pilot #3.1 at USD\$ 2,000, Pilot #3.2 at USD\$5,000, Pilot #3.3 at USD\$5,000, Pilot #3.4 at USD\$5,000, and Pilot #4 at USD\$60,000. Costs will be split between the two outputs of this component			476,600					476,600	-	-	476,600	MOFALI
Contractual services- Company	Organizations to carry out pilots: Pilot #1.1 at USD\$30,000, Pilot #1.2 at USD\$12,500, Pilot #1.3 at USD\$25,000, Pilot #1.4 at USD\$25,000, Pilot #1.5 at USD\$25,000, Pilot #1.6 at USD\$75,000, Pilot #2.1 USD\$200,000, Pilot #2.2 at USD\$20,000, Pilot #2.3 at USD\$50,000, Pilot #2.4: at USD\$6,000, Pilot #3 at USD\$155,000. Pilot			-	669,500				669,500			669,500	MOFALI

	#3.1 at USD\$6,000, Pilot #3.2 at USD\$45,000, Pilot #3.3 at USD\$50,000, Pilot #3.4 at USD\$40,000, and Pilot #4 at USD\$60,000, and Development of targeted assessment and site-specific ESMPs in line with project activities at USD\$40,000 (see annex 9 for additional details)												
Contractual services-Company	Organizations to carry out Pilot #4 at USD\$60,000					60,000			60,000			60,000	MOFALI
Contractual services-Company	Organizations to carry out Pilot #4 at USD\$60,000. Costs will be split between the two Outputs of the Component.						30,000	30,000	60,000			60,000	MOFALI
Contractual services-Individual	20% of the Project's Fashion Supply Chain Specialist costs for 5.5 years: they will support the implementation of the Pilot Projects as well as technical aspects linked to the Fashion Supply Chain Sector in Mongolia at USD\$15,000 per year (USD\$3,000 per year will be charged to this component), See annex 7 for additional details	8,250	8,250						16,500			16,500	MOFALI
Contractual services-Individual	20% of the Project's Gender, Social and Environmental Safeguards Specialist costs for 5.5 years: they will support the implementation of the Gender Action Plan and perform day-to-day monitoring of Social and Environmental Risks at USD\$15,000 per year (USD\$3,000 per year will be charged to this component), See annex 7 for additional details	8,250	8,250						16,500			16,500	MOFALI
Contractual services-Individual	One Project Monitoring & Evaluation Officer engaged for the coordination, implementation, oversight and follow-up of the Project's activities, including Monitoring of Stakeholder Engagement Plan, Monitoring of Environmental and Social Safeguards as well as Coordination with the Global Project, and the production of mandatory reports production at USD\$20,000/year for 5.5 years. Activities include M&E of GEF core indicators and project results framework, GEF Project Implementation Report (PIR), Monitoring of Stakeholder Engagement Plan and Gender Action Plan Monitoring of	-	-	-	-	-	-	-	-	110,000	-	110,000	MOFALI

	Environmental and Social Safeguards, among others. See M&E budget table on PRODOC section 7.1 for additional details												
Contractual services-Individual	One Project Administrator at USD\$12,000/yr for 5.5 years. See annex 7 for additional details							-			66,000	66,000	MOFALI
Contractual services-Individual	One Project Coordinator at USD\$15,000 per year, See annex 7 for additional details							-			82,500	82,500	MOFALI
Contractual services-Individual	20% of the Project's Fashion Supply Chain Specialist costs for 5.5 years: they will support the implementation of the Pilot Projects as well as technical aspects linked to the Fashion Supply Chain Sector in Mongolia at USD\$15,000 per year (USD\$3,000 per year will be charged to this component), See annex 7 for additional details			16,500				16,500				16,500	MOFALI
Contractual services-Individual	20% of the Project's Gender, Social and Environmental Safeguards Specialist costs for 5.5 years: they will support the implementation of the Gender Action Plan and perform day-to-day monitoring of Social and Environmental Risks at USD\$15,000 per year (USD\$3,000 per year will be charged to this component), See annex 7 for additional details			16,500				16,500				16,500	MOFALI
Contractual services-Individual	20% of the Project's Fashion Supply Chain Specialist costs for 5.5 years: they will support the implementation of the Pilot Projects as well as technical aspects linked to the Fashion Supply Chain Sector in Mongolia at USD\$15,000 per year (USD\$3,000 per year will be charged to this component), See annex 7 for additional details				16,500			16,500				16,500	MOFALI
Contractual services-Individual	20% of the Project's Gender, Social and Environmental Safeguards Specialist costs for 5.5 years: they will support the implementation of the Gender Action Plan and perform day-to-day monitoring of Social and Environmental Risks at USD\$15,000 per year (USD\$3,000 per year will be charged to this component), See							16,500				16,500	MOFALI

	annex 7 for additional details												
Contractual services- Individual	20% of the Project's Fashion Supply Chain Specialist costs for 5.5 years: they will support the implementation of the Pilot Projects as well as technical aspects linked to the Fashion Supply Chain Sector in Mongolia at USD\$15,000 per year (USD\$3,000 per year will be charged to this component), See annex 7 for additional details					16,500			16,500			16,500	MOFALI
Contractual services- Individual	20% of the Project's Gender, Social and Environmental Safeguards Specialist costs for 5.5 years: they will support the implementation of the Gender Action Plan and perform day-to-day monitoring of Social and Environmental Risks at USD\$15,000 per year (USD\$3,000 per year will be charged to this component), See annex 7 for additional details					16,500			16,500			16,500	MOFALI
Contractual services- Individual	20% of the Project's Fashion Supply Chain Specialist costs for 5.5 years: they will support the implementation of the Pilot Projects as well as technical aspects linked to the Fashion Supply Chain Sector in Mongolia at USD\$15,000 per year (USD\$3,000 per year will be charged to this component), See annex 7 for additional details						8,250	8,250	16,500			16,500	MOFALI
Contractual services- Individual	20% of the Project's Gender, Social and Environmental Safeguards Specialist costs for 5.5 years: they will support the implementation of the Gender Action Plan and perform day-to-day monitoring of Social and Environmental Risks at USD\$15,000 per year (USD\$3,000 per year will be charged to this component), See annex 7 for additional details						8,250	8,250	16,500			16,500	MOFALI
Equipment	Standard IT equipment	-	-	-	-	-	-	-	-	-	4,000	4,000	MOFALI
Equipment	Standard office equipment (Work desk and chair)	-	-	-	-	-	-	-	-	-	800	800	MOFALI
International Consultants	One International Specialist on Regenerative Design and Circular Business Models . See annex 7 for additional details	25,000	25,000	-	-	-	-	-	50,000	-	-	50,000	MOFALI
International Consultants	One International Consultant for the MTR \$25,000 and One International Consultant for the TE	-	-	-	-	-	-	-	-	50,000	-	50,000	UNDP

	\$25,000. See M&E budget table on PRODOC section 7.1 Monitoring Plan												
International Consultants	International Consultant on Post use 9Rs See annex 7 for additional details	-	-	-	-	-	25,000	25,000	50,000	-	-	50,000	MOFALI
International Consultants	International Consultant on International Consultant on Sustainable Production of Textiles. See annex 7 for additional details	-	-	-	-	75,000	-	-	75,000	-	-	75,000	MOFALI
International Consultants	International Consultant on International Consultant on Cleaner Production. See annex 7 for additional details	-	-	-	50,000	-	-	-	50,000	-	-	50,000	MOFALI
International Consultants	International Consultant to support research on innovative materials. See annex 7 for additional details	-	-	50,000	-	-	-	-	50,000	-	-	50,000	MOFALI
Local Consultants	Local consultant (Legal Consultant to support enforcement of policies and regulation) to support activities under Component 1. See Annex 7 for additional details.	25,000	25,000	-	-	-	-	-	50,000	-	-	50,000	MOFALI
Local Consultants	Local Consultant on Sustainable Production of Textiles and Local Consultant on Sustainable Production of Construction Materials to support activities under this component. . See annex 7 for additional details	-	-	-	-	-	25,000	25,000	50,000	-	-	50,000	MOFALI
Local Consultants	Local Consultant on Sustainable Production of Textiles and Local Consultant on Sustainable Production of Construction Materials to support activities under this component. . See annex 7 for additional details	-	-	-	-	50,000	-	-	50,000	-	-	50,000	MOFALI
Local Consultants	Local consultants (Technical Advisors) to support activities under Component 3. See Annex 7 for additional details.	-	-	-	50,000	-	-	-	50,000	-	-	50,000	MOFALI
Local Consultants	Local consultant (Legal Consultant to support enforcement of policies and regulations) to support activities under Component 2. See Annex 7 for additional details.	-	-	50,000	-	-	-	-	50,000	-	-	50,000	MOFALI
Office Supplies	Basic office supplies for duration of project period	-	-	-	-	-	-	-	-	-	600	600	MOFALI
Other Operating Costs	Audio Visual and Print Production Costs to support activities under Component 1. Regenerative design and circular business models. This includes awareness-raising materials. Enhancement and full integration of gender-supportive policies for women will be included.	12,500	12,500	-	-	-	-	-	25,000	-	-	25,000	MOFALI

Other Operating Costs	Audit Services (USD\$1,500 per year)	-	-	-	-	-	-	-	-	-	7,500	7,500	UNDP
Other Operating Costs	Translation services (English - Mongolian) for the MTR and TE	-	-	-	-	-	-	-	-	10,000	-	10,000	MOFALI
Other Operating Costs	Audio Visual and Print Production Costs to support awareness-raising on Post use 9Rs	-	-	-	-	-	7,500	7,500	15,000	-	-	15,000	MOFALI
Other Operating Costs	Audio Visual and Print Production Costs to support awareness-raising on Sustainable Consumption	-	-	-	-	5,000	-	-	5,000	-	-	5,000	MOFALI
Other Operating Costs	Audio Visual and Print Production Costs to support awareness-raising on Cleaner production	-	-	-	28,000	-	-	-	28,000	-	-	28,000	MOFALI
Other Operating Costs	Audio Visual and Print Production Costs to support awareness-raising on Innovative materials	-	-	15,000	-	-	-	-	15,000	-	-	15,000	MOFALI
Training, Workshops, Meetings	Training to strengthen capacities at the national and sub-national levels on Regenerative Design and circular business models	28,750	28,750	-	-	-	-	-	57,500	-	-	57,500	MOFALI
Training, Workshops, Meetings	Training workshops, seminars and meetings to strengthen project management capabilities	-	-	-	-	-	-	-	-	-	2,100	2,100	MOFALI
Training, Workshops, Meetings	Inception workshop. See M&E budget table on PRODOC section 7.1 for additional details	-	-	-	-	-	-	-	-	10,000	-	10,000	MOFALI
Training, Workshops, Meetings	Training and Workshops aimed to raise awareness on Post use 9Rs	-	-	-	-	-	20,979	20,979	41,958	-	-	41,958	MOFALI
Training, Workshops, Meetings	Training and Workshops aimed to raise awareness on Sustainable Consumption	-	-	-	-	15,000	-	-	15,000	-	-	15,000	MOFALI
Training, Workshops, Meetings	Training and Workshops aimed to raise awareness on Cleaner production	-	-	-	53,000	-	-	-	53,000	-	-	53,000	MOFALI
Training, Workshops, Meetings	Training and Workshops aimed to raise awareness on Innovative materials	-	-	22,500	-	-	-	-	22,500	-	-	22,500	MOFALI
Travel	Travel to support activities under Output A1	48,350	-	-	-	-	-	-	48,350	-	-	48,350	MOFALI
Travel	Travel to support activities under Output A2	-	48,350	-	-	-	-	-	48,350	-	-	48,350	MOFALI
Travel	Supervision and learning missions. See M&E budget table on PRODOC section 7.1 for additional details	-	-	-	-	-	-	-	-	20,000	-	20,000	MOFALI
Travel	Travel to support activities under Output E.2	-	-	-	-	-	-	35,000	35,000	-	-	35,000	MOFALI
Travel	Travel to support activities under Output E.1	-	-	-	-	-	35,000	-	35,000	-	-	35,000	MOFALI
Travel	Travel to support activities under Component 4	-	-	-	-	23,760	-	-	23,760	-	-	23,760	MOFALI
Travel	Travel to support activities under Component 3	-	-	-	134,500	-	-	-	134,500	-	-	134,500	MOFALI
Travel	Travel to support activities under Component 2	-	-	80,000	-	-	-	-	80,000	-	-	80,000	MOFALI
									-				
Grand Total		290,850	290,850	727,100	1,018,000	261,760	159,979	159,979	2,908,518	200,000	163,500	3,272,018	

Please explain any aspects of the budget as needed here

ANNEX I: RESPONSES TO PROJECT REVIEWS

From GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF.

Comment	How these comments will be addressed during the PPG
Germany	
appreciates the foreseen transparency of material contents and awareness raising for workers on the health risks of the chemicals and products they work with.	Thank you.
Introducing more sustainable materials and processes is regarded as very challenging in both supply chains. The final proposal shall explain which activities can be targeted in an integrated manner and how actors in both sectors might learn from each other.	The three child projects which address both sectors (Ecuador, Cambodia, Global) will be the most integrated and explicitly address this. The global child project will be organized
The PFD states that the empowerment and inclusion of vulnerable groups will be prioritised and further specifies individual cooperation partners. The final proposal shall outline relevant factors and concrete objectives for successfully empowering women and indigenous groups throughout the project.	The IP-wide stakeholder engagement process to develop the stakeholder plan will be led by the global child project and ensure vulnerable groups are engaged. Inputs from all child projects will be consolidated to analyse the factors and objectives as requested.
Appreciates the planned establishment of a shared knowledge repository. The final proposal shall include a strategy for covering diverse local contexts and solutions, also considering knowledge by local and national governments as well as development agencies and NGOs beyond the UN system.	The KM strategy of the coordination child project will cover national and local knowledge and solutions. Child projects to actively share local solutions and knowledge with the coordination project.
Component 4 – behaviour change: The proposal explains that consumers for global textile supply chains are predominantly high-consumption markets largely in the Global North. We request a more detailed clarification on i) which the mechanisms deploying international consumer markets are, and ii) how the selected transformation levers may influence	These issues will be addressed by the global child project, which will review both consumer communications/ marketing trends (e.g. UNEP's recent playbook on fashion communication) as well as regulations in importing regions. The specific European acts are duly noted.

these consumer markets (refer as well to recent market trends such as the European due diligence act as well as the upcoming Carbon Border Adjustment Mechanism).	
Component 5 – reverse logistic: Post-consumer and post-production waste are either mixed up or used as synonyms. Clearly differentiate these two strategies and review, if post-consumer waste is correctly placed under component 5 or rather should be moved under component 3	<i>IAs to confirm what projects are planning on post-production vs post-consumer waste – to discuss</i>
✓ Japan Comments	
Country selection: While the construction industries exist in any country, textile industries are concentrated in certain countries. Justifications are not adequately provided in terms of country selection on textile supply chains.	The IP countries were selected based on a competitive EOI process, which included a criterion on the relative importance of the country's sector in the global value chains. Child projects will clearly justify the country selection in the Rationale section of the CEO ER.
Structure: While some private investments are envisaged, they are very vague, and all project components are technical assistance. Justifications are not adequately provided to achieve the project objective.	<i>IAs to confirm what investments are being targeted particularly in relation to scaling up impact – to discuss</i>
Components: Although 9Rs are mentioned, more enhanced resource efficiency and circularity along with value chains should be highlighted more from design to recycling, to reduce pollution, GHG emissions, and biodiversity loss.	Child projects will highlight the contribution of circularity and resource efficiency concepts in support of all five components from design to end of life.
GEBs: Given that the project structure is based on TA, the expected GEBs (direct) seem very ambitious. Better to explain the rationale more clearly that this program can achieve such outcome	See response above on TA/ investment and impact.
Switzerland Comments	
The theory of change, it is not understandable or logic how the program components are contributing to the goal of the program and how they are linked with each other. Activities planned are missing. Indicators and the predicted amount of savings are not really justified and plausible and the stakeholder analysis is missing/weak. Could you provide more information?	A revised ToC will be produced by each child project. This process will be coordinated by the Lead Agency. Activities are not usually included in TOC as it would crowd the diagram and be unreadable. They will be described in the Project Description & Workplan sections of each child project. The GEBs methodology will be robustly applied during PPG including through sampling and analysis of chemicals in products. Stakeholder analysis will be deepened in the PPG phase and be presented as an IP-wide stakeholder engagement plan with roles for each child project.
United Kingdom Comments	

While it is valuable to reference the triple planetary crises of climate change, pollution and biodiversity loss in reference to the IP on “Eliminating Hazardous Chemicals from Supply Chains”, it is also helpful to underscore these interlinkages throughout the other Integrated Programmes (and indeed, focal areas). Adding a short line to that effect in the introduction to the work programme, or under the section on the IPs (paras 38 – 39) could be helpful in this regard	This comment on the work programme documentation will be considered by GEF Sec.
United States Comments	
India: We believe the Ministry of Chemicals and Fertilizers should be incorporated into this proposal.	To be considered by UNIDO.
STAP Comments (response already provided in the final PFD submission):	
1. Consider developing a narrative of plausible futures that considers the potential effects drivers of change and their associated uncertainties on achieving the project's goal, and use this to inform intervention options across the value chain and the different national child projects. See STAP's primer on future narratives for more guidance .	During the PPG, it will be ensured that the rational section in each child project will include a narrative of plausible futures that considers the potential effects drivers of change and their associated uncertainties on achieving the project's goal. Each child project will use this to inform intervention options across the value chain.
2. Ensure that all child projects address each aspect of the supply chain with appropriate actions toward achieving the transformational levers.	During the PPG, each child project will ensure action under each supply chain stage, targeting the transformational levers.
3. Recognize gender, Indigenous Peoples and Local Communities, and youths in the ToC, including in the overall project impacts and the example of activities. Pay extra attention to how to incorporate ILK [AB1] [LB2] into the child projects, where engagements take time and sensitivity.	Gender, Indigenous Peoples and Local Communities, and Youths aspects will be recognised in child project ToCs. The PPG will pay attention to the engagement of Indigenous Peoples so that Indigenous learning and knowledge can be adequately incorporated into relevant child projects.
4. We encourage all child projects to analyze policies across the various sector within their countries to understand where conflicting policies can hinder the achievement of the expected outcomes and ensure these are addressed appropriately. See STAP's paper on policy coherence for more guidance.	Each child project will analyse policies in its selected sector(s) to understand where conflicting policies can hinder the achievement of the expected outcomes and ensure that these are addressed appropriately in the project intervention. One of the selection criteria for the EoIs was the willingness of submitting country to address these conflicting and hindering policies
5. Undertake a detailed analysis of the innovation in the program. Also, consider how the child projects can demonstrate the many innovations highlighted in the PFD. Also, ensure that the global child project incorporates these innovations in its capacity building, technical assistance, knowledge management and learning aspects, awareness-raising, and advisor activities to help disseminate these solutions within the	Each child project will actively identify innovations during PPG and engage partners relevant to ensure their demonstration during the project implementation. The global child project will actively liaise with the other child projects during PPG so that its proposed intervention will serve the child projects, their identified innovations, and disseminate these best practices and lessons learnt inside and outside the program.

program and to countries outside the program. This will be essential for transformational change.	
6. We encourage the program to follow through in tracking the transformational change impact of the program using the selected indicators.	The monitoring and Evaluation activities to be developed for the program will utilise the program indicators designed to track transformational change.
7. Provide more information on how the GEBs across the IP were estimated, including the underlying assumptions.	During the PPG, the program GEB methodology will be further refined and applied uniformly among child projects. The child projects will provide a detailed description of their GEB calculations in their projects proposals, including underlying assumptions.
8. Recognize the local environmental benefits that can be generated through the project and put in place provisions to track, measure and report these and the socioeconomic co-benefits. Please see STAP's paper on incorporating co-benefits in GEF's investments for guidance.	The program and child projects will identify further co-benefits during the PPG and ensure provisions are put in place to track measure and report these and the socioeconomic co-benefits.